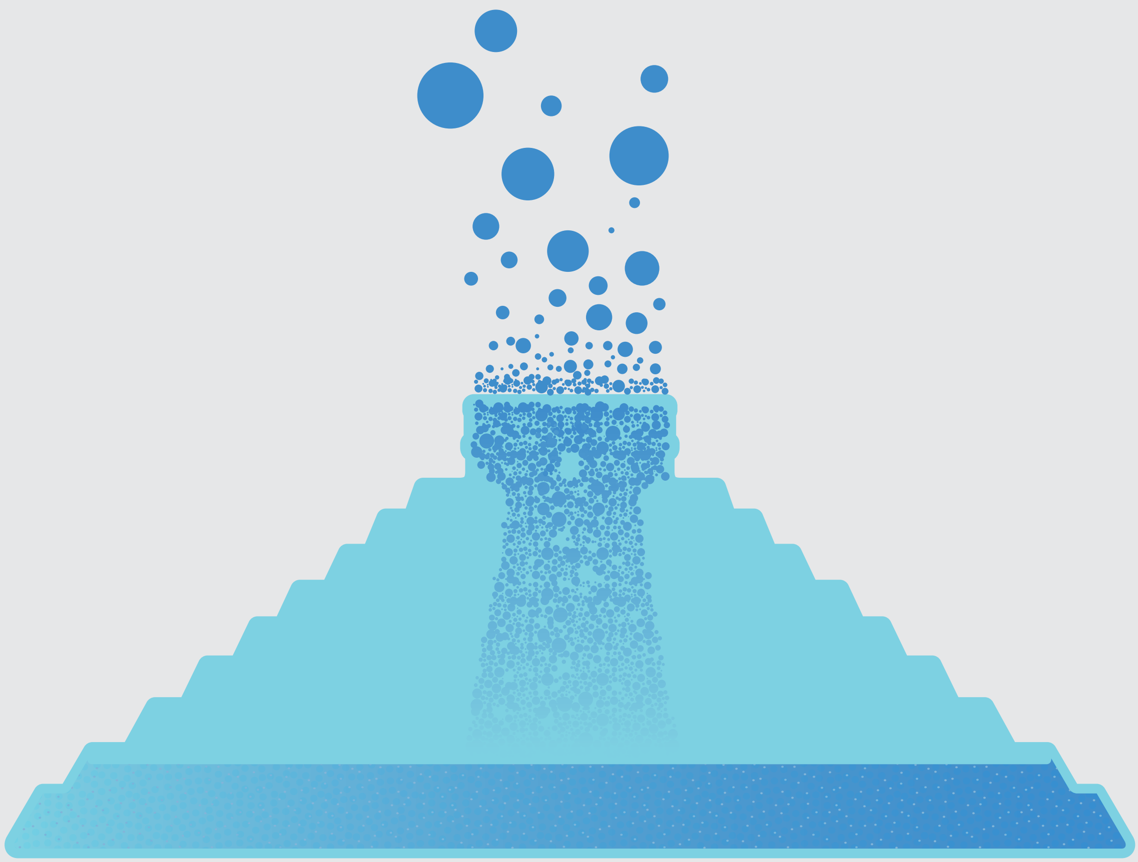
# GLOBAL BUSINESS REPORTS

INDUSTRY EXPLORATIONS



# MEXICO CHEMICALS

## 2015

*Economy - Chemicals - Energy Reforms - Petrochemicals - Agrochemicals*
*Paints and Coatings - Specialty Chemicals - Distribution*

# Dear Readers,

Mexico's chemicals industry presents an enormous opportunity. The country's vast wealth of natural resources, which includes medicinal plants, oil, to minerals, timber, marine, and agricultural products, can serve as raw materials and create new openings for developing new businesses and integrating multiple supply chains. At the same time, top-down, government-led structural reforms have opened the economy to further investment and will spur domestic consumption and exports, particularly with its northern neighbor. Mexico's demographic potential is also obvious. In 2015, 53 million of Mexico's 120 million citizens will be active participants in the economy.

According to the National Institute of Geography and Statistics (INEGI), the chemicals industry accounted for 2.6% of Mexico's GDP and 14.5% of manufacturing GDP in 2012, while employment was 0.8% and 8%, respectively. The largest segments of the industry include petrochemicals, rubber and plastics, pharmaceuticals, soaps, detergents and cosmetics.

For the time being, the chemicals industry is slowed by its dependence on imports for raw materials, but savvy and visionary leaders can seize this historical opportunity to increase local production. The petrochemicals sector will be the most closely watched, in light of the opening of the exploration and production segment of the hydrocarbons industry and the privatization of petrochemicals plants. Historically, petrochemicals production has been volatile, with the industry reaching an apex of 51 plants producing 16 million metric tons in 1996, but the subsequent lack of investment and upgrade caused these facilities to decay. Now, with imports rising to nearly 15 billion pesos in the year 2013, price and supply pressures are decreasing competitiveness.

In addition to the reforms, new investment in the ports at Altamira and Coatzacoalcos by Alfa, BASF, Braskem, CYDSA, IDESA and Mexichem will elevate the industry's global competitiveness. Meanwhile, companies are making real progress in addressing Mexico's weaknesses, which include excessive paperwork, unwieldy bureaucracy, corruption, and a lack of security, workforce training, and financing. The National Chamber of Transformation Industry, which represents small- and medium-sized enterprises as well as larger companies, is also working with authorities such as PEMEX and CFE to coordinate supply chain dynamics and integrate purchases of services, machinery and equipment on a national level.

The following report presents an in-depth account of the investment opportunities in the Mexico's burgeoning chemicals sector. We welcome readers to listen to the voices of private companies, government agencies, and business associations in the following pages that speak not only to the trends and dynamics on the ground but the spirit of optimism that pervades all levels of the value chain.

Ing. Juan Manuel Díaz Manjarrez, Presidente del Sector Químico
Ing. Gerardo Bazan Navarrete, Presidente de la Rama Petroquímica
Ing. Gilberto Ortiz Muñiz, Vicepresidente del Sector Químico

**CANACINTRA**

## Building a Better Future: The Mexican Chemicals Industry



## The Door is Now Open: Petrochemicals



## Feeding a Growing Economy: Agrochemicals



## Going Global and Green: Paints and Coatings



## Manufacturing-Fuelled Growth: Specialty Chemicals



## Attracting Ample Attention: Distribution



## Even Flow: Services, Infrastructure, and Logistics



## Into the Future: Conclusion, Final Thoughts, Company Index, and Credits



This research has been conducted by Josie Perez, Amelia Salutz, Alfonso Tejerina, and Lubo Novak

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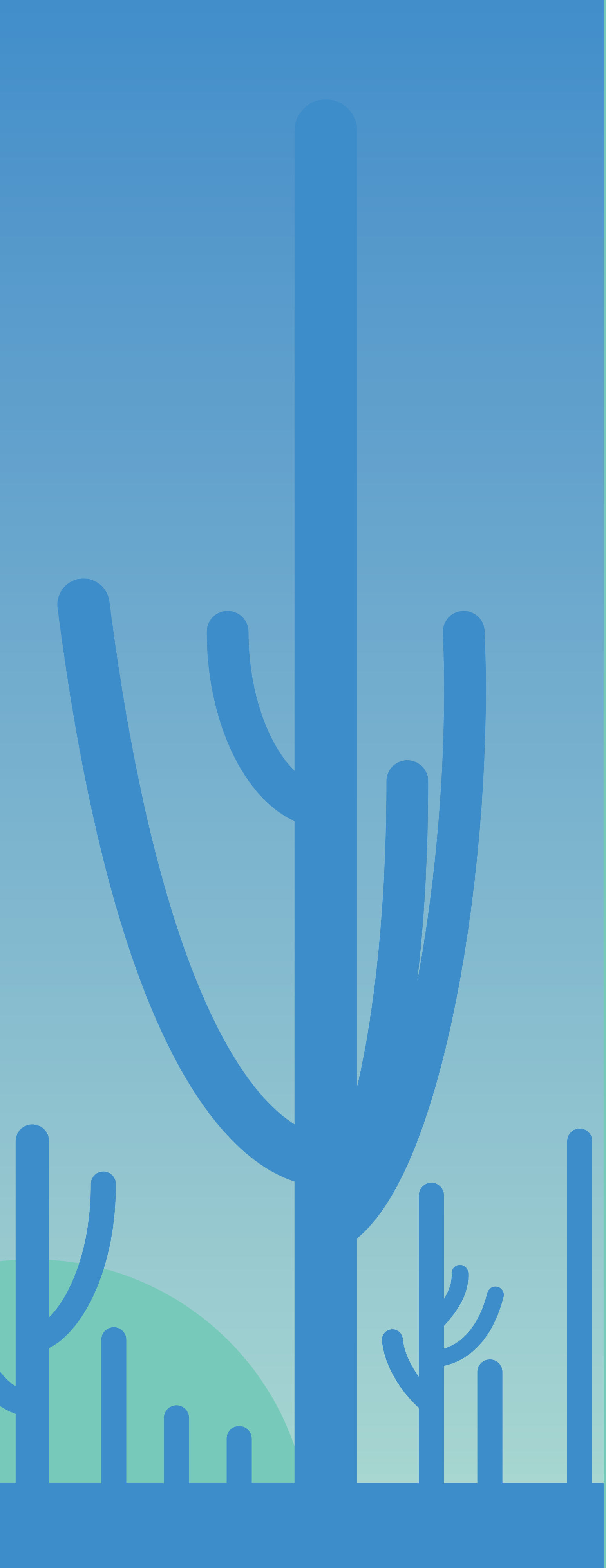


# Exclusive Interviews

Leading industry and government figures from Mexico's chemicals industry discuss market trends and opportunities, as well as strategies for the future.

10, 11, 19, 28, 29

# Editorial Analysis

Global Business Reports' journalists provide unique insights into all aspects of the pharmaceuticals value chain by working on the ground for week and meeting face to face with industry leaders.

8, 12, 24, 40, 52, 66, 78, 90, 98

# Quantitative Data and Maps

Maps and quantitative data highlight and clarify the key trends across all levels of the value chain in the Mexican chemicals industry.

8, 9, 13, 14, 16, 24, 25, 26, 40, 79, 98, 106

# Mexico


Mexico has a growing population and dynamic economy. GBR goes beyond the chemicals industry to help readers understand Mexico's place in the world.

8, 9, 12, 13, 14, 15, 16

# Future Outlook

The future is being built today, and numerous companies are transforming Mexico's chemicals sector one innovation at a time.

106, 108, 109


Image: AP Resinas

# BUILDING A BETTER FUTURE THE MEXICAN CHEMICALS INDUSTRY

“There is a strong appetite by foreign players, including those in the chemical industry, to come and invest in the opening energy market. In Nuevo León we have received more than 100 companies that have requested to come and set up operations and some of these organizations were key chemical players. It is a great opportunity to open new operations and pursue new opportunities.”

- Rodrigo Medina de la Cruz,
Governor of Nuevo León,
Government of Mexico


# INTRODUCING MEXICO

## A Political and Economic Overview

Latin America is well known as a commodities powerhouse, and Mexico, the region's second largest economy and second most populous country after Brazil, is no exception. In addition to being rich in commodities, Mexico is showing new traces of economic dynamism. Since assuming office in December 2012, the Mexican President, Enrique Peña Nieto has passed a series of reforms in education, telecommunications, tax reforms, and energy.

Mexico has always been well positioned geographically to grow its economy through trade. With coastal access to both the Atlantic and Pacific Oceans, Mexico's goods can easily reach markets both in Europe and the fast-growing Asia-Pacific region. Closer to home, Mexico does enormous values of trade with the United States and Canada through the North American Free Trade Agreement (NAFTA). Market integration through NAFTA has increased Mexican exports to the United States from $39.9 billion in 1993 to $280.5 billion in 2013, according to the Congressional Research Service. More important than the sheer volume, economic intercourse extends to technology transfer and other auxiliary benefits.

Technology transfer is now set to transform Mexico's hydrocarbon exploration and production sector (see Global Business Reports' Mexico Hidrocarburos (Oil & Gas) 2015 Industry Explorations – Spanish Language Edition, published in April 2015). Mexico nationalized its upstream oil sector in 1938, prohibiting foreign ownership of any oil produced in the country. Nationalization has been a source of great pride for Mexicans, but the industry has suffered in recent years from a lack of foreign investment and new technologies that can jumpstart production levels. From 2004 to 2013, Mexican oil production declined from 3.8 million barrels per day (mbpd) to 2.9 mbpd.

By opening the hydrocarbon sector, private companies that have refined techniques for unlocking tight and deepwater oil and natural gas in the United States can bring these technologies to bear in Mexico. Most immediately, Mexico will look to spur production from its shallow oilfields, then move to exploring deepwater fields in the Gulf of Mexico that were previously out of the reach of Petróleos Mexicanos (Pemex), the giant state oil company. Low oil prices are unlikely to discourage investment, as the extraction costs for Mexico's shallow plays remain low and attractive, but deepwater and shale plays have higher extraction costs and may be delayed.

The economic growth stimulated by the opening of the energy sector is expected to reverberate to others sectors including the chemicals industry and to usher in a period of sustained strong growth for Mexico. As the reforms were only signed into law in Au-


## MEXICO AT A GLANCE

Source: CIA World Factbook

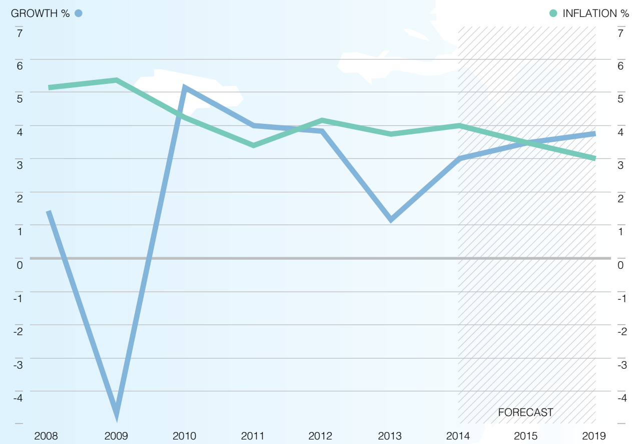
**Population:** 120,286,655 (July 2014 est.)
**Capital:** Mexico City
**Chief of State:** President Enrique Peña Nieto (since 1 December 2012)
**Gross Domestic Product:** $1.327 trillion (2013 est.)
**Growth Rate:** 1.2% (2013 est.)
**GDP per Capita:** $15,600 (2013 est.)
**Economic Sector Breakdown:** Exports: $370.9 billion (2013 est.): manufactured goods, oil and oil products, silver, fruits, vegetables, coffee, cotton. Imports: $370.7 billion (2013 est.): metalworking machines, steel mill products, agricultural machinery, electrical equipment, car parts for assembly, repair parts for motor vehicles, aircraft, and aircraft parts.
**Major International Trade Partners:** United States, Canada, China, Japan

**3.8%**
**INFLATION 2013**
Source: CIA World Factbook

**1.2%**
**GDP GROWTH RATE 2013**
Source: CIA World Factbook

## MEXICAN GROWTH VS. INFLATION (2008 TO 2013)

Source: International Monetary Fund




gust 2014, it is far too early to declare them a success or failure, but they instill confidence about the future of Mexico.

The political environment, on the other hand, instills little confidence. Many voters rejected the election of President Peña Nieto and his party, the Institutional Revolutionary Party (PRI) in December 2012, and accused the authorities of electoral fraud. The street protests that followed the election were driven as much by historical mistrust of the PRI, which had governed Mexico for 71 years prior to its defeat in 2000 and was characterized by cronyism and graft, as the immediate accusations of electoral fraud. Despite opposition, the Peña Nieto administration moved swiftly to enact its agenda of jumpstarting the economy, tackling an appalling security situation emanating from the illegal drug trade, and opening up Mexico's hydrocarbon sector. The PRI failed to secure a parliamentary majority, but managed to pass reforms and set Mexico on an auspicious economic track.

Peña Nieto's political popularity, however, has slowed declined and has fallen markedly in recent months, due to the failure to improve the security situation and new accusations of cronyism that lead to Peña Nieto himself: the president bought a house in 2005 from a contractor who has since won numerous government contracts under his administration. Later, Peña Nieto's Finance Minister was recently discovered to have taken a loan from the same contractor in 2007 to buy his own house. The security situation also continues to frustrate Mexicans and undermine business confidence. In September 2014, municipal police abducted 43 students, who later murdered by drug cartels. The administration has been weak and ineffective in addressing citizens' calls for justice. By early 2015, Peña Nieto's approval reached as low as 40%; a Mexican president has rarely been this unpopular.

Political weakness has prompted business interests to go on the attack against the administration's tax increases. Moreover, the decline in oil prices since the summer of 2014 has reduced national tax revenue. More importantly, the relaxation of quantitative easing by the U.S. Federal Reserve could also reduce investment in the country. Finally, the Mexican peso has slid against the U.S. dollar by 11% since the summer of 2014 and placed additional pressure on the country and Mexicans buying imported products.

Mexico faces serious political and economic headwinds and, at the same time, an auspicious long-term future. Deep-rooted problems will continue to hold the country back from meeting its potential, but the reforms are bound to spur broader economical activity, including in the petrochemicals, agrochemicals, automotive, aeronautical, and construction sectors, to name a few sectors that are discussed in the following report. •

# Ildefonso Guajardo Villarreal

Secretary of Economy
**GOVERNMENT OF MEXICO**

**Mexico's GDP expanded by only 1.4% in 2013 and 2.1% in 2014. What are the reasons behind this anemic growth?**
The Mexican economy is highly integrated to the global economy. Our ratio of total trade to GDP is approximately 66%. This makes our economy highly susceptible to economic fluctuations outside of Mexico. Thus, if the United States faces a bad year economically and Europe's growth remains stagnant, we are disproportionately affected.
Looking at the internal factors in Mexico, 2013 saw the transition to the new government, and it takes time to adjust policies. When the new administration came to power, certain sectors had been mismanaged, and it was necessary to rethink how entire systems were managed.
Today, the economies of our main trading partners are in much better shape and our own domestic policies are better structured. Decision making in the private sector is not looking at the short-term, as we see from the high level of foreign direct investment (FDI) coming into Mexico. This is proof that investors have faith in Mexico, not just in the short term, but looking to the long term as well.

**There is an obvious split between Mexico's large formal network of businesses and informal small and medium-sized enterprises (SMEs). How does the government aim to address this split in the Mexican business environment?**
Twenty years ago we integrated our country into the global market and opened our borders to foreign trade by signing the North American Free Trade Agreement (NAFTA). Since that time, we have multiplied our exports by seven and FDI inflows have increased fourfold. We have signed free trade treaties with 45 other countries that have directly connected Mexican producers to over one billion consumers across the world. At the same time, the economy has stabilized since the 1990s and both inflation and interest rates have come down. However, none of this translated into strong growth for Mexico because the underlying mechanisms governing how business operates were in dire need of reform.
The structural reforms aim to level the playing field for all businesses. One goal is to provide a regulated economy in which SMEs have access to more and more competitive financial resources and cheaper energy. How can companies flourish if they are paying 35% more for telecommunication services? How can companies flourish when they do not have access to financing? At the end of the day, the reforms, paired with a strategy to directly target sectorial developments, will help make the business environment more attractive for all players. Through INADEM (Instituto Nacional del Emprendedor), with a budget of MXN$10 billion, we are further pushing for the development, innovation and growth of entrepreneurs and micro, small and medium businesses.

**The automotive industry, an increasingly important area of focus for the chemical industry, is a key driver of the country's economy, but foreign players dominate the supply chain. Will we see Mexican companies make the transition from simple product supply to more knowledge-based participation?**
Ideally, the arrival of new investments into a country will lead to the domestic development of technologies and value-added capabilities. This process has already taken root in Mexico, and the country can boast a number of firms that contribute high-level processes and products to the industry. We now hope to see a similar skill transfer take place within the aerospace industry. Mexican aerospace exports have grown approximately 15% in the past seven years largely due to the proven expertise that has been built up in the automotive sector. We furthermore want to see the SMEs develop alongside this industry as tier 2 and 3 players.
Mexico is now in a privileged position with regards to manufacturing. There are three pillars to succeed in manufacturing. The first is human capital. Countries such as China and Korea will see their labor force diminish by 30% by 2050, while Mexico's will increase by 30% in the same period. The second is energy. Thanks to the Energy Reform, this resource will become cheaper, allowing companies to be more competitive on cost. Innovation is the third pillar. To this end, we are investing heavily in boosting information technology (IT) capabilities, and we have recently launched PROSOFT 3.0, our revamped public policy aimed at developing the IT sector in Mexico.

**Where will the Mexican economy be three years from now?**
The main target of President Enrique Peña Nieto is to reinstate the possibility of 5% to 6% growth by the end of his term. All of our economic policies are geared to stimulating growth. He has acknowledged that a dichotomy exists between unproductive SMEs and dynamic modern industry, and his policies aim to redress this situation. At the end of the day, we must increase productivity. This will be accomplished by incentivizing productive organizations to expand and by helping low productivity organizations become more sophisticated.

# Ing. Miguel Benedetto Alexanderson

Director General
**ANIQ**

**Could you please begin by telling us about ANIQ and the main milestones that have occurred since its inception?**

ANIQ was founded in 1959 and has grown to 240 members that represent over 95% of the companies that produce and distribute chemicals in Mexico. ANIQ divides the chemical industry into 19 unique sectors and the largest of these sectors are synthetic resins, synthetic fibers, pigments and dyes, fertilizers, and adhesives and sealants.

The primary role of ANIQ is to lobby the federal government in order to increase competitiveness and contribute to the development of the industry. ANIQ also provides training to those involved in the chemical industry, and trains between 4000 and 5000 people annually in areas such as safety, environment, energy, foreign trade, and union relationships. As the characteristics of the chemical industry are particular, ensuring safety is a primary objective for ANIQ.

Internally, ANIQ has the largest staff of any association in Mexico with over 80 employees and has three different sites that we operate from, including a training facility.

**Since Global Business Reports last met with ANIQ in 2009, what have been the most significant changes in the chemical market in Mexico?**

The most beneficial change that ANIQ has witnessed in Mexico is the increase in free-trade agreements. Mexico currently has 44 free-trade agreements (FTAs) with numerous countries all over the world and participates in FTAs with every Latin American country other than Brazil. Most recently Peru, Chile, and Colombia have entered into FTAs with Mexico, and Mexico is currently in discussions with Turkey to build such an agreement. These FTAs have opened up the market and allow the Mexican chemical industry to compete internationally on a much larger scale.

**What effect will the government reforms have on Mexico's chemical industry?**

The government reforms will bring Mexico back to the production levels witnessed during the late 1980s and early 1990s, when Mexico was the seventh largest petrochemical producer in the world. Although it may take five to ten years, reaching growth of 5.5% within the petrochemical industry is certainly possible for Mexico.

This prospect of growth is possible thanks to three contributing factors: the availability of feedstocks, the price of feedstocks, and the geographic positioning of Mexico. Mexico still has an abundance of feedstocks available that are competitively priced. Second only to the Middle East, Mexico has the most competitively priced feedstocks in the world. The availability and price of feedstocks paired with Mexico's ideal geographical location opens a world of possibilities for petrochemical producers and all those involved in the chemical industry. In addition, the government reforms and the opening of Pemex will allow for a large substitute of imports and a rapid development of technological capabilities. Currently over 80% of the requirements needed for petrochemicals are being imported into Mexico. National production will increase as a result of the reforms and the country will become less dependent on imports and become more self-sufficient. In addition, new international players that partner with Pemex will bring new technologies and capabilities, which will allow Mexico to exploit resources that until now have been left alone.

**Small to medium-sized enterprises (SMEs) make up a large majority of the Mexican economy. In addition to working with large multinationals, does ANIQ collaborate with these small organizations?**

Approximately 50% of ANIQ's memberships are SMEs and 55% of the members are funded by national capital. Currently, the chemical industry in Mexico employs 60,000 people. ANIQ forecasts that during the next 10 years this number will double to 120,000 people, a large percentage of which will remain in these small to medium-sized companies.

**How do you expect that ANIQ will transform in the next five years?**

ANIQ's current members consist solely of chemical and petrochemical companies. Moving forward, it is expected that ANIQ will begin to offer services for the oil and gas community. This will attract new members and will expand the focus of the services that we currently offer. Lobbying in the Mexican oil and gas sector has been limited to Pemex but in the future, ANIQ will aim to lobby on behalf of these new members, which will further develop our capabilities internally.

# MEXICAN CHEMICALS

## An Industry Recovers as Structural Reforms Spur Optimism

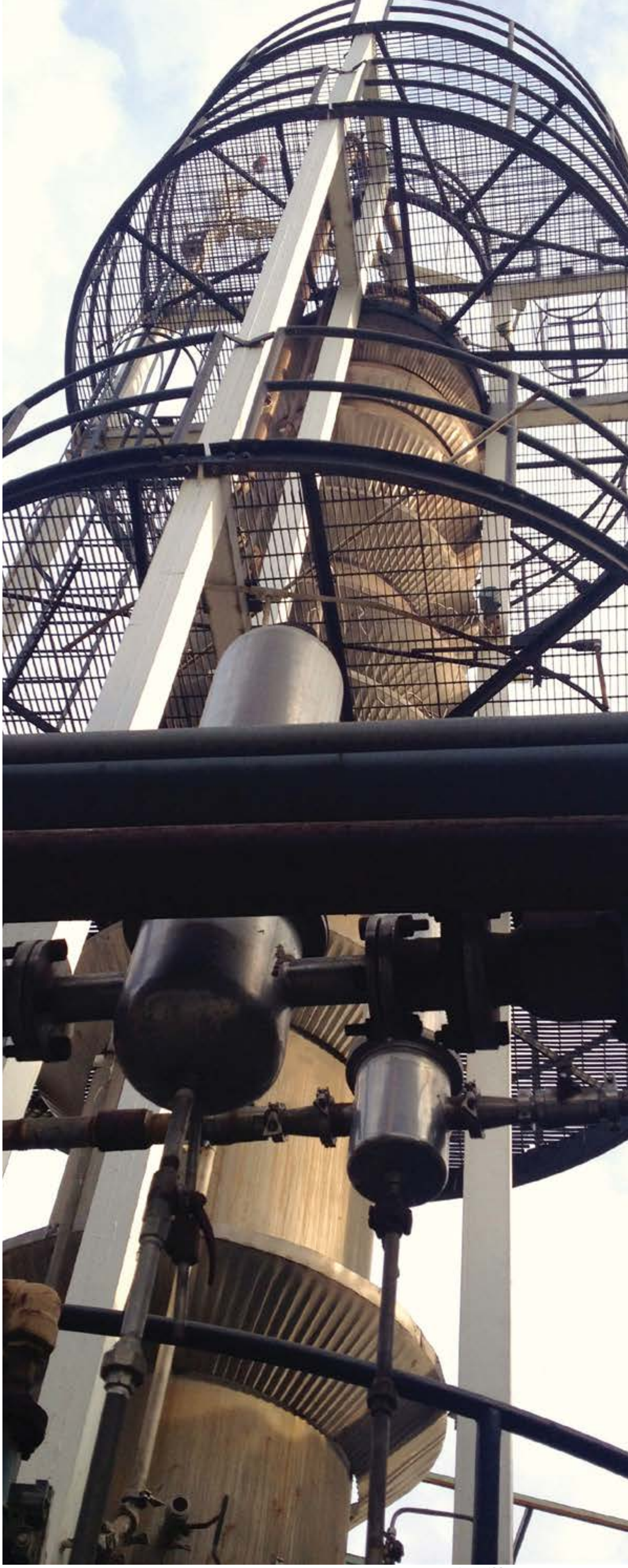


Image: IQC

In the wake of Mexico's historic approval of structural reforms allowing for private investment in the hydrocarbons sector at the end of 2013, the Mexican market has been frenzied with optimism and growth projections. President Enrique Peña Nieto's success in pushing through this reform package is certainly one worth celebrating, and now that the reforms have been approved, the business community is more clearly evaluating its opportunities across sectors. For Mexico's chemical industry, the opening up of the country's oil and gas sector could be the game changer. In decline since the 1990s, the Mexican chemical sector has struggled under the weight of Pemex and international competition. As Mexico's economy is the most closely linked to that of the United States, it has also been the most affected by the US recession. Yet, today Mexico has taken the lead in regional growth as its fellow Latin American powerhouse Brazil enters a recession. Upstream private investment spurred by the reforms could create downstream benefits to place the Mexican chemical market more firmly on the map. "Mexico has developed quite well since the crisis. We suffered perhaps the most in Latin America due to our proximity and close relationship with the United States, but this also helped our companies to make the most of our resources and become stronger," said Fernando Hernández, head of country services for Clariant.

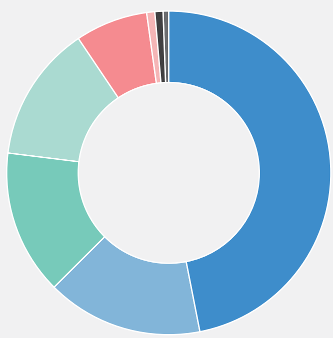
In the context of the wider economy, the past two years have seen relatively slow growth in Mexico, with a GDP growth of 1.1% in 2013 and a forecast for 2014 that was downgraded from 3%/4% to 2.3%/3.3%. Brighter prospects for the year ahead are being boosted by the country's strongest sectors which include automotive and food and beverage; both markets which are prime targets for chemical consumption.

Strong demographics, with over 52% of the population under 25, and a growing middle class, present robust growth opportunities going forward. "Mexico's GDP growth for 2015 is estimated to be around 3.8% in a market of 120 million inhabitants, with flourishing industries in many sectors," said Carlos Orbegozo, director of Merck Millipore Mexico.

Amidst the backdrop of relative economic growth, the Mexican chemical sector has posted encouraging numbers following nearly two decades of decline. Apparent domestic chemical consumption in Mexico has risen steadily from $33.7 billion in 2011

### MEXICO'S CHEMICAL INDUSTRY BY SEGMENT (2013)

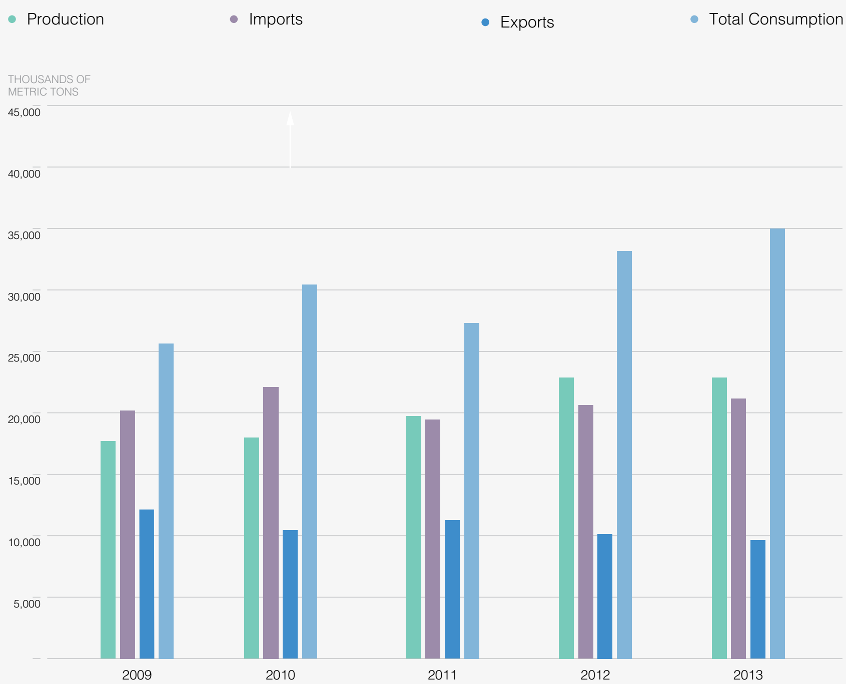
Source: ANIQ



| | % |
|---|---|
| Petrochemicals | 47.2% |
| Synthetic Resins | 15.5% |
| Inorganics | 14.3% |
| Industrial Gases | 13.8% |
| Fertilizers | 7.2% |
| Pigments and Colorings | 0.8% |
| Synthetic Oils | 0.8% |
| Adhesives | 0.4% |
| TOTAL | 100 |

### MEXICAN CHEMICALS INDUSTRY, 2009-2013

Source: ANIQ




to $35.7 billion in 2012 and $37.1 billion in 2013. National production has not kept pace; however, after dips in 2011 and 2012, Mexico finally regained 2010 levels in 2013 with an output of $17.6 billion.

"The past year was no doubt a difficult one for the chemical industry. The slow growth in the overall economy has had a fundamental effect on the chemical industry," said Roberto Ortiz, general director of Nynas Mexico, the local subsidiary of the global specialty oil producer and a world leader in transformer oil supply. "Nynas has seen positive trends in our business segments, and we are enthusiastic as we will have additional supply for naphthenic bases oils in 2016. The Mexican market has been slower as expected one year ago, but we remain optimistic that it will show a positive trend in the mid term."

This incremental growth in chemical production has not been sufficient to stem the tide of Mexico's growing trade deficit. The chemical sector's trade balance hit a five-year low in 2013, with imports of $31.3 billion and exports of $11.8 billion. While exports have made a net increase in the last five years, this gain has not kept up with imports coming in to meet growing domestic demand.

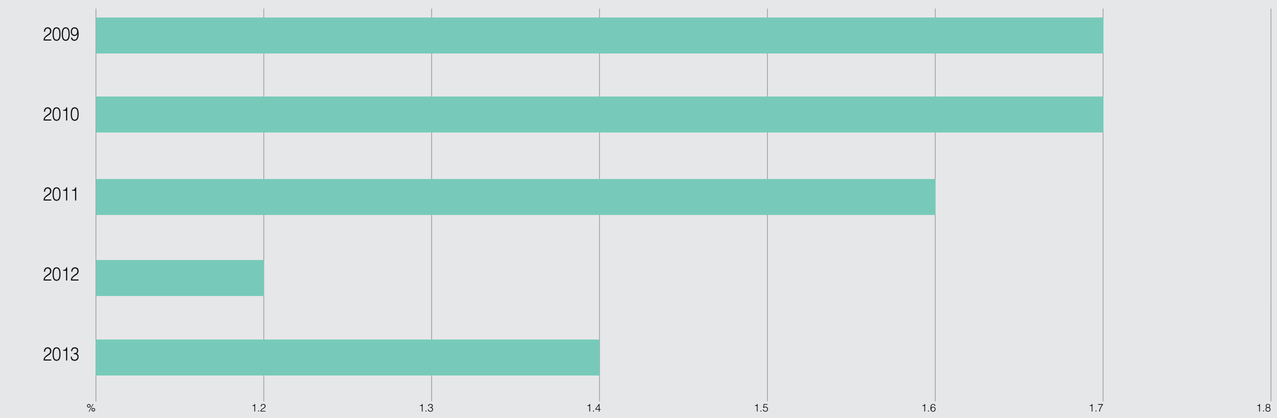
"With over $30 billion of raw materials imported each year, the chemical sector is

still active but is less integrated. Mexico's main export markets are in North America and Europe, which are the most effected by recession so Mexican exports have stayed at the same level," explained Gilberto Ortiz, vice president of energy within the chemical sector for industry association CANACINTRA and general director of law firm Gilberto Ortiz y Asociados.

With the promise of Nieto's approved structural reforms, the chemical sector is hoping for its recovery to accelerate. Expectations will have to be tempered, however, as investors remain in wait-and-see mode regarding downstream developments. A further challenge to the industry threatens, as domestic producers must soon contend with chemical capacity expansions underway in the United States. Mexico's government will have to fine-tune

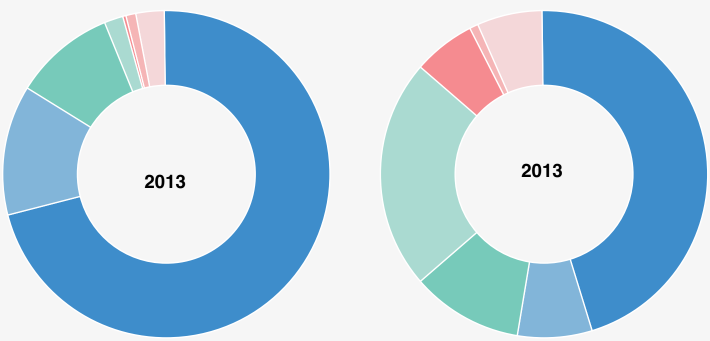
**MEXICAN CHEMICALS INDUSTRY AS % OF GDP (2009-2013)**

Source: ANIQ




**CHEMICALS IMPORTS BY ECONOMIC ZONE (2013)**

Source: ANIQ




| | 2013 | 2013 |
|---|---|---|
| NAFTA | 71.1 | 45.3 |
| Asia | 12.92 | 7.4 |
| European Union | 9.64 | 11 |
| South America | 2.6 | 22.5 |
| Central America | 0.12 | 6.5 |
| EFTA | 0.59 | 0.8 |
| Others | 3.03 | 6.5 |
| | 100 | 100 |

its policies related to the chemical sector in order to ensure adequate incentives to lure international players to Mexico and bolster domestic companies. “With the coming of this new government we thought that there was going to be recovery, nevertheless, in the first year we have seen the opposite,” said Juan Manuel Díaz, president of the chemical sector for CANACINTRA. “If there is no activation of the internal market, it will be very difficult for the industrial sector to maintain its position.”

## Can Mexico’s Structural Reforms Revive Chemical Manufacturing in Mexico?

Industry leaders are hanging hopes on the historical structural reforms passed to provide the much-needed impetus to bring manufacturing back to Mexico. In the future, the opening of the energy sector is expected to have a twofold impact on chemical production in Mexico as manufacturers count on energy and feedstock prices decreasing. “The government reforms will bring Mexico back to the production levels witnessed during the late 1980s and early 1990s, when Mexico was the seventh largest petrochemical producer in the world. Although it may take five to ten years, reaching growth of 5.5% within the petrochemical industry is certainly possible for Mexico,” predicted Miguel Benedetto, general director of Mexico’s largest chemical association ANIQ.

Already rising labor costs and increasingly strict environmental regulations in China have brought manufacturers back to North America. “Many companies that moved operations to China are now returning to North America. Mexico offers a viable option for businesses. The Mexican workforce is highly competitive in cost and quality compared to Asia. There are also significant logistical advantages in Mexico when serving the U.S. market,” said Herwig Bachmann, general director of Evonik Mexico.

Yet optimism remains cautious regarding the impact of the structural reforms. Industry leaders have voiced concerns that the downstream implications of the energy reforms are not well defined and international companies have yet to confirm investments in refining or petrochemical processing capacity in Mexico. “The only difference between promises of the past and this current plan for reform is that there is judicial reform accompanying these policies; however these reforms are still partial and are open to misinterpretation. The impact may not be as drastic as many people might imagine,” said Gregory Polak, general director of Grupo Polak.

With a slew of cracking facilities slated to come online in the United States starting in 2017, Mexican producers will have to


Image: Tecnimont (Maire Tecnimont Group)

cope with regional competition made fiercer by U.S. shale gas prices. According to reports by Bloomberg, global chemical manufacturers are investing a record $72 billion in US facilities.
"The new energy reform will help remedy some of the problems with Pemex but there is a risk that this shakeup has come 20 years too late. Now that the United States is well on the path to becoming a major shale gas producer and petrochemical hub, there may be much lower demand for Mexican products," said Alfredo Ison, general director of chemical distributor Química Delta.
In this context, competitive reindustrialization is a top priority for the industry. "There is a list of about 3,000 products that are no longer manufactured in Mexico and we need to bring them back to the country," said Ortiz of CANACINTRA.
Through a CANACINTRA committee established to study Mexico's lost production chains, the association has determined the country has competitive potential to recover production in gas and natural gas derivatives, oil derivatives, and natural products. "Most importantly we need to develop refining capacity to develop oil derivatives to support downstream manufacturing. This would give us competitiveness again, but since there is an excess of refining capacity in the United States there is not short-term interest. We have hopes for more interest in refining in the longer term," said Ortiz of CANACINTRA.

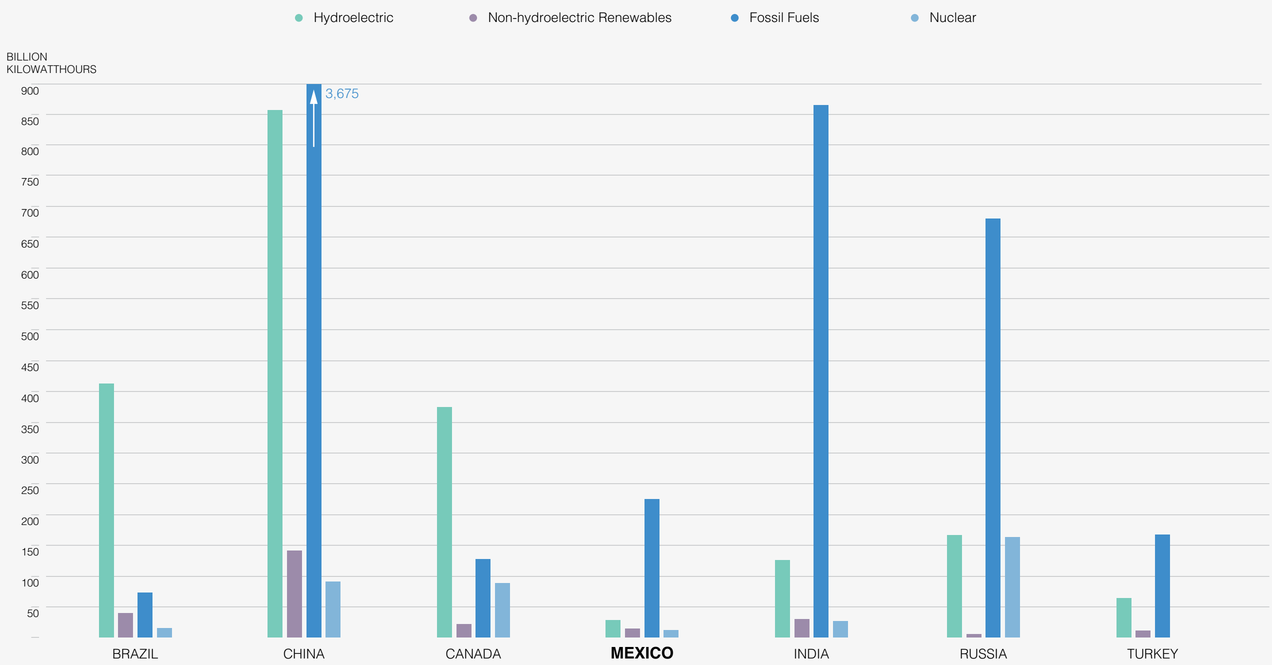
*Mexico was very important in commercializing petrochemical products in South America, however with NAFTA Mexico has shifted its trade focus. Now the government is taking steps to reestablish trade with South America with the Pacific Alliance to strengthen relations," said Ortiz of CANACINTRA. "Because Mexico is not a part of the Mercosur bloc, we have to gain more confidence in the Latin American market.*

*- Gilberto Ortiz,*
*Vice President, Energy, Chemical Sector, CANACINTRA*

As the impacts of the structural reforms will first need to trickle down from upstream developments, benefits to chemical companies will arrive in the medium to long term and have the potential to be diluted. "It is important for companies in the country not to rely on these reforms for increased business alone; they must continue to improve their standards so as to keep up with an evolving global market," counseled Hernández of Clariant.

**ELECTRICITY GENERATION MIX, MEXICO AND PEERS (2012)**
**Total Net Generation by Fuel Source**

Source: U.S. Energy Information Administration, International Energy Statistics




### Mexico deepens its ties with the global economy

Mexico's trade advantages are only set to multiply as the structural reforms come to fruition. The chemical market has been radically affected by the 1994 signing of the North American Free Trade Agreement (NAFTA), which brought a flood of foreign-made chemical products into the market. The facilitating of trade between the United States and Mexico put pressure on domestic chemical manufacturing, while also opening its borders with the largest global economy. "Twenty years ago we integrated our country into the global market and opened our borders to foreign trade by signing the North American Free Trade Agreement. Since that time, we have multiplied our exports by seven and FDI inflows have increased fourfold," said Ildefonso Guajardo, Mexico's secretary of the economy.

Mexico has gone on to further develop its trade links by signing numerous free trade agreements with other global trading powers. "Mexico currently has 44 free-trade agreements (FTAs) with numerous countries all over the world and participates in FTAs with every Latin American country other than Brazil. Most recently Peru, Chile, and Colombia have entered into FTAs with Mexico, and Mexico is currently in discussions with Turkey in order to build this relationship," said Benedetto of ANIQ.

In the wake of NAFTA, Mexican companies were quick to take advantage of its trade partners to the north, although arguably at the cost of its trade ties with the rest of Latin America. With the 2012 signing of the Pacific Alliance, a trade bloc consisting of Mexico, Chile, Colombia, and Peru, Mexico is refocusing on synergies to its south. The group, which aims to integrate all of its respective trade agreements, agreed early on in negotiations to the immediate elimination of all tariff items for the chemical sector. "Mexico was very important in commercializing petrochemical products in South America, however with NAFTA Mexico has shifted its trade focus. Now the government is taking steps to reestablish trade with South America with the Pacific Alliance to strengthen relations," said Ortiz of CANACINTRA. "Because Mexico is not a part of the Mercosur bloc, we have to gain more confidence in the Latin American market."

Looking across the Pacific, Mexico has also taken an active role in negotiating the Trans-Pacific Partnership, an initiative to sign a free trade agreement between countries in Asia Pacific and North and South America, including Canada, the United States, Mexico, Chile, Peru, Australia, New Zealand, Malaysia, Singapore, Vietnam, Brunei and Japan. ANIQ has participated in these talks, lobbying on behalf of the industry for the proposed elimination of tariffs between member countries for manufactured products including chemicals, plastics, scientific instruments and electrical machinery. •

GO

# Gilberto Ortiz & Juan Manuel Diaz

GO: Vice President, Chemical Sector
JMD: President, Chemical Sector
**CANACINTRA**

**Since we last spoke with CANACINTRA in 2009 just following the financial crisis, can you provide us with an update of the development of the chemical and petrochemical sectors in Mexico?**

GO: Over the last five years, the financial crisis has been a recurrent problem that has been aggravated by the way that small and medium companies have tried to use financial formulas from suppliers in order to pursue projects. It has been a difficult time for the petrochemical industry, which has been contributing less to GDP and losing ground to cost-competitive international producers. As a consequence, chemical and basic petrochemical imports grew over 100% while Pemex has decreased its petrochemical production and closed many of its plants.

As for small and medium companies we have seen a disintegration of activity. Today these companies are working with imported products. We estimate that there are over $30 billion of raw materials imported, which shows that while the chemical sector is still active, it is less integrated. Because Mexico's main export markets are in North America and Europe, which are the most beaten by recession, Mexican exports have stayed at the same level. Recently we have seen a small recovery, mostly in the automotive and food industries, but it is not yet enough.

JMD: With the coming of this new government we thought that there was going to be recovery, nevertheless, in the first year we have seen the opposite. CANACINTRA is working to encourage government policies to support the chemical sector. If there is no activation of the internal market, it will be very difficult for the industrial sector to maintain its position. This has led in some cases to companies working three of four days less to avoid laying off personnel.

**What recent actions have been taken by CANACINTRA to support the petrochemical and chemical sectors?**

GO: First of all we need to re-industrialize. There is a list of about 3,000 products that are not manufactured anymore in Mexico and we need to bring them back to the country. CANACINTRA is implementing a program to recover production chains. We have established a committee that studies which products can be competitively manufactured in Mexico in order to recover manufacturing that was lost to imports. We have found strengths, especially in gas and natural gas derivatives, oil derivatives, and natural products. This committee works very intensely with education institutions, CONACYT authorities and other institutions for technological development.

Rebuilding these production chains is difficult, as we are still importing raw materials. We hope with the structural reforms we will see more investments in the production of intermediates. This will depend on how investors outside of Mexico see the country. Most importantly we need to develop refining capacity to develop oil derivatives to support downstream manufacturing. This would give us competitiveness again, but since there is an excess of refining capacity in the United States there is not short-term interest. We have hopes for more interest in refining in the longer term.

**What is the perception of Mexico's chemical sector outside of the country for investors?**

GO: Mexico was very important in commercializing petrochemical products in South America, but with NAFTA Mexico has shifted its trade focus. Now, the government is taking steps to reestablish trade with South America. Our chemical industry has always had a large participation in South America. The first development to reestablish trade with the region is the Pacific Alliance signed by Chile, Peru, Mexico, and Colombia to strengthen relations. Because Mexico is not a part of the Mercosur bloc, we have to gain more confidence in the Latin American market.

**While the structural reforms have generated a lot of optimism in the market, they are following a long line of attempts at reform that have not succeeded. How are these reforms going to be different?**

GO: First of all, the law has changed fundamentally. The heart of the reforms is to eliminate the existing barriers for foreign investment to reach Mexico's strategic sectors, which are the oil sector, the electric sector and the telecommunications sector. This is a radical change from reforms in the past. Mexico has an approximate petroleum production of 2.4 million barrels per day. With the opening of the oil and gas sector it is expected that petroleum production will grow up to 3.5 million before 2020 and reach up 4 to 4.5 million in 2030. This would bring very important cash flow to Mexico and strengthen the economy as a whole, especially internal consumption.

**What expectations do you have for the chemical industry and the wider economy in the next five years?**

JMD: We hope in the next five years to see a complete change in the industrial sector. Our goal is to be more re-industrialized and integrated.

GO: Our efforts are dedicated to demonstrating that we can internally develop the industry. We must guide the development of our resources to ensure it is done effectively, fortify education and support technological development.

# MEXICO'S ENERGY STRUCTURAL REFORM; WHAT'S NEXT ON PETROCHEMICALS?

Sean Goldstein, Partner,
Daniel E. Sanchez, Partner
White & Case Mexico

**Background.**

Since 2012, the Mexican government has pushed forward an ambitious set of structural reforms aiming at tackling the most deeply entrenched problems in the country and triggering the overall economic growth by seeking to attract investment and, hence, create business opportunities. Spotlight has been directed to the so-called *Energy Reform* which encompasses a whole new regime at the Constitutional and legal and regulatory levels, allowing participation of private investment in sectors which – for over half a century – were monopolized and reserved to Mexican state-owned entities (Petróleos Mexicanos and its subsidiary entities (Pemex), and *Comisión Federal de Electricidad*).
Prior to the Energy Reform, the production of basic petrochemicals, and almost all midstream and downstream sectors were reserved to the Mexican state through Pemex. As a consequence of the Energy Reform in turn, the oil and gas sectors are being fully liberalized; private participation has no restrictions (not even on foreign investment), and thus it enables private investment participation into a wide range of activities, including production, refining, processing, transportation, storage and retail sales of petrochemicals.

**New legal and regulatory regime.**

As opposed to the previous legal regime which differentiate *basic petrochemicals* from secondary petrochemicals, the Hydrocarbons Law (LH) enacted as part of the implementing legislation ensuing from the Constitutional –energy – reform, defines petrochemicals as *"liquids or gases obtained from the processing of natural gas or from the refining of petroleum and its transformation, capable of being transported through pipelines"*.
Under the LH, whereas transportation, storage, distribution, compression, liquefaction or decompression, regasification and retail sales to the public of petrochemicals are activities which have been liberalized and may be developed by private developers and sponsors, they nevertheless remain subject to regulatory approval and supervision through the Energy Regulatory Commission (CRE). Foreign trading of petrochemicals remains subject to foreign trade rules and the applicable tax regime, and on top of those, to import and export permits which are to be granted by the Ministry of Energy, in each case.
Marketing of hydrocarbons, LP gas, other petroleum products and petrochemicals will not require prior permit, though marketers will need to be registered with the CRE and be bound to a series of reporting obligations with the CRE. All petrochemicals transported, stored, distributed, marketed or sold within Mexico shall comply with the applicable Mexican Official Standards (*Normas Oficiales Mexicanas*, the so-called "NOMs") to be issued by the CRE.

**Current situation; challenges.**

Whether concerning assets, facilities, know how, human resources, etc., Mexico has and it now affords developers with all stages throughout the whole petrochemicals' productive chain; processing, fractionators, cracking, refining, transformation and transportation of petrochemicals are activities now open to private participation.
The demand for polymers in Mexico has been and is expected to continue being above and beyond the production capacity. To this end, in more recent years it became public policy to engage into large investments in infrastructure to cope with the constantly growing demand (the best examples of this are the *Etileno XXI* project and the *Pemex-Mexichem* alliance).
The 2014-2018 National Infrastructure Program (PNI) sets fort the objectives sought by the Mexican government to develop infrastructure associated to certain strategic areas to boost the economy; this PNI contemplates up to US$3.3 billion for investments in petrochemicals' projects (mostly for modernization or overhaul of some existing facilities), which are irrespective of other investments in new projects which may be developed by private sponsors, and also for instance, the recently-announced refurbishment and reconfiguration of Pemex's Tula, Hidalgo refinery (totaling such project alone, an investment of over US$15 billion), and the Pemex and Grupo Alfa's Alpek US$300 project for repowering the Cangrejera Petrochemical Complex, at Coatzacoalcos, Veracruz.
Because of the constantly growing methane reserves and production capabilities in the US, there is also an increasing supply. Because of the growth in the supply of methane, there is thus, a considerable growth in the petrochemical industry and supply chain (a large number of participants have applied for permits and are currently developing greenfield and brownfield projects throughout the East coast of Texas).
Mexico's mid to long term options may be narrowed to either import large quantities of polymers and other petrochemicals to cope with its internal demand, or otherwise start developing and investing into the sufficient infrastructure to process and produce its own. To avoid being dependent on imports, as well as to benefit from the liberalization of the industry, a number of domestic and foreign petrochemical companies are currently assessing whether to engage into new projects, while others have already approached Pemex and are now seeking to venture into current and future projects under a totally *new-for-Pemex* private regime.
Opportunities in Mexico for petrochemicals in the following years – particularly with ethane - will continue growing; while there are still some issues that need to be ironed-out, solid legal and regulatory foundations are being set into place.

# Gerson Moacir Secomandi

Commercial Director
**OXITENO MEXICO**

**Oxiteno has been in Mexico since 2003 when the Brazilian company acquired Canamex. What changes have you made since the acquisition?**

Oxiteno purchased Canamex Quimicos' operations in Mexico over 10 years ago. After we purchased Canamex, we made changes in the organizational structure of the company to look after the market, the finances and operations. We made investments in our plants to better serve the market with products, using our experience in Brazil to develop specific products for the Mexican market.

**Can you give us a brief overview of the three facilities that Oxiteno has in Mexico and what investments you have planned for them?**

Over the last 10 years, we have doubled our capacity in Mexico. At our plant in Coatzacoalcos, where we manufacture non-ionic products as well as some specialties, we are finishing an investment to increase the capacity to this plant. We are making this expansion because of the facility's logistical advantage. There is a port near the plant, which allows us to export the products easily by ship or by train.

At our second plant in Guadalajara, we manufacture specialty products and blends, serving the home and personal care, food, oil and gas, pharmaceuticals and agrochemical markets. Oxiteno's third plant in Mexico is in San Juan del Rio, and there we manufacture anionic products focused on sulfate products and sulfurate products used for shampoo, home care, cleaning and industry.

**What percentage of Oxiteno's Mexican production is for the domestic market? Do you expect this percentage to change going forward?**

Today we are exporting about 30% of our products made in Mexico. Our first priority is to look after the local Mexican market because there is a great demand that is not yet fully developed. There is very low consumption per capita of personal hygiene products as well as foods, so these are great areas to grow. We want to serve these industries and use Mexico as an export platform to look after the NAFTA market and Latin America. We export products to Colombia, Costa Rica and elsewhere in Latin America.

**Oxiteno has been ranked by Info Magazine as one of the top 10 innovative companies in Brazil. What are the benefits of having a research and development (R&D) center in Mexico that serves the wider NAFTA market?**

Our main R&D center is in Brazil, but at our Guadalajara plant, we have an R&D center with a large capacity and the necessary equipment and qualified personnel for the market. At Oxiteno, an average of 2% per year of our general invoices goes to investment. At our Mexico center, we focus on home and personal care products, foods, oil and gas, as well as agrochemicals. Oxiteno has more capacity and a greater line of products in the Mexican food market than in Brazil. Oxiteno also has certification for polysulfides, which is an advantage in servicing the United States.

**On which specific areas of the food industry does Oxiteno focus?**

Oxiteno is investing in more production capacity and new products for the food industry. In Mexico taxes that are being applied to high caloric content products have brought sales down in the market. This is an opportunity for companies like us to make products for baked goods and chocolate factories to reduce caloric content while maintaining quality, taste and the caloric requirements of the Secretary of Health. We are also seeing in countries across Latin America that food consumption is low compared to Europe and other countries.

**Oxiteno also participates in the oil and gas industry. Do you think that the energy reforms will change Oxiteno's profile?**

We have strong activity in oil and gas in Brazil and are developing the same level of activity in Mexico. In June, we signed a technological agreement with the Mexican Petroleum Institute to develop new products where we have expertise and other products in which they have the expertise to manufacture and sell jointly or separately. This union will allow us to take advantage of the reforms. Pemex will have to expand its production capacity, and this crude oil will have to be treated. Together we can take advantage of the opportunity.

**Oxiteno has implemented sustainability initiatives like the "Greenformance Program" and has set goals to make more of its raw materials renewable. What green initiatives are you implementing here in Mexico?**

One example is our shampoo products with sulfates, for which we use natural alcohol from palm oil imported from Malaysia, where there is a lot of production. At one of our plants in Brazil, we import palm oil and transform it to alcohol. In Mexico we purchase products either from our plant in Brazil or we import them directly from Malaysia. All the sources of our raw materials have Roundtable on Sustainable Palm Oil (RSPO) certification, proving that the products have a renewable origin and have not used child labor. Almost 30% of the chemical raw materials that Oxiteno uses are renewable, coming from alcohol, sugar and other products.

# Carlos Jurado

General Director
**FMC AGRICULTURAL SOLUTIONS LAN REGION**

**Can you please give us a short introduction to FMC and tell us about its presence here in Mexico?**

FMC started with one product and from there grew very quickly. Today our portfolio has more than 80 products and over 130 distributors. We have grown from $4 million in sales at the beginning to $72 million this year. 70 of our distributors encourage sustainability, growth initiatives and increases in food quality, which are our areas of focus as well. We are also developing several new products. We are especially excited about our new fungicide offerings.

**Can you give us an overview of your manufacturing and distribution facilities in Mexico?**

The company has a unique model, which some companies have copied. Many years ago, all our production facilities in the United States were closed and new facilities were opened in China. We produce the active ingredient there and bring it to Mexico to finish the formulations with our two commercial partners. Recently, we opened a distribution center in Celaya, which also has a unique model. Other companies have many distribution centers, which is not an efficient strategy. We have just one and includes the latest innovations which allow us to accelerate logistics. We have agreements with transportation companies and divide Mexico into three areas where different companies operate to ensure that our products get delivered as fast as possible. In this industry, it is common for distribution centers to be located far away from their clients. For example, a client in the north of the country may be dependent on a distribution center in the south, which means a long delivery time. Our distribution location is in the center, which gives us the advantage to be able to react quickly.

**Do you have a strategy to help you expand in Mexico?**

Our market in Mexico is growing by 5% to 7% annually, but a great part of this growth is based on inventories in the distribution channel. We have access to the markets where we invested and know the situation in every region and municipality of the country. We have a vast database of information and are cross-referencing it with information from our sales representatives to better understand what areas we want to cover.
FMC recently acquired Cheminova, which will add to our overall growth. We are still waiting for approvals from certain government agencies, especially ones in Brazil. This acquisition will help us grow from the sixth to the third position in the Mexican market. Cheminova will give us a very strong position in insecticides specifically, because they will bring in an additional $30 to $35 million to our current sales of $72 million.

**FMC has a very strong focus on sustainability. Can you please tell us what FMC is doing to help the environment?**

FMC is taking a very serious position in this regard. Last year, we took the decision to buy a company in North Carolina to make green products and established a partnership with one of the biggest fermentation companies called Christian Hansen. FMC will gain an extraordinary amount of knowledge about fermentation and cost production from this. We hope that we will start launching new compounds in the next two years. It may sound arrogant, but FMC's standards are above the industry standards here in Mexico. We have been recognized as a socially responsible company for the last seven years. We have two consecutive years as being the number one company in terms of recognition of the industry for being the best AMOCALI associate. We have a program where we actively work in terms of responsible agrochemical management. We have to give back a part of the wealth that FMC receives from this country and our community.
AMOCALI is an association of companies in Mexico where the majority are global companies. The association complies with a residues management plan. Containers that have been used become dangerous in terms of their residues, so our job is to collect and dispose of these containers. Our main objective is to integrate other companies because we currently have 50 associates, but in Mexico there are more than 150 registered companies that sell products that contaminate and these companies are currently not participating.

**Where can we expect to find FMC in five years?**

We will have a very solid sustainable portfolio. We want to become the number one company in agriculture. We also want to become the most efficient company of the group with less working capital and more growth. We want products that provide a different solution than what the traditional chemical companies give to their clients. We are in a very noble business; it is a vibrant business that will continue to grow. The world's population must be fed so we are compelled to deliver better quality products with a different profile. The industry is working on that, but we must accelerate this to help make our world a better place.

Image: Braskem IDESA

# THE DOOR IS NOW OPEN PETRO-CHEMICALS

"Over the last five years, the financial crisis has been a recurrent problem that has been aggravated by the way that small and medium companies have tried to use financial formulas from suppliers in order to pursue projects. It has been a difficult time for the petrochemical industry, which has been contributing less to GDP and losing ground to cost-competitive international producers. As a result, chemical and basic petrochemical imports grew over 100% while Pemex has decreased its petrochemical production and closed many of its plants."

- Gilberto Ortiz,
Vice President, Energy, Chemical Sector,
CANACINTRA

# WHAT GOES UPSTREAM, MUST COME DOWN

## Mexico's Petrochemicals Sector

Unlike oil and gas exploration and extraction, petrochemical manufacturing in Mexico has already been opened to the private sector. Private sector involvement has been limited to secondary processing, however, with basic and intermediate production being handled by state entities. Despite the open market, which has led to a Unigel-Pemex petrochemical partnership and now a massive Braskem IDESA ethylene joint venture, foreign companies have been wary of surety of supply over the years. "The difficulty before was that foreign petrochemical companies were not totally confident that Pemex would be able to supply them with raw materials," said Ison of Química Delta. "Now we hope that the predicted heavy investment upstream will help boost confidence and attract investment further downstream. Mexico needs this new capacity because the country currently relies overly on imports to meet domestic demand for gasoline."

### Mexico's first major petrochemical investment in 20 years advances

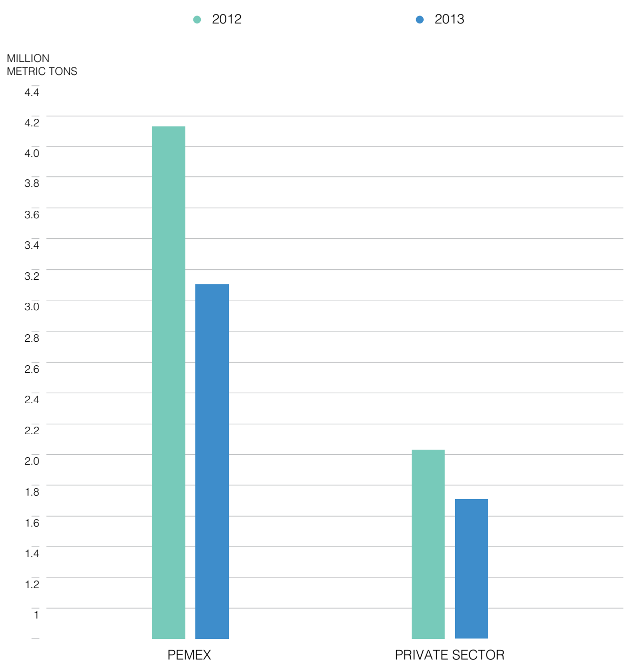
With over 60% of the requirements needed for petrochemicals production currently being imported into Mexico, the decision by Brazilian petrochemical player Braskem and Mexican chemical company Grupo Idesa to invest in a $4.5 billion polyethylene facility is a much-needed step towards correcting Mexico's raw material deficit. "As of today, Mexico is importing 1.3 million mt/y of polyethylene. The production capacity of the Braskem IDESA plant, Etileno XXI, will be 1.05 million mt/y, which will help Mexico to substitute its imports with local production, particularly imports coming from North America. This is convenient for local customers, who are able to have closer technical support and rely less on inventory," said José Luis Uriegas, general director of Grupo Idesa.

The Etileno XXI project will need secure access to competitive raw materials, a risk which Brakem IDESA has managed to mitigate with a government commitment to supplying ethane over the long-term. "This was by far the most important ingredient in a project such as this. You cannot invest close to $5 billion in a project without the complete insurance of the supply of competitive raw materials," explained Uriegas.

At the end of 2014, the project was in its peak construction phase, with 17,000 workers on site. As one of the major projects that Mexico has seen in the last decade, Braskem IDESA has had to take a proactive approach to equipment procurement and labor force development. "It is the largest industrial investment in Mexico and the largest petrochemical project to start in the Americas," explained Roberto Bischoff, CEO

**SALE OF INDUSTRIAL PETROCHEMICALS IN 2012 AND 2013**

Source: ANIQ




*It is the largest industrial investment in Mexico and the largest petrochemical project to start in the Americas. We started this project ahead of the current wave of new projects, so we are in a better position in terms of equipment procurement and labor force. However we will also face some labor challenges as we work on training our operational workforce.*

*- Roberto Bischoff,*
*CEO,*
*Braskem IDESA*

of Braskem IDESA. "We started this project ahead of the current wave of new projects, so we are in a better position in terms of equipment procurement and labor force. However we will also face some labor challenges as we work on training our operational workforce."

For its part, the company has invested in training its construction workforce and is now working to hire its operational workforce well in advance to provide them with training at Braskem's Brazil operations. In addition to jobs, the megaproject will bring downstream benefits to small and medium-sized consumers of its polyethylene, of which the site will be producing both low density and high density. "Since 2012 we have been working with midsized Mexican firms to develop close relationships with them and to understand their needs in order to be ready to fulfill their requirements. We have more than 300 customers and it is our strategy to stay close to our Mexican clients to be able to offer them customized solutions," said Bischoff.

To extend this impact, Braskem IDESA has partnered with the government of Veracruz and CANACINTRA to support plastic bag makers in the region, a key consumer of their output. "Our initiative with the government of Veracruz is to create clusters that will attract investments in downstream industries that would use our products and in turn produce plastic bags or packaging that can be consumed in the region. These are less capital-intensive industries, but can createa lot of jobs in the process," said Bischoff.

While certainly a positive step forward, Braskem IDESA's Etileno XXI project is not a silver bullet. Growing petrochemical demand will be too great to be satisfied with one facility, albeit it of this scale. "Although there will be new production plants set up to produce raw materials domestically, such as the Braskem IDESA project, imports will continue to be vital for Mexican producers," said José Carlos Tapia, general director of chemical distributor Trichem. "Mexico will continue to be a net importer of these raw materials for the near-term."

Yet the success of Etlieno XXI has set a precedent for investors. "We have shown that such projects can be successfully brought to fruition in Mexico, even in the aftermath of the worst financial crisis in recent history. As long as there is a guaranteed supply of competitively priced feedstock and support from government and other relevant stakeholders, which Etileno XXI has, these projects can work," said Sean Goldstein, partner at White & Case Mexico.

**Private players harness the power of Pemex**

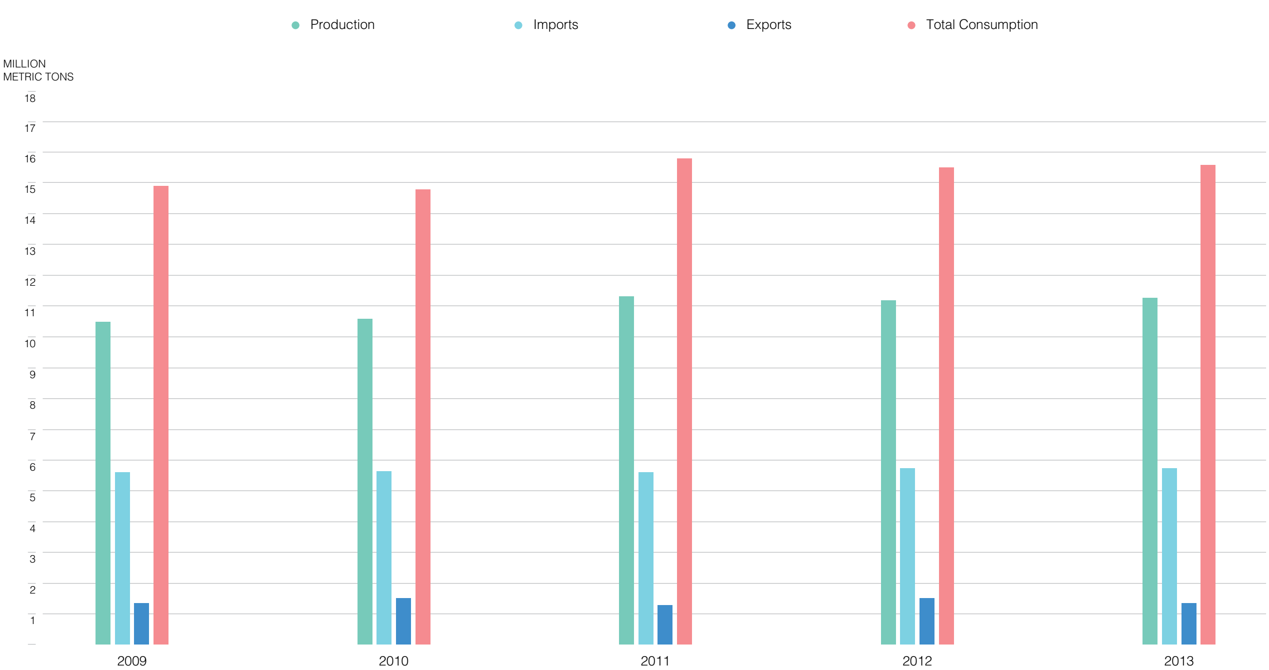
Pemex continues to play an influential role in the industry, supplying the main feedstocks to producers and consuming a majority of the industry's output. As a result, weak performance by the global oil and gas giant in chemical sales, sustaining a 6.6% decline in 2013, is being felt further down the value chain.

"When we started our facility six years ago, Pemex used to supply us with five very important raw materials. They have since stopped producing these products that we now have to get through importers. Today we import roughly 70% of our raw materials," said Moises Preciado, general director of Barnices y Resinas.

Grupo Petroquimico Beta (GPB), the only Latin American company that produces hydroxyethyl cellulose, has its plant in Coatzacoalcos, Veracruz, strategically situated in between Pemex Petroquímica's Cangrejera and Morelos plants. "Grupo Beta receives a substantial portion of its feedstock through a pipeline that comes directly from the Pemex facility; this is a substantial agreement for us. We have developed a lubricant that takes five minutes to transport to Pemex which allows us to be very flexible in terms of our client offerings," said Raúl Baz, president and general director of Grupo Beta. "Our goal is to start manufacturing more of the products that Pemex will need as it opens up at a better price than our competitors so that we can build on this relationship."

**MEXICAN PETROCHEMICALS INDUSTRY (2009-2013)**

Source: ANIQ



**MEXICAN PETROCHEMICALS TRADE BALANCE WITH MAJOR PARTNERS**

Source: ANIQ


In order to combat rising imports, Baz at Grupo Beta advises companies to focus on specialty petrochemical products destined for domestic use. "Grupo Beta has a very important R&D team based out of Mexico that receives 5% of our sales. They work on consistently developing the latest HEC products as well as other polymers. Mexico imports more petrochemical products than it exports oil, which is something that needs to change. The Mexican industry as a whole should move to manufacture more specialty chemicals that can be applied to the oil and gas sector, and we aim to adopt this strategy at Grupo Beta," said Baz of Grupo Beta.

Also expected to play a hand in decreasing Mexico's petrochemical imports is the energy reform's restructuring of basic petrochemical processing regulation. "Previously the basic processing in the petrochemical industry was only in the hands of Pemex," explained Alejandro López-Velarde, partner at energy-focused law firm López Velarde Wilson Hernández & Barhem S.C. (LVWHB). "This division created inefficiencies in production, because at the same time that companies produce secondary petrochemical products, they also produce primary products reserved only for the Mexican state. According to previous Mexican law, Pemex had to buy the basic petrochemical products at the cheapest price on the market, which is why no companies wanted to invest here."

out the option of relying on global networks as do the sector's multinational heavyweights, domestic producers are seeking creative value chain solutions. "The key strategy to stay competitive is to import active ingredients. By doing business in China, you can reach the same low costs of multinationals and large domestic companies for active ingredients," said Juan Ma nuel Ramírez, general director of Internacional Química de Cobre (IQC), which produces fungicides, insecticides and herbicides. "Beyond imports, smaller domestic companies like IQC also benefit from our structures. Compared to multinationals that have very large staffs, we can be more flexible and efficient."

On the other end of the supply chain, Velsimex is looking to take advantage of Mexico's geographic position in order to become a top global player. "Velsimex is currently looking at Africa and Asia as potential markets but Latin America currently presents a very interesting

## Pemex Policies Shape Petrochemical Landscape throughout the Years

*Othón Canales, chairman of chemical distributor Quimi Corp, outlines the history of Pemex's petrochemical developments and its impact on the private sector over the last three decades.*

At the time when Pemex invested in its first ammonia plant in the early 1960s, Mexico was a closed economy. When the ammonia and other products plants were built, the private sector immediately invested in downstream plants. This created a scenario unique to Mexico in which primary petrochemicals were made by Pemex and secondary petrochemicals were made by private industry. By the 1980s, Pemex was one of the main producers of ammonia in the world. As a result, the private sector was investing in more downstream capacity. Not long after, however, Mexico signed the General Agreement on Tariffs and Trade (GATT) in the early 1990s and eventually NAFTA. With the opening of the economy, Mexico was flooded with petrochemicals. At this time, the government decided to discontinue its focus on the petrochemical industry and stopped investing in Pemex's petrochemical plants. This brought the private sector to a halt, as they were not able to back integrate raw materials.

Under the regime of President Carlos Salinas, Pemex was broken into five independent entities (one corporate and four subsidiaries), which had negative implications for the private sector. The Ministry of Finance interfered with transactions between the subsidiaries and determined the price at which Pemex's gas was sold. The price of gas was based on the price of gas in Texas and adjusted for freight and transportation cost. Immediately the price of gas soared in Mexico and Pemex decided to shut down its ammonia plants. Urea producers in Mexico lost their source of ammonia and CO2 and many producers collapsed. Over these years there were only a few survivors in the private petrochemical sector, including Grupo Idesa, Alpek, Kuo and Mexichem. •

market. Mexico has many shared idiosyncrasies with these countries and with the many trade agreements that exist between Mexico and these countries, the potential for Velsimex is truly great," said Escalante.

Expanding the sector's in-country innovative capacity is crucial as Mexico's small landowners face climate constraint and market consolidation. "Farmers are always looking for better quality seeds both in terms of yield and disease resistance. Roughly 75% of Mexico's area is reliant on rainfall for its irrigation, which can affect the crops, climate and yield depending on whether there is an excess of rainfall or a drought," said Manish Sirohi, general manager at United Phosphorous de México.

Companies are tapping into this need for innovation with investments in research and development capacity specifically within the Mexican market. United Phosphorus's subsidiary Advanta will be establishing an R&D center in Mexico this year, while Syngenta Mexico will be investing in a Seed Care Institute in Jalisco to provide services in seed safety testing, treated seeds analysis, and formulations development and application.

Syngenta's institute will be focused on product application in the Mexican market. "There are three areas that we will focus on at the institute: training farmers how to use this technology, improving the safe use of products, and increasing productivity. The Seed Care Institute in Jalisco is a key way for us to expand as we will develop new technologies for seed care," said Javier Valdés, general director of Syngenta Mexico.

Yet introducing new technologies to the market can be challenging in a fragmented market. "The use of technology remains regional here in Mexico with the majority of farmers on the Pacific coast, mainly Sinaloa and Sonora, utilizing technology in their processes. In the middle of the country as well as towards the southeast, the adoption of technology in farming practices remains low," said Ibarlucea of Ibarquim.

Many small-scale farmers do not have access to new technologies or the funds to implement them. Without government support, this is unlikely to change in the short term. "Currently there is a huge demand for maize, sorghum and rice, but Mexico only produces 22 million mt of maize annually, while it consumes 31 million mt/y. Rice farming areas have dropped by half, with production at around 180,000 mt/y and consumption at 1,000,000 mt/y," explained Sirohi of United Phosphorous de México. "This needs to change. The government must take initiatives in providing both credit and education to meet these needs. The private sector has been attempting to do this, but it cannot and should not be held responsible for this on its own. Public-private partnerships will be key in making this change," continued Sirohi.

Faced with the lower purchasing power of small agricultural producers and low agrochemical prices from multinationals, players such as IQC have taken further innovative approaches to developing their value chains. In a partnership with the mining company VES Capital Partners, IQC is developing the Veta Grande silver-copper project as a mine with on-site processing and refining capacity. "We plan to continue this model in the future and acquire various mining projects to put into operation. The copper we are mining we can then refine into copper sulfate and use for IQC's production, making our business more vertically integrated" said Ramírez of IQC. •


Image: Macropol

# Alejandro Martínez Sibaja

Director
**PEMEX GAS Y PETROQUÍMICA BÁSIC (PGPB)**

**To begin, can you introduce us to the PGPB division within Pemex and the work that you do?**

PGPB is one of four subsidiaries within Pemex. We are responsible for the processing of the gas that we receive from exploration and production (E&P), as well as its distribution and commercialization. PGPB is also responsible for the transportation and distribution infrastructure for natural gas and liquefied petroleum gas (LPG) and is responsible for 11,000 km of pipelines, as well as compression stations and terminals. Our pipelines move more than 5 billion cubic feet (Bcf). In addition we import 1.2 Bcf to 1.3 Bcf to meet demand. In the petrochemical sector, we are responsible for the sulfur that is produced at our gas processing complexes and refineries; we move this gas in Mexico for domestic sales and through PMI, Pemex's international commerce arm. With the energy reform and secondary laws, however, the way we do business is going to change dramatically.

**What are the main changes that the energy reform will bring to PGPB's business model?**

The natural gas market was opened in Mexico more than 15 years ago, so for natural gas commercialization and transport we are already competing in the market, but new actors will now be competing with us in processing, E&P, commercialization and transportation. We will be creating partnerships with private companies in order to continue to participate in the market, but our participation will be on a minority basis because we want to send the right signal to the market. We will also have a new independent entity called CENEGAS, which will manage practically all of the capacity of PGPB's pipelines. PGPB will first transfer its capacity to CENEGAS, then its assets later on.

**Will the two main projects that PGPB is currently working on, Ramones and Cinturón Interoceánico, also be transferred to CENEGAS?**

By law CENEGAS will be responsible for managing all of the capacity in an integrated natural gas pipeline system. These assets, however, will not be transferred because they are partnerships with private companies. On different phases of the Ramones pipeline we are working with Gasoductos de Chihuahua, IENova and GDP Suez.

**Can you update us on the development of the Ramones and Cinturón Interoceánico projects?**

Ramones will be part of the backbone of the transportation of natural gas in Mexico. Ramones is a 1,000-km pipeline that starts in Agua Dulce, Texas and extends down to Reynosa and then to Los Ramones. From Los Ramones the pipeline will go to San Luis Potosi and then Apaseo El Alto. The Ramones pipeline will be moving 2.3 Bcf by the end of 2015. Ramones is just the beginning of a number of pipelines that Pemex and CFE are developing in order to bring gas from the south of Texas to Mexico.

PGPB's other key project is the Cinturón Interoceánico, which will link the Coatzacoalcos port to the Salina Cruz port. This is a very important project for us because it will allow us to take advantage of both the products in the south of Texas and those that we produce in the southeast of Mexico, and move them to Salina Cruz. Salina Cruz is a gateway to the Pacific for not only sending products to the Far East but also to South America and the Pacific coast of Mexico.

**Are there any other key projects that PGPB is focusing on?**

We are also working on an underground storage capacity project. We have a 2 million barrel-capacity propane cavern near the Pajaritos port and are building another two caverns for propane and natural gas. This underground capacity will give us an advantage in moving gas from the south of Texas to the Salina Cruz port.

**What expectations do you have for Mexico developing its own shale gas resources?**

With the energy reform, we will also have E&P coming from private companies, and our expectations are strong. The shale gas phenomenon has changed the industry for the next 50 years. Not only can we take advantage of gas from the south of Texas, we also produce more than 3 Bcf from the Cantarell field that we can move to the Pajaritos port and then Salina Cruz.

**Where do you see the most natural gas demand coming from in the future?**

Demand for natural gas in the next ten years will be very important as CFE changes their plants from fuel oil to natural gas and builds natural gas facilities. We will see demand coming from the center and the north of Mexico. There will be important increases in demand from the Monterrey area, which is largely industrial, and the western side of Mexico where assembly plants for car makers have been established. The ports of Pajaritos and Tampico will have increased demand as well. We also have to build pipelines to the southeastern states of Oaxaca and Chiapas as per the mandate of President Nieto, as a part of the National Plan of Infrastructure to bring benefits to these regions that have the highest rates of poverty. •

# Roberto Bischoff

CEO
**BRASKEM IDESA**

**Can you provide us with an introduction to Braskem IDESA and a brief history of Braskem's entry into Mexico through its partnership with IDESA?**
Braskem IDESA is a partnership between Braskem, a Brazilian petrochemical company that is a leader in the production of plastics in the Americas, and IDESA, a Mexican petrochemical group. Braskem IDESA is 75% owned by Braskem and 25% owned by IDESA. We are involved in the construction of a very important petrochemical complex, Etileno XXI, which will produce 1,050,000 metric tons per year (mt/y) of polyethylene. Polyethylene is a derivative that Mexico is lacking and as a result imports 1.2 million mt/y. The project is 85% complete as of November 2014 and is scheduled to be on stream by the end of 2015. We have just started the initial tests of the complex regarding electric power supply, and we will soon begin tests for water supply, steam supply and steam generation.

**What are some of the main challenges you face in ensuring the project is completed on time and on budget?**
The Braskem IDESA project is a greenfield project that involves a lot of permits and necessary arrangements. The cost of the project is $4.5 billion, 70% of which is financed by a pool of very qualified financial lenders on a non-recourse project finance scheme. This is one the major projects built in Mexico in more than a decade; it is the largest industrial investment in Mexico and the largest petrochemical project to start in the Americas. We started this project ahead of the current wave of new projects, so we are in a better position in terms of equipment procurement and labor force. However, we will also face labor challenges as we work on training our operational workforce. We have invested a lot into training our construction workforce, many of whom are local people. Our operational workforce will be a smaller group of about 480 people who are very specialized in their fields. These jobs are usually only found at Pemex and we have decided to hire them far ahead of our needs to be able to train them. We have invested in special training in Brazil to give them experience in our operations there, as well as in Europe at licensor plants.

**What innovative technologies are you incorporating into Etileno XXI's polyethylene production?**
Our cracker technology is one of the most sought after. We will make two different types of polyethylene. The first is low-density polyethylene, which we will produce using Basell technology, a very well known technology that uses high pressures. For high-density polyethylene, we have twin plants that will produce 750,000 mt/y using Slurry Loop technology from INEOS. Both of these technologies are state-of-the-art and well adapted to the market requirements in Mexico. We have identified good opportunities in the high-density market in Mexico, which is why we first built two high-density plants. Low density is also very much needed in the Mexican market. By 2016 when we will be up and running, Mexico will continue to import about 700,000 mt/y and remain a net importer.

**How will Etileno's 1,050,000 mt/y of polyethylene production affect the downstream chemical sector in Mexico?**
There are opportunities available because Mexico is a net importer, we plan to ramp up in the domestic market. Since 2012, we have been working with medium-sized Mexican firms to develop close relationships with them and to understand their needs in order to be ready to fulfill their requirements. We have more than 300 customers, and it is our strategy to stay close to our Mexican clients to be able to offer them customized solutions.

**U.S. petrochemical facilities are slated to open in 2016 and 2017 as a result of the shale gas boom. How will Braskem IDESA ensure its market share in Mexico?**
The companies in the United States are very used to supplying their Mexican customers and Mexico is a very important market for them. We believe that our key differentiator will be the close relationships we have with our customers. We are looking to develop long-term relationships with our clients in Mexico, where we can add value. This is the way we function in Brazil, and we intend to do the same in Mexico.

**What opportunities do you see for Braskem IDESA in light of the structural reforms?**
Reforms to the electric power generation system will create opportunities to generate power to sell to third parties. While Mexico will be able to acquire cheaper gas from the southern United States, the country will also be able to produce gas domestically in a more competitive way. All these conditions will generate a short-term boom in investments in power generation. Braskem IDESA is self-sustaining; we have a 150-megawatts power plant that was designed for our own consumption with some extra energy available for the local market, and we are starting to build a second plant. The price of electricity in Mexico is high, and there is an opportunity to produce it cheaper domestically.

# Alejandro Llovera Zambrano

President
**INDELPRO**

**Indelpro was founded in 1992, can you tell us about the history of the company and its recent milestones in the last two years?**

Indelpro first began with a plant that produced 100,000 metric tons (mt) of polypropylene, which later increased to 220,000 mt. In that moment propylene and ethylene, basic raw materials, were imported. The company later built a splitter in order to capture low quality propylene from Mexico's refineries. In 2008, we built a second production line, which has a capacity of around 450,000 mt. Today, our total production capacity is 670,000 mt. Our main focus is to supply the Mexican market, which is sized at 1.2 million mt per year. As a result of the lack of raw materials available in Mexico, our current production only meets 40% of this demand.

As a company, Indelpro places great importance on the environment and as such we comply with Industria Limpia and Responsible Care and the National Chemical Industry Association (ANIQ) program. We are constantly seeking to reduce our emissions as a way to help the environment.

**Why is Indelpro the only producer of polypropylene in Mexico?**

Indelpro is currently the only producer of polypropylene due to the lack of available raw materials in the country. Previously, Mexico used to import 100% of its raw materials, and today the industry receives approximately 75% of its supply from Pemex. Propylene is a byproduct of refineries and in the last five years, refining in Mexico has been either stable if not decreasing. The demand in the domestic chemical industry has been growing at 5% per year, but raw material availability has not been keeping pace. Today, most of the imported polypropylene comes from the United States. The energy reforms were introduced to address the lack of raw materials and hopefully to decrease energy costs, which are very high in Mexico compared with the United States.

**Indelpro has a wide range of product lines. Which product is the largest driver of growth?**

Polypropylene is a very versatile resin, and our ample product portfolio is designed so we can participate in many different market segments. Among the largest segments by volume are packaging applications (BOPP film, caps and closures, etc.), fibers (hygiene products) and Food and Beverage containers. The automotive industry is now one of the fastest growing segments for PP in Mexico at this time. Through research and development (R&D) and innovation, Indelpro is constantly looking to offer better products and solutions to all segments and customers. The company is in position to increase its production and sales; however, this is all contingent upon our access to competitive raw materials. Indelpro's ample product portfolio and presentations, quick response, and delivery efficiency puts the company in an excellent position to grow.

**Can you tell us about your partnership with LyondellBasell and the benefits that Indelpro receives from partnering with such a large international petrochemical company?**

Indelpro uses LyondellBasell's technology in its production lines, as it is one of the most widely used and reliable technologies in the world. The two companies share knowledge and technology whenever one of us discovers new improvements in production. As a result of this partnership, we are also able to supply our customers with a more varied portfolio of products. In addition, our employees train in LyondellBasell plants all over the world; upon their return to Mexico we are able to gain from their acquired expertise.

**One of the main challenges of doing business in Mexico is transportation. Has this been an issue for Indelpro?**

Transportation of raw materials is one of the main challenges that Mexico is facing. For example, in the United States, propylene is typically transported via a network of pipelines; however, Mexico does not have this infrastructure. Indelpro's plant is connected with a pipeline to only one refinery in Mexico and the other supplies arrive by rail cars and trucks. In order to be more competitive, Mexico has to invest to build up its infrastructure.

Regarding our finished products, we provide an integral service to our customers, offering our products delivered to our customers' plants. For that purpose, we use a large fleet of railcars, bulk trucks and trucks, and our customers can avoid the long transit time and administrative process involved in importing materials from other countries.

**Where can we expect to find Indelpro in five years?**

Hopefully, the energy reform recently implemented in Mexico will result in better availability of raw materials and Indelpro will be building its third production line. We would like to maintain our position as the largest supplier of polypropylene in Mexico. Indelpro currently serves about 40% of the market and we would like to grow much more. Indelpro has been operating in Mexico for many years and while we are the only producer in Mexico, we are not the only supplier; however, we have been able to compete with very large suppliers in the United States through differentiated products and service.

# José Luis Uriegas

Director General
**GRUPO IDESA**

**Can you please tell us the brief history of Grupo Idesa and the main milestones that the company has encountered?**

Grupo Idesa was founded in 1956 and has operated since the beginning as a petrochemical company. In the early 1960s, Mexico was a closed economy and did not actively participate in trade with other countries. The country was therefore looking for a way to substitute any dependency on the imports of raw materials. Grupo Idesa recognized the opportunity to supply these raw materials and started production. During the 1980s, Grupo Idesa decided that in addition to serving the domestic market, it would begin to focus on exports. In order to export more efficiently, a production facility was erected in Vera Cruz that had direct access to the rest of the world via the nearby port.

Starting in 2005, Grupo Idesa decided not only to pursue new ventures independently but to focus on building relationships and utilizing technical and financial partnerships to build new projects. The latest example is the large Braskem Idesa plant being constructed in alliance with Brazilian petrochemical producer Braskem. Beginning in 2008, this partnership has proven to be very beneficial for both parties. Braskem is knowledgeable in the production of polyethylene and Idesa has a deep understanding of the Mexican market. This project is 80% complete, and we will start operations September of 2015. Thus far the project is on time and on budget.

**What is the benefit of having a local producer and supplier of petrochemicals in the Mexican chemical industry?**

As of today, Mexico is importing 1.3 million metric tons (mt) of polyethylene. The production capacity of the Braskem Idesa plant will be 1.05 million mt, which will help Mexico to substitute its imports with local production, particularly from North America. This is convenient for local customers, who are able to have closer technical support and rely less on inventory.

**What have been the greatest challenges in completing the Braskem Idesa project?**

To be successful in petrochemicals, four elements are needed. The first one is good access to raw materials. If there are feedstocks that are priced competitively and abundant in quantity then you have a great case to make business. The Mexican government is committed to supplying ethane over the long-term, which was by far the most important ingredient in the project. You cannot invest close to $5 billion in a project without the complete insurance of the supply of competitive raw materials. The second key element is having fluid access to the market. This is a very strong element for Mexico, as we have an ideal geographical location and trade agreements with 44 different countries. The third element is technology, and we have chosen the very best technologies in the market. The fourth element is talent, and Mexico has a productive and educated work force. At present, 14,000 people are working on the Braskem project, which is on time and on budget because of the hard work and dedication of this skilled labor force. Although we are one year away from completion, Idesa has hired its operators and began training these employees, so that we are ready to begin operation when construction is completed.

In addition, Grupo Idesa has been collaborating with Evonik in order to build a sodium cyanide production facility in Mexico. This project, CyPlus GmbH, also meets all four of these key pillars, and although the engineering and designing of this project has just been completed, it will be a successful project moving forward.

**How will the structural reforms affect Mexico's global competitiveness?**

The structural reforms are deeper than many expected. There are many opportunities for companies to capitalize on business opportunities. As part of the first phase, I am pleased to see that Pemex will have the opportunity to make partnerships with private companies from all over the world. This will bring much needed technology to the Mexican market and stimulate technical progress. In addition, these reforms will allow Pemex to grow and become stronger as a result of these partnerships. This progress will mean better availability of gas, crude oil, and hydrocarbons. Having access to these feedstocks is a key pillar to growth in the petrochemical industry and downstream markets.

**As we often produce these reports every five years, what objectives and goals do you have for Grupo Idesa over the next five years?**

Five years from now, Grupo Idesa plans to be in the expansion phase of our projects. The Braskem Idesa project and the CyPlus GmbH project are currently in their primary phases, and although this is a vital stage, it is still the first stage in a plan for long-term production. Grupo Idesa expects growth in the demand of our materials and will scale its production to match this demand. The reforms are a powerful step in allowing greater access to feedstocks, a necessity in increasing production in the future. In five years, Mexico will begin to see the impact of these current reforms and will become more attractive and more competitive globally.

# THE NEW RULES APPLICABLE TO THE PETROCHEMICAL INDUSTRY IN MEXICO

Alejandro López-Velarde[1]

One of the fundamental characteristics of the petrochemical industry is its integration into long productive chains, which then supply other fields of economic activity, the first link of which are the primary and the secondary petrochemical products. In fact, primary and secondary products are sometimes produced at the same time. However, the Mexican government used to divide this industry in (1) Basic Petrochemical Industry (BPI) integrated by the following products (i) ethane, (ii) propane, (iii) butane, (iv) pentane, (v) hexane, (vi) heptane, (vii) naphtha, (viii) the raw material for smoke lampblack, and (iv) methane; and (2) Secondary Petrochemical Industry (SPI) integrated by the rest of the petrochemical products. The only purpose of this division was to keep in the hands of the State the exclusive production and development of the BPI; while the private sector was able to participate in the SPI. However, when the private sector produce primary products, these products have to be sold to the Mexican government at low prices. Without any questions, this regulation was unattractive for foreign concerns that wishes to invest in the petrochemical sector in Mexico. In fact, Mexico was the only petrochemical jurisdiction in the world that established this unpractical and unattractive division.

In addition to the above-mentioned poor regulation, due to the lack of investment by Pemex in this sector, the commercial international balance in petrochemical products has been for more than a decade in the red.

Before the modifications to the Constitution back on December 20, 2013, article 28 of this paramount law reserved exclusively in favor of the Mexican State the dominion, exploitation and commercialization of the BPI. Consequently, the Mexican government modified the Constitution; the Foreign Investment Law; and promulgate the Hydrocarbons Law on March 11, 2014, with the purpose to end with the undo regulation to the petrochemical industry. Today, the private sector either national or international will be able to do the following:

i. Participate in the production of both BPI and SPI. In fact, in the Mexican legal system there is no longer the division between BPI and SPI; however, private investors will have to obtain a permit from the Energy Regulatory Commission (*Comisión Reguladora de Energía*--known by its Spanish acronym as “CRE”).

ii. Participate in the commercialization of petrochemical products as long as companies obtain a permit from CRE and provide statistical information requested by such Commission. It is important to note that petrochemicals that do not need to be transported by pipeline do not need a permit from CRE.

iii. Joint venture with Pemex or any Productive State Entity or Pemex’s affiliate for the production and commercialization of petrochemicals is now available even in the so colled primary petrochemical products. Further, the Law on Public-Private Partnerships was amended to allow public-private partnerships in this sector. It is expected that Pemex may call interested parties to participate with it joining force or selling assets for the production of petrochemicals. Back in July 1995 the Mexican government tried to sell off various assets for the production of secondary petrochemicals located at 61 petrochemical plants distributed in 10 complexes owned by Pemex-Petrochemical (*Pemex-Petroquímica*); specially, the one located in Cosaloacaque, State of Veracruz with no success since various sectors of the Mexican community opposed the sale and the possibility to liberalize the petrochemical industry to the private sector, among them, senators and representatives, unions, industrial leaders, associations, industrial chambers, Mexican doctrine and of course certain political parties which made this controversy their own under the supposed protection of the Mexican sovereignty. The foregoing caused a climate of uncertainty and lack of confidence with the domestic and foreign investors who wish to invest in this sector in Mexico. With the new provisions of the Hydrocarbons Law these uncertainties ended. The private sector will be able to (i) join venture with Pemex or any of its subsidiaries or affiliates; and (ii) buy petrochemical assets owned by Pemex and its subsidiaries if such public entities decide to sell them. •

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[1] Attorney and Counselor-at-law, admitted in México in 1991. LL.M. University of Houston Law Center, 1993. Mr. Alejandro López-Velarde was in-house counsel for the Pemex Houston Legal Department in 1992. He is a Professor of Law on Energy in the National Autonomous University of Mexico. He is partner of the law firm López Velarde, Wilson, Hernández & Barhem, S.C. where he acts as Director of the Energy Practice Group of the Mexico City office. alopezv@lvwhb.com

Image: Grupo Polak

# Raúl Baz & Raúl Marquez

RB: President and General Director
RM: Project and Commercial Director
**GRUPO PETROQUIMICO BETA (GPB)**

RB

**Could you give us a brief overview of Grupo Petroquimico Beta and your history in the market?**
RB: Grupo Petroquimico Beta (GPB) was started in 2005, when we purchased assets with the intention of manufacturing petrochemical specialties. Our specialty is the manufacturing of HEC, which is based on ethylene oxide. Developing this was a long process, which we finally finished in 2012. Our HEC is now on par with competitors like Dow and Samsung. GPB's current capacity is 3,300 metric tons per annum (mta) and we expect to increase this to 5,000 mta next year. GPB developed its plants and HEC capabilities to keep up with the oil industry, which with the segmentation of oil wells is currently very popular.

**Considering that 35% of GPB's product is exported, where do you export to and how would you like to expand these markets?**
RB: Currently, GPB exports mainly to South America. We are as yet unable to sell to European companies because of REACH requirements. REACH is a non-tariff barrier that requires a large amount of paperwork and licenses in order to be authorized for the sale of petrochemical products.
RM: Each product that comes into Europe has to be approved in this manner, which takes some time. We have been working on these approvals for nearly four years; they require proof of best practices and raw material quality. Once this is achieved, we hope to begin marketing to European clients. Given the higher value per metric ton there, the transportation cost ends up being quite low and the difference between the euro and the dollar gives us an advantage. At the same time, we are in the process of expanding relationships with the US market in order to increase our exports to the United States.

**What sort of specialty products do you see GPB expanding into in the future, having captured a leading role in the HEC market?**
RB: GPB has a very important research and development (R&D) team based out of Mexico City, where we invest 5% of our sales. They work on consistently developing the latest HEC products as well as other polymers. Mexico imports more petrochemical products than it exports oil, which is something that needs to change. The Mexican industry as a whole should move to manufacture more specialty chemicals that can be applied to the oil and gas sector, and we aim to adopt this strategy at GPB.

**What is GPB doing to improve operations at its plants and ensure best practices on par with global competitors?**
RB: GPB is always in the process of making improvements to its plants and processes. Currently we have two areas of focus. First, we have installed the latest technology in terms of safety and control systems; we have the latest ABB control systems, which we update constantly to keep up with their modifications. We are one of the three safest plants in Mexico in this regard, and given how explosive ethylene oxide can be, we are happy with our current standing.
In terms of systems, we have a rigorous training and monitoring program that involves spot tests for alcohol and drug use with all employees and contracted agents. We have created agreements with the labor unions to make it clear that we have a zero tolerance policy for drug abuse. As a whole, we make sure our employees are consistently trained in all technology present in our plants.

**Does GPB import most of its technology, or develop it in-house?**
RB: GPB develops its own technology in-house. Many larger corporations tend to be risk averse and have larger pockets, so they are able to simply go out and buy the existing technology elsewhere. Because GPB has a technological and engineering per-

spective, we have been able to develop our technology in-house. We act as conceptual engineers for all contractors we hire.

**Given GPB's proximity to two PEMEX complexes, what sort of synergies have you been able to develop with the state-owned producer?**

RB: GPB receives a substantial portion of its feedstock through a pipeline that comes directly from the PEMEX facility; this is a substantial agreement for us. We have developed a lubricant that takes five minutes to transport to PEMEX, which allows us to be very flexible in terms of our client offerings. PEMEX has only recently been given the mandate to make profits and open up their business, so increasing their sales while decreasing their costs is going to be a challenge for them, but something that our proximity will allow us to benefit from. Eight years ago, GPB bid on a product for them with a price of $1,500 per mt, with the closest bid behind us being $3,500. Our goal is to start manufacturing more of the products that PEMEX will need as it opens up at a better price than our competitors so that we can build on this relationship.

*The Mexican industry as a whole should move to manufacture more specialty chemicals that can be applied to the oil and gas sector.*

*- Raúl Baz, President and General Director, Grupo Petroquimico Beta (GPB)*

**GPB has application labs providing technological services to clients in several industries; which of the industries has the greatest demand for the services these labs provide?**

RM: Paints and coatings have shown the greatest demand for GPB as we manufacture the cellulose additives required for them. We are also developing the joint compound required for joining gypsum board together, which is an area we have seen a lot of demand in and have had substantial success in so far.

**PEMEX has been described as a company that is not open to change. What has GPB's experience been?**

RM: PEMEX has not traditionally been a market-oriented company, but this is changing. The old mode of operating at PEMEX was indeed risk averse, which did not leave much room for innovation. As its mandate changes, it will have to take more risks, which will not be an easy process. The entire government of Mexico is pinning its prestige and political capital on the success of the energy industry, and this seems to be a good catalyst for PEMEX to refresh its practices.

**Where can we expect to see GPB in the next five years?**

RB: Currently, GPB is a medium-size company and is in the lower third of companies of our type; in five years, we hope to be in the next bracket up. We hope to be a significant partner of PEMEX by that time. •

# Alejandro López-Velarde

Partner
**LÓPEZ VELARDE WILSON HERNÁNDEZ & BARHEM, S.C. (LVWHB)**

**Can you provide us with a brief introduction to LVWHB and the firm's expertise?**
We are a medium-sized boutique law firm devoted to all phases of the energy sector from upstream to downstream, including exploration, production, petrochemicals, refining, transportation, distribution, storage and commercialization. We have about 25 lawyers, 7 out of which come from the oil industry including myself. I worked at Pemex for eight and a half years, including three years at the Pemex office in Houston. As LVWHB, we have participated not only in the private sector, but also the public sector. We represent Pemex in very special cases such as antitrust and litigation where they need experts outside of their in-house legal team. We have also provided legal advice to the Mexican Congress.

**What level of interaction does the firm have with the petrochemical sector?**
The petrochemical industry accounts for roughly 30% of our business, while the oil and gas industry accounts for the other 70%. We have several clients doing business in this sector with Pemex, as well as clients that are trying to seize new opportunities from the new laws coming into force. Previously we also participated in the sale of the petrochemical assets of Pemex in Veracruz in the petrochemical complex called "Cosoleacaque," although this sale ultimately was not completed due to political reasons.

**Mexico's petrochemical industry has been in decline for the last two decades, leading to a negative trade balance for petrochemical products. Will the reforms improve the sector?**
The petrochemical industry saw its boom at the end of the 1970s and beginning of the 1980s. During that time, about 61 plants were built. After that, Pemex did not invest enough money to increase production, maintain its plants, or further develop the industry. Roughly 65% to 85% of Pemex's profits are paid as tax, and the remaining goes to exploration and production. As a result, the petrochemical industry has not been properly developed for a long time. Today we have to import a lot of the products in the industry to comply with the national demand. With the reforms, it is assumed that Pemex will be working with in partnership with private companies.

**What differentiates LVWHB's approach to the petrochemical and oil and gas sectors, compared to other law firms in the market?**
We have been on the other side of the table working with Pemex on many transactions, so we know how it does business in Mexico. We also provide a quick and personal service to our clients. Additionally, LVWHB holds seminars and writes comprehensive articles about sector issues, such as the history of petrochemical regulation in the country, and the sector's current legal framework. We are currently in the process of publishing an article about the new possibilities for foreign investors in Mexico which will be coming out in January 2015.

**As a result of the energy reform, what key changes will impact the petrochemical sector in Mexico?**
The energy reform is a huge change and will allow private companies to participate in all sectors of the industry. Mexico's economy has been based on natural resources, but it has not been regulated well in the past. Previously the basic processing in the petrochemical industry was only in the hands of Pemex. This division created inefficiencies in production, because at the same time that companies produce secondary petrochemical products, they also produce primary products reserved only for the Mexican state. According to previous Mexican law, Pemex had to buy the basic petrochemical products at the cheapest price, which is why no companies wanted to invest here. Now that this division is ended, as of August 12, 2014 companies will only have to obtain a permit from the Energy Regulatory Commission before beginning operations. Pemex will also be able to establish joint ventures with the private sector.

**Could the sudden enthusiasm for petrochemical investments in Mexico be tempered by the new projects coming online in the United States?**
There is a lot of enthusiasm in the border areas with the United States especially concerning shale gas, however it will not have a negative effect on petrochemical investment in Mexico. There are other more salient issues impacting investment, such as the real estate property law. In Mexico a property owner is not the owner of the natural resources found there. The other big issues that need to be confronted are infrastructure and the environment. Overall our clients are enthusiastic about their future prospects.

**Can you leave us with a final message about LVWHB?**
There are tremendous opportunities in Mexico. The reforms have taken place not only at the level of secondary laws, but at the constitutional level as well. Now Mexico needs foreign investment; the rules are in place to provide legal certainty and to provide commercial terms and conditions to negotiate with Pemex. Going forward Pemex will be a commercial company open to joint ventures. We welcome any questions from companies who are interested in Mexico and can guide clients on how to invest here.

# Sean Goldstein

Partner
**WHITE & CASE MEXICO**

**How does White & Case's Mexico practice fit in with the firm's global network?**
White & Case is a global law firm with offices in 26 countries around the world. We set up our Mexican practice in 1991, making us one of the first international firms to establish an office here. Since that time the office has grown from its original core of three U.S. lawyers to an 80-strong team of legal professionals. To my knowledge, we are still the only firm in Mexico to maintain U.S. lawyers in country in addition to our Mexican team. Within Mexico we offer a full range of services, including securities, mergers and acquisitions, project finance, commercial litigation and arbitration.

**What level of interaction does White & Case have with the petrochemical sector?**
On a global level, White & Case works on many major petrochemical projects, including some of the largest projects in the Middle East. With the arrival of plentiful cheap feedstock to the United States, we are also looking to focus on more activity there. We continue to be heavily involved in the Braskem Idesa Etileno XXI project.

**Could you provide us with some more information on the structured finance deal you arranged for Etileno?**
Etileno was in the pipeline for many years, and in 2010 we began to assist the sponsors in structuring a financing that eventually closed in 2013. The core lenders consisted of seven development banks, multilateral institutions and export credit agencies (ECAs). Certain commercial banks then came in under the umbrella of certain multilateral and ECA facilities. There were several reasons for this lender mix: first, the size of the financing was over $3 billion, which constituted the largest private investment in the sector in Mexican history; and second, the fact that in 2010 we were only just coming out of the global financial crisis, creating a more challenging environment for commercial bank financing.

**How has the investment climate changed since the energy reforms passed in 2014?**
Since the secondary legislation passed, we have noticed a tangible increase in investment activity. As an example, although Pemex will maintain its monopoly on gasoline sales until 2018, we already have clients looking to form joint ventures to move into retail in preparation for this market opening up. There is also significant interest in the Round 1 bids schedules for next year.

**Work began on the financing for Etileno before the reforms came into force. Did you initially have difficulties getting banks on board?**
It was easier to bring private lenders in once we secured the core development banks, multilaterals and ECAs. While several lenders had long experience working in Mexico, others were relatively new to the market. Any challenges we encountered were not related to slow progress with the reforms, rather they were because this deal was unprecedented in Mexico, both in terms of its scale and the diversity of the lender group.

**What implications will this deal have on Mexican project finance in the future?**
The purpose of Etileno XXI was to substitute imports coming into the country, but Mexico will continue to rely on PE produced overseas even after start-up of the project. As it stands, there is space for Mexico to develop several more similar-sized projects. We have shown that such projects can be successfully brought to fruition in Mexico, even in the aftermath of the worst financial crisis in recent history. As long as there is a guaranteed supply of competitively priced feedstock and support from government and other relevant stakeholders, which Etileno XXI has, these projects can work.

**Will the high volume of U.S. projects coming online dampen enthusiasm for investment in Mexican petrochemicals?**

There is certainly competition from other projects north of the border but there is room in the market for both countries to thrive. One of the main selling points of Etileno XXI was that the end products would be destined for the home market. This differs from new investments in the United States or the Middle East, which are more export-driven. Upstream developments and higher oil and gas production levels in Mexico will continue to spur interest in petrochemicals, while new pipelines from the United States will allow Mexico to take advantage of the fruits of the shale gas boom.

**Some analysts have complained that the legislation relating to downstream operations is too vague to warrant heavy investment. Do we need more clarity?**
The reforms have a very broad scope and the crowning achievement is the opening of upstream exploration and production to private investment. The downstream was already relatively open, so the impact has been less dramatic. The biggest change is that foreign investors will now be able to participate in the production of basic petrochemicals, allowing for new levels of vertical integration. There is still some degree of uncertainty over regulatory details. Essentially, the secondary reforms dictate that the sector will be governed by regulations to be released by the relevant agencies within a given time period. These regulations are yet to be released. •


Image: Grupo Polak


# FEEDING A GROWING ECONOMY AGRO-CHEMICALS

"The key challenge in Mexico is that the area for farming crops is not growing. Nearly 76% of the farmers have only 24% landholding capacity, and most of the maize crop that they grow is for their own consumption. Their landholding capacity is too low to have an interest in investing significant amounts in seeds or technology, so the technological advancements are not as welcomed within this portion of the agricultural industry."

- Manish Sirohi,
General Director,
United Phosphorus de Mexico

# HUNGRY TO SUCCEED BUT STARVED FOR INPUTS

## Mexico's Agrochemicals Sector

Mexico's agrochemical sector is dominated by global players accounting for 70% of the market, followed by a highly fragmented market of small and medium-sized companies. While consolidation has occurred in the last five years, significant potential remains for further merger and acquisition activity. Domestic and global players alike have been constrained by the introduction of 2004 regulations restricting production registration, while a growing focus on innovation presents opportunities for companies with research and development (R&D) capability.

As the global population increases, agrochemicals will play a more important role in agriculture. "In Mexico's particular case, by the year 2050 our country will have around 150 million inhabitants, who will demand a greater quantity of food," says Maria Eugenia Villanueva, executive director of Mexico's largest crop protection association PROCCYT. "Our industry plays a fundamental role supporting agriculture to increase production, cover the food needs of a growing population and reduce the dependency on importing food from abroad. Without the use of agricultural consumables supplied by our industry, productivity of all types of crops, including conventional, hybrids, transgenic and even organic, will be reduced up to 40%."

Since product registration regulation for agrochemicals was changed in 2004, the process has beleaguered the industry. While companies both international and local in scope have struggled with these regulations, which have been described as unclear and lacking transparency, domestic manufacturers have been most affected. Overtime, political opposition to the sector has taken its toll on production.

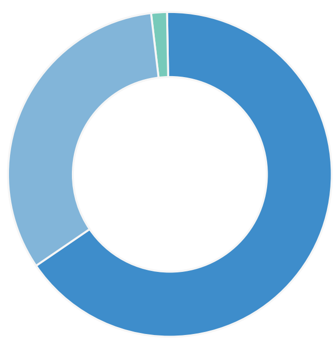
"In Mexico registration is done through the Federal Commission for the Protection against Sanitary Risk (COFEPRIS), which is part of the Ministry of Health. There is political opposition to agrochemicals within the government driven by the Green Party and they are not issuing any permits or registrations, which has brought the industry to a standstill," said Gregory Polak, general director of Grupo Polak, whose subsidiary Polaquimia manufactures agrochemicals. "In agrochemicals Polaquimia is the only company in Mexico that is still manufacturing molecules for agrochemical active ingredients. We were the first company and now the last," said Polak.

Although updated regulations were issued in 2010, the process remains prohibitively costly for many companies in the market. Yet this cost is necessary to ensure the safety of the industry's products, argues José Escalante, president of Velsimex and vice president of agrochemical association UMFFAAC. "The new reg-


Image: Organo Sintesis

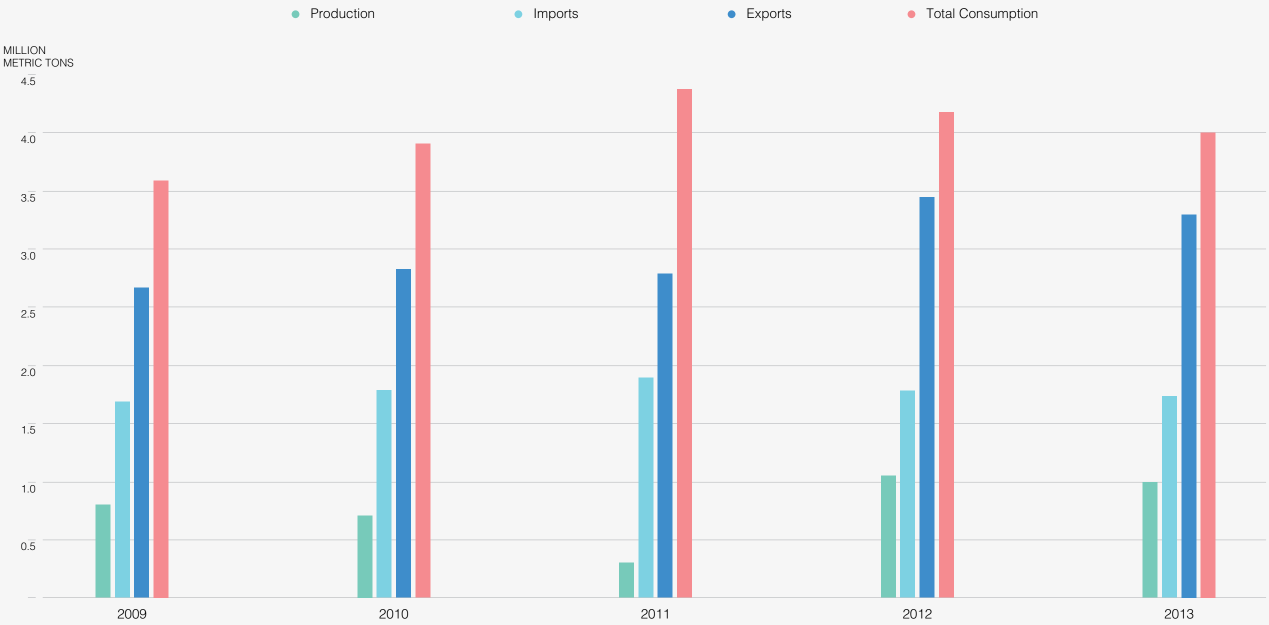
**VOLUME OF AGROCHEMICALS AND FERTILIZERS (2013)**

Source: ANIQ



| | |
|---|---|
| Diammonium Phosphate and Others | 65.69 |
| Ammonium Sulfate and Others | 32.4 |
| Herbicides and Defoliants | 1.91 |

MEXICAN AGROCHEMICALS AND FERTILIZERS INDUSTRY (2009-2013)
Source: ANIQ




ulations are great improvements when compared to the previous. Velsimex understands that the market needs to be regulated as the general public is consuming many of our products but there also has to be incentive to make money. The new regulation is much more balanced," he said.

With regulations now slightly more in check, agrochemical manufacturers in Mexico are focused instead on staying competitive in a rapidly consolidating global industry.

FMC announced late this year that is would acquire Cheminova, the Denmark-based crop-protection company for $1.8 billion. Both companies have significant footprints in Mexico and their integration will commence when the sale is completed in the early 2015. This is the second major agrochemical deal of the year affecting Mexico after Chemtura announced it would sell its agrochemical business to Platform Specialty Products Corporation in early 2014.

Within the domestic market, producers are further squeezed by the availability of raw materials that: "Since 2009, the government has closed all semi-official companies that were supplying raw materials used to manufacture urea, ammonia, and phosphoric acid, which are very necessary for agriculture. This has led to Ibarquim having to fight for prices," said Julián Ibarlucea, general director of Ibarquim.

*The key strategy to stay competitive is to import active ingredients. By doing business in China, you can reach the same low costs of multinationals and large domestic companies for active ingredients.*

*- Juan Manuel Ramírez Muro,*
*General Director,*
*Internacional Química de Cobre (IQC)*

With Grupo Polak's Polaquimia subsidiary one of the few remaining active ingredients manufacturers in the Mexican market, agrochemical manufacturers are starved for raw materials. Without the option of relying on global networks as do the sector's multinational heavyweights, domestic producers are seeking creative value chain solutions. "The key strategy to stay competitive is to import active ingredients. By doing business in China, you can reach the same low costs of multinationals and large domestic companies for active ingredients," said Juan Ma nuel Ramírez, general director of Internacional Química de Cobre (IQC), which produces fungicides, insecticides and herbicides. "Beyond imports, smaller domestic companies like IQC also benefit from our structures. Compared to multinationals that have very large staffs, we can be more flexible and efficient."

On the other end of the supply chain, Velsimex is looking to take advantage of Mexico's geographic position in order to become a top global player. "Velsimex is currently looking at Africa and Asia as potential markets but Latin America currently presents a very interesting market. Mexico has many shared idiosyncrasies with these countries and with the many trade agreements that exist between Mexico and these countries, the potential for Velsimex is truly great," said Escalante.

Expanding the sector's in-country innovative capacity is crucial as Mexico's small landowners face climate constraint and market consolidation. "Farmers are always looking for better quality seeds both in terms of yield and disease resistance. Roughly 75% of Mexico's area is reliant on rainfall for its irrigation, which can affect the crops, climate and yield depending on whether there is an excess of rainfall or a drought," said Manish Sirohi, general manager at United Phosphorous de México.

*The use of technology remains regional here in Mexico with the majority of farmers on the Pacific coast, mainly Sinaloa and Sonora, utilizing technology in their processes. In the middle of the country as well as towards the southeast, the adoption of technology in farming practices remains low.*

*- Julián Ibarlucea, General Director, Ibarquim*

Companies are tapping into this need for innovation with investments in research and development capacity specifically within the Mexican market. United Phosphorus de Mexico's subsidiary Advanta will be establishing an R&D center in Mexico this year, while Syngenta will be investing in a Seed Care Institute in Jalisco to provide services in seed safety testing, treated seeds analysis, and formulations development and application.

Syngenta Mexico's institute will be focused on product application in the Mexican market. "There are three areas that we will focus on at the institute: training farmers how to use this technology, improving the safe use of products, and increasing productivity. The Seed Care Institute in Jalisco is a key way for us to expand as we will develop new technologies for seed care," said Javier Valdés, general director of Syngenta Mexico.

Yet introducing new technologies to the market can be challenging in a fragmented market. "The use of technology remains regional here in Mexico with the majority of farmers on the Pacific coast, mainly Sinaloa and Sonora, utilizing technology in their processes. In the middle of the country as well as towards the southeast, the adoption of technology in farming practices remains low," said Ibarlucea of Ibarquim.

Many small-scale farmers do not have access to new technologies or the funds to implement them. Without government support, this is unlikely to change in the short term. "Currently there is a huge demand for maize, sorghum and rice, but Mexico only produces 22 million mt of maize annually, while it consumes 31 million mt/y. Rice farming areas have dropped by half, with production at around 180,000 mt/y and consumption at 1,000,000 mt/y," explained Sirohi of United Phosphorous de México. "This needs to change. The government must take initiatives in providing both credit and education to meet these needs. The private sector has been attempting to do this, but it cannot and should not be held responsible for this on its own. Public-private partnerships will be key in making this change," continued Sirohi.

Faced with the lower purchasing power of small agricultural producers and low agrochemical prices from multinationals, players such as IQC have taken further innovative approaches to developing their value chains. In a partnership with the mining company VES Capital Partners, IQC is developing the Veta Grande silver-copper project as a mine with on-site processing and refining capacity. "We plan to continue this model in the future and acquire various mining projects to put into operation. The copper we are mining we can then refine into copper sulfate and use for IQC's production, making our business more vertically integrated" said Ramírez of IQC. •

# Maria Eugenia Villanueva

Executive Director
**PROCCYT**

**Could you give us an introduction to Mexico's largest agrochemical association and your most recent milestones?**
PROCCYT is the leading association for Mexico's agrochemical industry, founded by companies involved in research and development, synthesis, manufacturing, formulation, distribution and transportation companies for the protection of crops and farming.
We have a new name and logo for our organization; today we are called PROCCYT: Crop Protection, and Science and Innovation. We have a new face to go along with the new perspectives and challenges of the market and the world. By 2050, the world's population will grow to approximately 9 billion people, who need to be fed with less land and water. The agrochemical industry is highly relevant for sustainability and food security; without these products yield production would decrease by 40%.

**How has PROCCYT's membership base developed over the course of the last five years?**
We represent 75% of the Mexican market and have a membership of 49 associated companies across the entire supply chain. Our priority is to increase agricultural productivity in a sustainable way, so as to improve the quality of life of millions of people. The Mexican agrochemical industry has a market value of approximately 13 billion pesos and our products are applied in 16 million sowed hectares in the country.

**What is the importance of crop protection products to the agriculture and food sectors in Mexico?**
In the coming years, worldwide agricultural production must be increased sustainably due to demographic growth. By 2050, Mexico will have around 150 million inhabitants, who will demand a greater quantity of food. Our industry plays a fundamental role supporting agriculture to increase production, cover the food needs of a growing population, and reduce the dependency on importing food from abroad. Without the use of agricultural consumables supplied by our industry, productivity of all types of crops, including conventional, hybrids, transgenic and even organic, will be reduced up to 40%. The aforementioned drop in productivity is due to plagues, weeds and diseases, which demonstrate that crop protection products are indispensable for the agro-food sector.

**How does innovation help increase harvest yields?**
We contribute to the development of the national agricultural sector with cutting edge technology that is transferred to farmers to benefit the small, medium and large producers. Science and technology for farming will not only allow us to meet the increasing demand for food, but also set the basis for the country to become a food power on an international level.

**PROCCYT hosted the first annual National Forum on Science and Technology for Sustainable Agriculture this month. Can you tell us about the outcome of the event?**
For the first time, the forum took place on October 1, 2014, and was attended by authorities and sector members. The goals were to emphasize the importance of science and technology for farming within the agro-food sector and to show the stance of the industry. The forum enriched dialogue and cooperation among those who are developing the Mexican fields and helped identify and analyze the challenges that we must overcome to reach a greater competitiveness.
PROCCYT highlights the importance of technology in protecting crops. We were honored by the attendance of Dr. Sanjaya Rajaram, who won the Food Supply World Award in 2014. Dr. Rajaram gave a speech on the importance of the use and management of crop protection products in Mexico. The forum also hosted two panels about important themes for the agriculture industry, which were "Food Safety: The Role of Technologies in Farming" and "Strategic Consumables for Competitiveness of Mexican Agriculture and the Benefits for Farmers."

**How will the new tax rate applied to pesticides affect the industry's many small-scale producers?**
The Special Tax on Production and Services (IEPS), which is being applied to crop protection products this year, is a significant challenge. It seriously undermines over 3 million agricultural producers, especially the small producers and self-consumers, as production costs have increased. Due to the fact that the tax is being transferred along the production chain, all Mexicans are absorbing it in the increased cost of food. This goes against the commitment of the federal government to make Mexican fields more productive, profitable, sustainable, and capable of guaranteeing food security.

**What are main initiatives that PROCCYT is pursuing in the next 12 months?**
One of our main goals this coming year is to expand our successful program Servicio de Información Toxicológica (SINTOX) to Central and South America. Part of PROCCYT's mission is to improve the responsible use of agrochemicals, and this initiative is needed in South America. All of our association's members are part of the SINTOX program, and we keep a database of products, suppliers and manufacturers. SINTOX provides medical advice 24 hours a day, 365 days a year related to toxicology from the incorrect use of agrochemicals. SINTOX also distributes first aid kits containing medications and antidotes. The program has a database of first aid kits across the country so we know the nearest location of a kit if someone does not have one.

# Dr. Jose I. Escalante de la Hidalga

President
**VELSIMEX**

**The Mexican agrochemical industry is dominated by large multinationals. Despite this dominance, a handful of Mexican agrochemicals companies have managed to grow to the point where they are starting to compete with the multinationals at home, such as Velsimex. What has led to the success of Velsimex?**

Velsimex aims to be attractive in each and every product that is offered. Farmers in Mexico often have a very small area of land. This is very different than the large commercial farming that occurs in the United States. This means that distributors play a primary role in the industry and our strategy aims to attract these distributors. Velsimex often provides better margins to these distributors compared to large multinationals and this has been our strategy for a long time, since the inception of Velsimex. Building long-lasting relationships with distributors by saving them money has been our key to success.

At the beginning of the 20th century there were 1.5 billion people on the earth. Today we are close to seven billion. As countries gain more wealth and the middleclass around the world grows and consumes, more businesses such as Velsimex remain vital. Our underlying philosophy at Velsimex is that we are in the business of feeding people and with this as our primary business objective we see our operations making a difference.

**What role will the structural reforms that are currently being implemented in Mexico have on the agrochemical industry?**

Mexicans are very proud that the political parties here have decided to put their differences aside and move forward with these reforms. This cooperation will open many opportunities for Mexico. It is my belief that these reforms will bring a large amount of foreign and domestic business in to Mexico. Mexico will be better positioned to compete with countries like China and India in terms of production and manufacturing. These reforms, paired with Mexico's productive labor force and attractive geographic location, will make Mexico a huge player, not only in North America, but also around the world.

**When we last spoke in 2009, you made a point to say that the high barriers to registering generics was the number one factor impeding the Mexican chemical industry's growth. Has this changed today?**

The new regulations are great improvements when compared to the previous. Velsimex understands that the market needs to be regulated as the general public is consuming many of our products but there also has to be incentive to make money and the new regulation is much more balanced. Mexico exports vegetables, fruits, and flowers all over the world and it is important that consumers from all over the world have confidence in the product we provide.

**What are the primary objectives Velsimex hopes to achieve over the next five years?**

Velsimex is going to become the third largest agrochemical company in the world. Currently, it is the seventh and our company is pursuing a grow strategy that will allow us to enter the top three. If Velsimex wants to be a major player we need to expand geographically. Velsimex is currently looking at Africa and Asia as potential markets, but Latin America currently presents a very interesting market. Mexico has many shared idiosyncrasies with these countries and with the many trade agreements that exist between Mexico and these countries the potential for Velsimex is truly great.

# Julián Ibarlucea

General Director
**IBARQUIM**

**What has changed in the Mexican chemical industry since we last met with Ibarquim in 2009?**

The primary change has been political. Unfortunately, every time governments change, problems arise and progression is slowed. The former government's agenda is often postponed and the new government attempts to recreate policy. Aid promised by former government is often forgotten and no follow up occurs. Policies need to be linear, to progress, and to be remembered. This problem is a true challenge for private industry. However, there is hope. The new energy reforms being implemented by the government may permanently change this problem.

In addition, the price of raw materials and logistics continues to be a major problem in Mexico. The government has abandoned rail freight and continues to transport everything by road, which means additional costs for distributors like us. Since 2009, the government has closed all semi-official companies that were supplying raw materials used to manufacture urea, ammonia, phosphoric acid, which are very necessary for agriculture and this has led to Ibarquim having to fight for prices. We would like to be exporting to the United States but prices are usually 10% to 15% higher in Mexico, which makes it extremely challenging.

**Do you expect these problems to change with the new reforms?**

The new government reforms, particularly the petrochemical reform that will open up competition to Pemex, are expected to attract more foreign companies, particularly from Canada and the United States. As more companies enter the market, prices will become more international. I am optimistic about the reforms, as they will help us to compete on price.

**What role does technology play in Ibarquim's business and how have your clients, the Mexican farmers, adapted to new technologies?**

A bottleneck exists and can be largely attributed to a lack of technology. The use of technology remains regional here in Mexico with the majority of farmers on the Pacific coast, mainly Sinaloa and Sonora, utilizing technology in their processes. In the middle of the country as well as towards the southeast, the adoption of technology in farming practices remains low. We try to provide solutions to meet the needs of all farmers but the truth is, many of the traditional farmers do not know our products and believe that they do not need them. Instead, they prefer to farm as generations before them have done. This is a challenge and an opportunity for Ibarquim.

**How important are small to medium size businesses, the 'MiPymes', to the agrochemical industry in Mexico?**

Smaller organizations struggle to compete in this market. Multinational companies are able to give much more time to repay credit to their distributors, up to six months. Smaller organizations, such as ourselves, can often find it difficult to provide such a payback period and are often adversely affected by the high interest rates here in Mexico. I can only give suppliers one or two months due to the fact that my bank is charging me 16% annual interest. Compare that to the 6% that can be obtained in the United States and again the problem becomes pricing. •

# Gregory Polak

General Director
**GRUPO POLAK**

**Grupo Polak has been supplying chemicals to the Mexican market since 1919. Can you introduce us to your operations today?**
Grupo Polak was one of the first pioneers in Mexico in the chemical industry, and we are still pioneers today in different niches of the industry. We have remained an independent company, with several entities within the group that manufacture and distribute chemicals. Through our distribution arm, we have offices in China and the Southern Cone. We distribute chemicals throughout the Americas, by either buying and reselling within the country, or manufacturing products in Mexico and selling them in international markets. In manufacturing, we are focused on specialties and developing new programs under our Polaquimia subsidiary. We are also consultants, giving solutions to customers' problem that are not necessarily our own products. Our business model is based on experience in chemical solutions.
We operate and grow at our own pace, rather than following the market. We are growing 12% to 16% in volume per year through new products and applications. Grupo Polak has several plant facilities where we have our R&D resources, and in the future we are going to open up laboratories to teach customers how to use and apply our products.

**How has competition from international companies in Mexico's chemical market developed over the last five years?**
Chemical companies are now interested in Mexico because of its logistics, but it is a difficult market to enter. The market is not that big in comparison with Brazil and the United States, and with a smaller market you have more competition.  Prices suffer a lot because everyone wants a piece of the cake. Mexico's market still has a lot to grow and mature; it comes down to the growth of the middle class and their purchasing power.

**Since entering into the specialty market through your subsidiary Polaquimia, what areas have you been focusing on?**
We entered the specialty market ten years ago with a focus on surfactants, colloids, and eco-friendly products. The biggest theme for us is eco-sustainable chemical innovation. We are trying to use eco-friendly basic products to introduce new concepts of sustainability into the country. We are striving for more eco-friendly products by using natural products produced in the field and modifying them for different uses. Our new products are starting to enter the market, with some going through FDA and REACH registration.

*We entered the specialty market ten years ago with a focus on surfactants, colloids, and eco-friendly products. The biggest theme for us is eco-sustainable chemical innovation.*

**How does the registration process for agrochemicals in Mexico compare to other markets?**
In agrochemicals, the registration process is very different. Plant health, like human health, needs to go through the scrutiny of the FDA in order to be registered. In Mexico registration is done through the Federal Commission for the Protection against Sanitary Risk (COFEPRIS), which is part of the Ministry of Health. There is political opposition to agrochemicals within the government driven by the Green Party, and it is not issuing any permits or registrations, which has brought the industry to a standstill. In agrochemicals Polaqiumia is the only company in Mexico that is still manufacturing molecules for agrochemical active ingredients. We were the first company and now the last.
The issue in Mexico is that no one wants to get into manufacturing active ingredients anymore because the government is not

well-versed about the industry, even though agrochemicals are extending the life expectancy in this country. In the future the entire industry will change again because of genetically modified seeds, which will increase the productivity of the farmer.

**When do you expect to see genetically modified products coming to the agrochemical industry in Mexico?**

Because of political opposition, genetically modified crops are not currently allowed in Mexico. The rest of the world is ten to 15 years ahead of our industry. This has to change eventually in Mexico, but the question is when. It is possible we could see these crops come to the country in 2016 or 2018.

**What impact do you expect the structural reforms to have on the chemical sector and the wider economy?**

It will have an impact, but we do not know yet to what degree. The only difference between promises of the past and this current plan for reform is that there is judicial reform accompanying these policies. However these reforms are still partial and are open to misinterpretation. The impact may not be as drastic as many people might imagine. There will be lower energy costs but we will still not have the energy costs that the United States has, and we are not going to be as efficient as Europe in using that energy. These are small steps forward and we will wait to see what happens.

**How optimistic are you in terms of the chemical industry's future in Mexico?**

Mexico is a Klondike of the future and always will be. There is a lot to be done, one of the first being education. For our part, Grupo Polak has established a university program that provides virtual education, classroom education and sponsorship for students to get advanced degrees at a university. We have found that this is a great tool for the organization. It retains our workforce as we work towards the future. We are going to apply for recognition to tie this program into the national educational organisms in Mexico. All of the ready-made talent in the streets has been hired already. The industry has to train people, which is what we are doing.

**Considering the reforms and the demographic changes that are taking place, where will we see Grupo Polak in five years?**

In five years we are going to be more international. Our growth is in other geographical markets, such as United States and South America, and we will grow based on these markets' requirements. Grupo Polak is also getting into different fields beyond our four official companies. We have three more groups that are already established and registered in the United States for intellectual property protection. These companies are in the research phases for genetically modified seeds, biotechnology, and nanotechnology.

**Do you have a final message about Grupo Polak for our readers?**

We offer expertise, honesty and hard work to our customers. As an independent Mexican company, we are not relying on central offices elsewhere. Our motto at Grupo Polak is that we are part of the solution, not part of the problem. •

# Juan Manuel Ramírez Muro

General Director
**NTERNACIONAL QUÍMICA DE COBRE (IQC)**

**To begin can you provide us with an introduction to Internacional Química de Cobre (IQC)'s history in the market?**
IQC was founded 42 years ago to provide copper sulfate to the mining sector. From there we began to produce more copper-related chemical products such as copper carbonate and copper hydroxide, mainly for the agricultural market. We then began producing active ingredients for the seed protection market. By the 1980s, we were the leading company in seed protection, working mainly with local maize producers to treat their crops against soil diseases. When this market began to consolidate with the entry of Monsanto, IQC shifted its focus to agrochemicals. The chemical market is much bigger than the seed treatment market. Currently IQC is selling equal volumes of fungicides, insecticides, and herbicides. The main product range in our portfolio is fungicides, which includes copper sulfates. Today our products are also used in mining, in the filtrate sector and for industrial uses. We manufacture our products at our plant in Estado de México

**How will the structural reforms affect your business?**
As a producer, we are going to have lower costs for raw materials and energy. Our final clients are also going to be more effective when they produce. We will especially see an impact in the sugar cane industry, where we will see a shift towards more industrial uses for the crop.

**IQC has focused its R&D on biotechnology in the past. Can you update us on your current R&D projects?**
IQC currently produces bio-pesticides for organic crops. This business is growing fast and has high margins, but it is a specific market that will not grow much larger. Right now we have slowed down with our biotechnology research, and instead we are investing in regulatory studies for active ingredients that we are importing from China. The regulations for importation are very strict, so we are investing time and money into completing the required tests and laboratory studies to demonstrate to the government that these active ingredients are less toxic than active ingredients that are already in the market.

**Historically Mexican farmers have been slow to adapt to new technologies. How have you found the market responding to your products?**
Mexican producers have responded well to our products, because they have known IQC for 40 years. Older farmers are giving new opportunities to young farmers, who are using a lot of new technologies. IQC is part of the group Consejo Nacional Agropecuario, which is an organization of producers that is encouraging change in the industry.

**What role do exports play in IQC's business?**
We are exporting copper sulfates to Spain and the United States. We are also focused on South America, Central America and some of the Caribbean, such as Dominica, where producers are looking for fungicides for their organic crops.

**As more multinationals enter Mexico, how are smaller domestic companies maintaining their market shares?**
The key strategy to stay competitive is to import active ingredients. By doing business in China, you can reach the same low costs of multinationals and large domestic companies for active ingredients. Beyond imports, smaller domestic companies like IQC also benefit from our structures. Compared to multinationals that have very large staffs, we can be more flexible and efficient.

**IQC is involved in a mining project in Chihuahua in partnership with VES Capital Partners. Can you tell us about your involvement in this project and the strategic benefits that you will gain?**
IQC is working on the Veta Grande silver and copper project in partnership with VES Capital Partners, which is a mining company focused on silver production in Mexico. The project consists of 370 hectares, and has good accessibility and infrastructure, located just two hours outside of Mexico City. Our development strategy is to acquire an incubated company that has been prequalified by the U.S. Securities and Exchange Commission in order to enter any of the exchanges in the country so that we can raise the capital to exploit the mine and install a plant for processing and refining. We plan to continue this model in the future and acquire various mining projects to put into operation. The copper we are mining we can then refine into copper sulfate and use for IQC's production, making our business more vertically integrated.

**How would you like to see IQC develop in the next five years?**
We want to grow in the agriculture market. Right now we have a 1% market share, which is valued at $600 million. Our goal is to have a 3% market share in five years. We plan to do this through our bio-pesticides, which is an area where we do not have many competitors, and also through new active ingredients. We are starting to complete data to get new registrations for new active ingredients that have recently come off patent. We will be focused more on pre-emergent herbicides and insecticides for the drier climate going forward.

# Javier Valdés

General Director
**SYNGENTA MEXICO**

**As Mexico's population continues to grow, what role is Syngenta playing in assisting farmers to meet agriculture demand?**
The population of Mexico is growing, which means that demand for food is growing as well. The economy and quality of life are improving, and the population is demanding more protein. This represents an opportunity for Mexico to improve its productivity. There is a gap in our production compared to other countries like the United States or Brazil. We are not using improved seeds in many areas of Mexico; hybrids are only used in the case of corn. This presents a big opportunity. Crop protection also has large potential. In this context, Syngenta is planning to set up a Seed Care Institute in Jalisco, Mexico, which will join 11 such institutes that Syngenta has across the world. Roughly 80% of crop problems start at the root so we need to develop crop protection solutions for this early stage.

**What is the importance of Mexico to Syngenta from a strategic point of view?**
It is one of our key operations in the world; Mexico represents an excellent opportunity for growth. We have aspirations to reach $25 billion as a global company and Mexico will be crucial to achieving that goal.

**Which are the fastest growing products or areas for Syngenta in Mexico, and what are the factors driving this growth?**
The seed business is growing faster than crop protection. Crop protection has a history in Mexico of more than 50 years, while seed care is a new technology that has been launched in the last decade.

**Genetically modified organisms (GMOS) are not yet approved in Mexico. When is this likely to happen and what will be the impact on the industry?**
We are waiting for the government to approve the commercialization of GMO corn. We are working with them to provide the information needed to support this technology. The government recognizes that GMOs are key for farmers to have a sustainable future in Mexico. GMOs provide solutions that control pests and simplify the control of weeds. For select crops, such as cotton, soybean, and corn, GMOs can be used effectively to overcome certain problems.

**How would you compare the agrochemical regulatory process in Mexico with those set by international standards?**
Mexico is following international standards for agrochemical regulation. Currently we are implementing a joint review with the United States and Canada within NAFTA. Syngenta seeks to make the technologies available to farmers in the United States and Canada also available to Mexican producers. We want to support both subsistence farmers, as well as those that export to the United States, Canada, and Europe.

**What percentage of Syngenta's business in Mexico is dedicated to large-scale farming for export, versus the smaller subsistence farmers in the south?**
Both markets are important to us. In the north, there are a few large scale farmers, while in the south there are millions of farmers. Syngenta's growth in terms of market penetration for our technologies will come from the center and the south of the country, while in the north the use of hybrid sees is already nearly 100%. Our growth in the north will come from introducing new technologies for crops with better quality and differentiated flavors. Seed care, however, is a technology that is new even to the north of Mexico, so we expect to see growth across the country in this area.

**What will be the focus of the new Syngenta Seed Care Institute that the company is opening in Jalisco?**
This institute will be focused on the application of Syngenta's products to the Mexican market. There are three areas that we will focus on at the institute: training farmers how to use this technology, improving the safe use of products, and increasing productivity. The Seed Care Institute in Jalisco is a key way for us to expand, as we will develop new technologies for seed care.

**What is your approach to attracting talent?**
We have very talented people, who are our key resource. They are trained in the Syngenta facilities and are crucial in spreading knowledge to the over 3 million farmers that we have in Mexico. We also work with a number of other institutes as well as universities to help us train our employees. We made a commitment to improve productivity, environment, farmer communities and diversity. In the next five years, we are looking to increase the productivity of some crops by 20% without using more land, water or inputs.

**How has the rapidly consolidating agrochemical industry affected the competitive climate for Syngenta?**
Our main goal is to develop new technologies and get farmers to use them. In a consolidated market, this is an opportunity for us to be better. Syngenta's differentiating factor is the amount of investment we put into new products. We invest approximately 10% of profits into research and development. We want to bring complete solutions to the farmers and link them with insurance companies, financial services, and technical assistants.


Image: IMPAC


# GOING GLOBAL AND GREEN PAINTS AND COATINGS

"The paints and coatings sector is growing, and Mexico is seeing an increase in technology and higher quality of paints and products. With the new laws aimed at growing the economy, we will see real growth in these sectors."

- Samuel Troice,
Director General,
Pinturas Acuario

# NO LONGER A SUPPLEMENTARY MARKET

## Mexico's Paints and Coatings Sector

Latin America, previously a supplementary market for many paints and coatings producers, is quickly shifting to the forefront of corporate strategies. A number of high profile mergers and acquisitions have taken place in the last 18 months, indicating an attractive and active sector with significant growth potential. In the last year, industry leader Mexichem purchased PolyOne's specialty vinyl dispersion, blending, and suspensions resin facilities in Ohio for $250 million, while Axalta Coating Systems is expanding capacity within Mexico with a $10.5 million investment in their Tlalnepantla facility for transportation coatings.

Chemical giant DuPont, which has had manufacturing in Mexico since the early 1950s, is in the process of a global divestiture of its performance chemicals segment. The $7 billion per year unit will be spun-off and fol lows the 2013 sale of the giant's automotive coatings business to Carlyle Group, which today is Axalta.

Global paint supplier Sherwin-Williams has set its sights on Latin America as a major growth market, taking advantage of Mexico's proximity to the US market by headquartering its new Latin American coatings group in Mexico City. "The protective and marine industries are growing very fast; considering the new regulations surrounding those areas, Sherwin-Williams is hoping to see the most growth there," said Gerardo Gurrola, director of research and development at Sherwin-Williams Mexico.

Sherwin-Williams' decision to invest in a regional coatings group follows a thwarted attempt to acquire family-owned Mexican paints giant Comex. A 2012 bid by the company to buy Comex would have doubled their Latin American business but was rejected due to antitrust issues.

Comex has proved an attractive target, as a new acquisition deal was announced in June 2014, this time with PPG Industries as the buyer. Following the October 2014 approval of the deal by Mexico's Federal Economic Competition Commission, PPG Industries has successfully completed its takeover of Comex. The $2.3 billion transaction is just the latest acquisition in Latin America that PPG has made in recent months.

"PPG is not strong in the architectural market, which is our strongest point in Mexico, so we see great opportunities for synergy there. They also do not have any operations in this part of Mexico, so we are looking to work with them in this regard. We are also hoping to take advantage of their knowledge and experience with industrial OEMs to expand our network in that market," said Alejandro Morones, vice president of global research and development at Comex.

> *In the past, we focused our exports on the Latin America market, but more recently there has been a shift in the market and we are examining the United States as a potential expansion area."*
>
> *- Luis de Vecchi, National Director, Sales, AP*

Synergies with the U.S. market are growing among Mexican paints and coatings providers, with Comex subsidiary AP, a producer of resins, now eyeing the market for expansion. "In the past, we focused our exports on the Latin America market, but more recently there has been a shift in the market and we are examining the United States as a potential expansion area," said Luis de Vecchi, national director of sales at AP.

Also looking south, the Mexican paints and coatings industry is working toward regional integration in order to harmonize standards and facilitate exports. The regional association Latinpin is the result of these efforts, spearheaded by Mexico and Brazil. Current members also include Colombia, Uruguay, Ecuador, and Argentina. According to the newly formed organization's head, Javier Maldonado, the move toward regional representation will help with regards to standardization and image. "Our main objective is to send all the industry standards that are already approved to the other countries to incorporate them. In the near future, we want to submit these to the International Paint and Printing Ink

Council (IPPIC)," said Maldonado, president of Latinpin and general director of architectural paints manufacturer PSI Pinturas. "The Mexican paints and coatings industry has been increasing our relations with Brazil because both countries are the giants of Latin America. Brazil in particular is very well-developed in terms of innovation and has many new technologies in the market that we can learn from," explained Maldonado.

**Towards a more specialized and greener industry**

Along with the growing revenues of paints and coatings businesses in Mexico, producers are also responding to a demand coming from the market for better products. "Mexico is seeing an increase in technology and higher quality of paints and products," said Samuel Troice, general director of Pinturas Acuario.

For its part, the National Association of Paints and Coatings Manufacturers (ANAFAPYT) is supporting the industry in its quest to raise its specialty paints and coatings products. "The energy and economic reforms will help to kick start projects in the industry. ANAFAPYT is working with its members to obtain government resources to start up new projects. We are trying to take advantage of this moment to help the industry develop more innovative products faster," said David Arciniega, president of ANAFAPYT.

Particularly for Mexico's fast growing and export-focused automotive and aeronautic industries, finding international-standard local materials is key. "The coatings industry is growing much faster with the introduction of numerous specialty products for the energy sector and the automotive industry. There have been a growing number of parts manufacturers coming to Mexico that can provide an expanded market for us. Companies are very interested in trying new technologies and developing new products as the market matures," said Maggie Flor Gómez, general director of chemical distributor Charlotte Chemical, and president of the chemical distribution section at ANIQ.

The energy sector reforms are also opening up opportunities for advanced paints and coatings products. "PEMEX and CFE are going to start building new power plants as a part of the energy

Image: Kathion

reforms. The kinds of coatings these will require are completely different than what we already produce, and this change is exciting to us," explained Gurrola of Sherwin-Williams.

"At the same time, the average customer has changed. Price is no longer the main issue; environmental friendliness, performance, and quality are all drivers for improvement in the industry to keep up with changing demand," added Gómez of Charlotte Chemical.

Key to meeting the demands of an evolving marketplace is close collaboration with suppliers. "Our innovation strategy is to first optimize our processes to achieve lean manufacturing, and secondly to work closely with our suppliers on introducing their innovations into our production. For example we send PSI Pinturas technicians to observe our suppliers' innovations to ensure they are efficient and environmentally-friendly," said Maldonado of PSI Pinturas.

For WYN de México, a local polymer producer, the company is ramping up its technical capacity in order to penetrate the growing paints and coatings market. "We have brought in technicians to improve our technology in this area to better serve the market. While we used to only sell polymers and adhesives that we bought from suppliers, we have moved into producing our own adhesives to supply them directly to our customers. We are now moving towards ready-to-use products," explained Jorge Saldaña Lozano, general director of WYN de México. With growing interest in environmentally friendly products, companies are also adjusting their product lines to meet consumers' increasingly stringent sustainability requirements. "The industry needs more green products. This is an idea that Comex has embraced recently, starting with the removal of lead from our paints. Being a larger company, it is easy for us to institute this change, and we are hopeful that others will follow," said Morones of Comex.

*We are looking to establish what the best percentage level of VOCs should be, as well as excluding APOs and formaldehydes. We want to set a standard so that when a product is produced with a green paint stamp in Mexico, it will comply with the agreed regulations."*

*- Jorge Saldaña Lozano, General Director, WYN de México*

An industry initiative led by ANAFAPYT is in the process of establishing a level of standardization across the Mexican industry for green products. "We are looking to establish what the best percentage level of VOCs should be, as well as excluding APOs and formaldehydes. We want to set a standard so that when a product is produced with a green paint stamp in Mexico, it will comply with the agreed regulations," explained Saldaña of WYN de México, one of the companies taking part in the standardization process. •

# Alejandro Morones

Vice President of Global Research and Development
**COMEX**

**Please could you provide us with an overview of Comex and its milestones over the recent years?**

Comex is a family-run company with more than 60 years in the Mexican market. It has over 3,400 stores in Mexico, having just sold all of our factories and outlets in the United States and Canada to PPG Industries. Comex recently won a prize for innovation in Mexico and has one of the best research and development (R&D) centers in Latin America. We have four factories in Mexico City and one in Monterrey. We work simultaneously with the packaging, gypsum board and resins plants in a vertical integration.

**Does Comex export any of its products, or is its focus solely on Mexico?**

Comex used to export many of our products to the United States and Canada prior to the acquisition of our U.S. operations, but now we focus on Central and Latin America, with some exports going to China. Comex can continue to sell to some clients in the United States, but agreements exist with PPG to avoid conflicts of interest.

**What changes will we see in Comex with the new acquisition by PPG?**

PPG is not strong in the architectural market, which is our strongest point in Mexico, so we see great opportunities for synergy there. It also does not have any operations in this part of Mexico, so we are looking to work with them in this regard. We are also hoping to take advantage of its knowledge and experience with industrial original equipment manufacturers (OEMs) to expand our network in that market.

**What has allowed Comex to grow so successfully as a Mexican company in the face of so much competition from larger multinationals, and how has it become the fourth largest manufacturer of its kind in Latin America?**

Comex is focused on its clients and distributors. In all of its markets, the main objective is to maintain positive relationships with those that it deals with. This, along with offering the best products at the best price, forms our core values. It helps that we are a local company, which gives us an advantage. We also have an advanced, prize-winning R&D center that works in conjunction with other centers and universities around the world.

**When we were here for our 2009 report, Comex was just opening its visual color evaluation center and entering more into the refinishing business. What have been the main changes in the company over the last five years?**

After the acquisition of the U.S.-Canadian paint companies, we learned about and developed new technologies, which turned out in the creation of new areas, product development and new markets. Comex is starting to use more raw materials, high solids products, water-based industrial products, and several other new products in the industrial, architectural, and roof coatings areas. Comex has looked to different places across the globe for new technologies and developments and has expanded its knowledge and offerings.

*Comex is starting to use more raw materials, high solids products, water-based industrial products, and several other new products in the industrial, architectural, and roof coatings areas. Comex has looked to different places across the globe for new technologies and developments and has expanded its knowledge and offerings.*

The industrial division has performed the best over the last five years. Comex already has a high market share in the architectural market which means growth is not as impressive. We supply to both Pemex and Mexico's Federal Electricity Commission (CFE), so 30% of our industrial business is set to grow.

**Comex is an active member of the Mexican Paint and Printing Ink Manufacturers Association (ANAFAPYT). How do ANAFAPYT and Comex work together, and what can we expect to see out of this partnership?**

I am ANAFAPYT's vice president representing Comex, and it is important to us to move towards less contaminating production processes. The industry needs more green products. This is an idea that Comex has embraced recently, starting with the removal of lead from its paints. Being a larger company, it is easy for us to institute this change, and we are hopeful that others will start to follow.

**What are Comex's goals for the coming five years, and what are your key projects moving forward?**

Comex is working on products that allow for lower costs of energy and can take the heat out of light. Comex is building some special houses with different controls to see what we can do in the area of energy efficiency. Comex is working with the support of the government, which is encouraging competition amongst companies to innovate. This is a positive development for Mexico. We are also working in creating similar regulations to the United States regarding restricted raw materials, which is a field in which Mexico has remained significantly behind. We are focused on the launching and innovation of low-emission, water-based, and 100% solids products.

# Ricardo Rodríguez

Director
**IMPAC**

**Can you give us an introduction to IMPAC and tell us about your recent achievements?**
I founded the company from scratch in 1980. At the beginning, we only had one reactor that was lent to me by my brother. I acted as the buyer, the chemist, the producer, and the salesman. If an entrepreneur possesses the necessary hunger, he or she can succeed in reaching his or her goal. In the past few years, we have been growing substantially. Last year, IMPAC had double-digit growth. One of the main ways of achieving this success has been through innovation. One of our most recent innovations was in acrylic rubber materials and water-based polymers. IMPAC has been able to reach a level where we can fulfill any of our clients' needs. Our portfolio is quite broad, as is our production capacity. We can provide tailor-made solutions to our customers. We have provided three or four custom-made polymers to one of our clients in the United States.

**How much of your production is exported and how much is consumed domestically?**
IMPAC exports to more than 12 countries. About 85% of our production is for the domestic market and the rest is exported mainly to the United States, Central America, South America, and the Caribbean. One of our main clients in Mexico is Home Depot. One of our goals is to look for more opportunities in the United States, which presents a very lucrative market. We currently have a new export manager and expect exports to increase dramatically. Our outlook for 2015 is also very positive. We are looking both to increase the volumes that we export to our current export markets as well as to find new countries where our products will be in demand.

**Which one of your product lines represents the biggest driver of your business? What is driving this demand?**
Acrylic water-based materials represent the largest contribution to our revenue. IMPAC had a big client making acrylic roofing materials, and we provided them with resins as raw materials needed in their production. This client grew dramatically and became our most important customer. For IMPAC, this represented a huge risk as this client could have easily replaced us, and we realized that diversification was key. This client's business was not integrated, and IMPAC ended up losing them. We brought our own products to the market and offered cost efficiency compared to everyone else, including that client. The quality of our products was also better than the competition. One of the main industries that we supply to is the construction sector.

**How has the recent poor performance of the construction industry negatively impacted your business?**
IMPAC'S focus is not only on new construction, but also on houses that are already constructed. When the economy deteriorates, people tend to renovate their homes instead of selling them, which helps our revenue. People do whatever it takes to maintain their homes, whether it is fixing a rooftop leak or whatever the problem may be. IMPAC's products help them do this well. Currently, Mexico is not in the best economic shape, and Mexicans do not have the money to invest in new housing, but due to the strong performance of the U.S. economy, Mexico can benefit from this boom. Overall, we expect the construction industry to grow by 4% this year.

**Mexico is currently not a hub for innovation, but due to its young workforce it has the potential to become one. What is your opinion on this?**
Mexico has enormous potential when it comes to innovation and creativity. We now have some tech companies that have developed innovation centers in Monterrey. Mexico's young workforce is well educated, and IMPAC employs a lot of these fresh graduates. We have not had trouble finding talented individuals. IMPAC invests a lot in its human resources department to find and train quality personnel.

**The chemical industry is moving towards more environmental sustainability. Can companies do more to promote this and is the government doing enough?**
The government is not doing enough. There is a lack of regulations, and the regulations that are in place are not clearly defined and enforced. In the United States, emissions from the production of paints, coatings, and solvents are controlled, but not in Mexico. A preservative prohibited in the United States can still be used in Mexico. IMPAC does not use this substance and focuses on producing water-based, environmentally friendly materials. Companies in Mexico are supporting environmental sustainability and creating solutions to promote this idea.

**If we came back to see you in five years, where can we expect to find IMPAC?**
Our goal is to grow further and find new export markets as well as increase exports to the countries that we already export to. The economy will improve due to the performance of the U.S. economy, while the current low price of oil will drive demand higher. Americans will have more disposable income, and Mexico will benefit.

# David Arciniega

President
**ANAFAPYT**

**Can you please give us an introduction to ANAFAPYT and tell us about the recent milestones for the association?**
This year ANAFAPYT celebrated its 70th anniversary with a series of events to commemorate its history and mark a new beginning. In 2014, we hosted a successful technical conference in Guanajuato with over 100 participants. At this event, we discussed technical, logistical and business culture topics that affect the industry. ANAFAPYT also held two conference cycles in Mexico City: the Cycle of Technical Conferences for Paints and the Cycle of Technical Conferences for Ink. This year, we have focused on bringing in both international and national speakers to give our members more comprehensive information. We also hosted the Seminar for Innovations, where we encouraged our associates to take up different initiatives for innovation to develop the sector.

In addition, ANAFAPYT launched its digital publication this year, called Pinturerias, which was formerly issued in paper form. The magazine is sent to over 15,000 readers. We have created a culture of communication using new technologies such as Facebook and Twitter, which have helped us to deliver our message to more readers.

**ANAFAPYT has also been instrumental in the creation of a regional paints and coatings association this past year. Can you provide us with more details on this organization?**
ANAFAPYT was a part of the creation of the Latin American Federation of Paintings and Coatings Manufacturers. This was a Mexican initiative that we launched in March with Javier Maldonado as president. The confederation was created in Argentina and will be a regional body for the industry, aimed at increasing cooperation and standardization.

**Looking at the year ahead in your role as president, what goals do you have for 2015?**
One of our key objectives for 2015 is to continue modernizing the association's communications technology, by means of teleconferences and streaming to take our conferences to the national and international levels. We are also working on increasing the number of international speakers that we have at our events. Last year we brought speakers in from Coatings Atlanta to our technical conferences. Another key initiative will be to increase our membership. This year we increased our members from 65 to 100 and we hope to keep growing next year. A final key initiative will be to establish an office in Guadalajara to be closer to the many companies that are growing in this area.

*There has been a lot of consolidation in the market, most importantly the purchase of Comex by PPG and the several acquisitions made by Mexichem. This consolidation, however, has been on an international level and has not affected local companies very drastically. We see this development as positive. The reorganization that is going to take place in the market will open up new opportunities for national companies.*

**ANAFAPYT has increased its membership in the context of a consolidating market. How will this consolidation trend affect your members going forward?**
There has been a lot of consolidation in the market, most importantly the purchase of Comex by PPG and the several acquisitions made by Mexichem. This consolidation, however, has been on an international level and has not affected local companies very drastically. We see this development as positive. The reorganization that is going to take place in the market will open up new opportunities for national companies. ANAFAPYT's membership represents 95% to 96% of all production in the national market. The remaining percentage of the market is made up of very small companies that we are interested in bringing into the association.

**How is ANAFAPYT working to support the small and medium-sized enterprises that form the core of your membership?**
We create spaces and forums to share information from national and international speakers with these companies, both members and non-members. ANAFAPYT often collaborates with companies to share knowledge among the industry, particularly regarding the research that companies are working on. We are increasing these forums and improving the quality of information shared. We are also establishing networks with suppliers and government offices to help with paperwork and support services.

**Small and medium-sized companies in the sector often do not have deep resources for research and development (R&D). How can the industry take advantage of government incentives for R&D?**
The energy and economic reforms will help to kick start projects in the industry. ANAFAPYT is working with its members to obtain government resources to start up new projects. We are trying to take advantage of this moment to help the industry develop more innovative products faster.

**Can you leave us with a final message about ANAFAPYT?**
2014 has been a year of record for ANAFAPYT in the context of its 70th anniversary. We have increased the number of our members, as well as the quality and number of our events. We want to communicate to the sector the importance of growing together. We are here for our members to support them in this growth.

*We create spaces and forums to share information from national and international speakers with these companies, both members and non-members. ANAFAPYT often collaborates with companies to share knowledge among the industry, particularly regarding the research that companies are working on.*

# Patricio Cueva Zambrano

General Director
**REACCIONES QUÍMICAS**

**Can you please give us an introduction to Reacciones Químicas and tell us about your recent accomplishments?**
Reacciones Químicas was founded in 1981 as part of a family business that was focused mainly on the paint industry. In 1994, we formed a joint venture with an American company that introduced us to the composites market. Since 2011, Reacciones Químicas has been a 100% Mexican-owned company. Reacciones Químicas started by producing only one type of resin, now we produce a complete range of products for the coatings and the composites industries. Our market territory includes Mexico, some areas in South America, Central America, the Caribbean and the United States. Our main competitive advantage is the quality of services that we provide to all our customers.

**Reacciones Químicas has its main office in Monterrey in addition to branches in Guadalajara and near Mexico City. Can you give us an overview of your manufacturing and distribution facilities?**
Our plant in Santa Catarina, N.L. was built in 1981 with only 1 reactor and our footprint is about 40,000 square meters. Currently, the plant has 8 reactors which are fully automated. We are ISO 9000, 14000, and OSHAS 18001 certified. Additionally, we are also part of ANIQ's Responsible Care program. Safety is the number one priority in our operations; we are very well equipped in case of any emergency, including having trained fire brigades. Training is paramount in our production. All our personnel are schooled in our manufacturing processes as well as emergency procedures.

**What strategy do you have to help Reacciones Químicas grow?**
The first way that we would like to grow is to develop new products for our markets in coatings and composites. Products that will go in line with market needs and perform better than what is currently available from our competition. The second growth strategy that Reacciones Químicas employs is expanding its export markets such as those in the United States and South America, which are strategic priorities.

**Which one of your products represents the largest percentage of your business and why?**
59% of our business is in coatings and 41% is in composites. The composites market was greatly affected by the recession in the United States and many American composites manufacturers have plants in Mexico. With the recession the volumes decreased, but now after four slow years this industry is coming back, and we are looking for more growth in this area. On the coatings side, this market is more dependent on the internal economy; we are doing our best to look for every new business opportunity that we can find in the industry.

**What is your current research and development (R&D) focus?**
Reacciones Químicas is committed to the environment. Roughly 70% of our new composites line uses eco-friendly products. We have also been working on a new business, vinyl ester resins, where we will improve our resin performance to be used in specialized markets such as windmill generators, for example. On the coatings side, we are working on an eco-friendly line of products and targeting the third quarter of this year to roll out this new product line.

*Safety is the number one priority in our operations; we are very well equipped in case of any emergency, including having trained fire brigades.*

**As a medium-sized manufacturer, what challenges do you face in doing business in Mexico?**
The biggest challenge is our internal economy. We expected great things from the new government, but nothing has happened so far. Fortunately, we conduct roughly 40% of our business in U.S. dollars and the deteriorating value of the peso has not affected us. The energy reforms will take time to implement; the real effects will not be felt for another 15 to 20 years. Another challenge is corruption; the government has to work hard on this matter, if it wants the country to grow.

**Where can we expect to find Reacciones Químicas in five years?**
Reacciones Químicas will be even more innovative and looking to develop new products from scratch. It will be an important player in the markets that it participates in with sustainable growth and leading products. Starting this year, we will have a new team that will look after the development and production of these products. We are also looking to continue our policy of environmental sustainability and get more companies on board to join the Responsible Care program through ANIQ.

# Jorge Saldaña Lozano

General Director
**WYN DE MÉXICO**

**WYN de México was founded in 1964 and has recently celebrated its 50th anniversary. Can you please tell us about the company and the scope of its operations?**

WYN de México is a family company that grew out of producing additives for textiles. Today our polymers can be used in adhesives, construction, inks and other sectors. Our current focus is on the paints and coatings industry, and we have brought in technicians to improve our technology in this area to serve the market better.

We manufacture our products at our Queretaro plant, which has a total capacity of 36,000 metric tons. The plant operates at roughly 70% capacity, which means that we have plenty of room for growth. We have nearly 200 people working at our Queretaro facility, with offices in Mexico City as well as branches in Monterrey and Guadalajara. We plan to open branches next year in Puebla and the Mexican Southeast region. We export 15% to 20% of our products, mostly to Texas, Central America, and South America. We are looking to increase these exports further.

**WYN de México's key markets include adhesives, construction, leather, textiles, and paints and coatings. Which is its biggest driver of turnover?**

Most of WYN de México's business today is in paints and coatings, which represents around 40% of our revenue. In adhesives, we have many sectors ranging from white glue to lamination and bonding of leather, plastics and textiles. We also make pressure-sensitive adhesives such as tape. In addition, we retain some business in textiles and nonwoven materials. Furthermore, we have an inks and graphic arts segment, which is a niche market with a large added value.

**How is WYN de México adapting to the crowded paints and coatings market in Mexico, which is seeing increased interest from foreign players?**

WYN de México's main advantage is that it is always focused on the client. There are a few big international players in Mexico such as DOW, BASF, Henkel and Clariant that are active in the paints and coatings market, followed by 100%-Mexican owned companies such as WYN de México. While we used to only sell polymers and adhesives that we bought from suppliers, we have moved into producing our own adhesives to supply them directly to our customers. We are now moving towards ready-to-use products. Big producers such as BASF only offer singular products to customers, whereas we provide customized solutions to our clients by adapting to their needs. In our case, if a customer needs a certain viscosity we alter our products to meet the specific need. This kind of personalized approach promotes loyalty among our clients.

**Can you leave us with a final message?**

We see ourselves as a big player in polymers, but also in ready-to-use products for the industry. We are looking to continue serving our clients with personalized solutions. As a family company, we are open to forming partnerships with other companies. We are also looking to pass the leadership of our company onto the third generation.

# Javier Maldonado

President
**LATINPIN**

**Can you introduce us to the newly formed regional paints and coatings organization, Latinpin?**
Mexico and Brazil were the founders of this association. We have worked for eighteen months on forming the association and our current members are Brazil, Colombia, Uruguay, Ecuador, Argentina and Mexico. We are working towards bringing in Peru, Panama and Chile. We have had several meetings so far and we have formed our board of directors. Our main objective is to send the industry standards that are already approved to the other countries to incorporate them. In the near future, we want to submit these to the International Paint and Printing Ink Council (IPPIC).

**What brought about this initial partnership?**
The Mexican paints and coatings industry has been increasing its relations with Brazil because both countries are the giants of Latin America. Brazil in particular is very well developed in terms of innovation and has many new technologies that we can learn from.

**Can you give us a specific example of an initiative that Latinpin has introduced in Mexico based off of the Brazilian paints and coatings market?**
In Brazil, the market has developed a classification system on a scale of one star to three stars to communicate the specific characteristics that paints have. This helps consumers know what they are buying. In contrast, in Mexico a consumer can find a paint for 150 pesos that is labelled "interior and exterior," as well as a 1,800-pesos paint with the same label. We want to implement a similar system in Mexico, although some manufacturers are resisting the idea because their paints would not quality as "interior and exterior."

**How does the association plan to support the Latin American paints and coatings industry as a whole?**
Within IPPIC, there is not Latin America representation for the whole zone. The United States has a representation and now Mexico and Brazil have representation; however, we are also looking for representation as a region to help us to foster normativity and give the industry a good image to our governments.

# Gerardo Gurrola

Director of Research and Development
**SHERWIN-WILLIAMS**

**Please could you provide us with an overview of Sherwin Williams in Mexico and in the region?**
Sherwin Williams is the oldest paint company in Mexico, celebrating its 85th anniversary this year. We do business around the world and are looking to grow in Latin America because we see it as a major market in the coming years. This past month Sherwin Williams created a new group called the Latin American coatings group, which will be headquartered here in Mexico City. Our proximity to the U.S. market makes it the most logical place for such a venture.

**Which divisions do you have in Mexico, and which have experienced the most growth?**
Sherwin Williams has protective, marine, industrial maintenance, coatings, and architectural divisions in Mexico. We also offer tailor-made coatings and professional finishes, as well as a plant that handles automotive coatings. The protective and marine industries are growing quickly. The architectural is more seasonal while protective and marine spaces are more project-driven, so we are confident that this growth will be consistent.

**How do you see the structural reforms affecting your business?**
The chemical process of 'gas cracking' allows us to make many raw materials from gas. For latex paint especially, the main material is obtained from gas cracking. Sherwin Williams is hopeful that the increased attention on gas as a source of energy will help us bring costs down and bring us enough raw materials and polymers.

**What role has the industrial side of your operations played in Sherwin Williams' growth in Mexico?**
Because cars are so expensive in Mexico, we have seen major growth in refinishing. People are spending increasing amounts of money to repaint cars. For the time being, however, producing OEM automotive paint is too much of a liability, as it is with the aerospace industry.

**What are Sherwin Williams' performance goals in Mexico?**
Sherwin Williams has a lot of facilities in Mexico, which gives us an advantage over other companies. With Mexico becoming the headquarters for Latin America, we are poised for further growth.
Sherwin Williams is expecting exciting times ahead, as the constitutional changes that Mexico has made will accommodate growth not just in our industry, but also in other infrastructure and energy-related projects. Mexico has been a sleeping giant for decades, but now we are seeing an awakening.


JAE


GASA


PM


JLR

# Juan Alonso Escobedo, Gabriel Arturo Santoy Alvarez, Pedro Méndez & Jose Luis Rivera

JAE: General Director
GASA: Technical Manager of Pigments
PM: Technical Manager of Home Care and Agrochemicals
JLR: Technical Manager of Metalwork

**KATHION**

**Can you please give us a general introduction to Kathion and tell us about your recent milestones?**

JAE: My work experience started in a company that was the predecessor of Clariant. We were there for 10 years and then went to Chemcentral, where we spent several years and started to become interested in becoming independent. Kathion was created with a similar concept as Chemcentral, that is, with strong suppliers who are looking for new lines, new products, and new technologies but improve the service according with the technical necessities of the customers.

**Can you give us an overview of your manufacturing and distribution facilities in Mexico?**

JAE: Kathion is currently undergoing a few changes. We are upgrading our facilities to give us more space, especially for our warehouse and research and development (R&D) facilities. We would also like to establish an office in Mexico City within the next six months and another one in Guadalajara later this year. Kathion began its operations in the northern part of Mexico, but because most opportunities are in central Mexico, our presence there is crucial.

**Kathion offers a broad range of products. What is the biggest driver of its business?**

JAE: Our main market is construction and paints, which represent around 38% of our total sales. Following that, we also sell detergents and home care, agrochemicals, plastics, metalworking and water treatment products. In the construction and paints sector, we divide it further into paints, waterproofing products, floor adhesives, industrial coatings, and powder paints. Another line is lubricants, and we are starting to introduce petroleum and cosmetics and personal care products. We are also interested in the automotive industry and industrial coatings, as well as lubricants and metalworking for the automotive assembly lines. Nowadays, the inclination is toward domestic production, so Kathion is working to introduce new products with new eco-friendly technologies. We also have the intention to start exporting and to open an office in the United States in about two years.

**What is Kathion doing to differentiate itself from its competition?**

GASA: Given the technical know-how that Kathion has in the manufacturing and application of our products, we want to take this technology to China or India with leadership companies, manufacture our products there, and bring them back to Mexico. This would increase our efficiency and performance.

**Kathion is strongly focused on innovation. Can you tell us about a new technique or technology that you have introduced?**

PM: Kathion has noticed certain needs in some markets. For example, the agrochemical market is looking for less dangerous solvents that are less toxic and more environmentally friendly. We have introduced an ecological solvent that allows even the final consumer to avoid toxicity problems. This same product was adapted to the detergents industry. We have seen changes in the way that Mexican businesses think about the environment; there is a greater demand for safer and more ecological products.

Image: Clariant

# MANUFACTURING-FUELLED GROWTH

## SPECIALTY CHEMICALS

"Our main plan is to be more present in the automotive industry, which is growing very quickly in Mexico. The aeronautical industry is also growing in Mexico and we are looking to penetrate this market with our materials, specifically in compounds."

- Ezra Bejar,
Deputy Director General,
Especialidades Industriales y Químicas (EIQSA)

# CARS, COMPOUNDS, AND SPACE

## Mexico's Specialty Chemicals Sector

While the specialty chemical sector does not stand to benefit from Mexico's energy reforms as directly as petrochemical producers, the market has nevertheless grown in recent years on the back of increasingly specialized sectors. Multinationals have found an expanding market for their specialty solutions, while both domestic producers and distributors are positioning themselves to take advantage of these growth opportunities. With margins for commodities increasingly shrinking, specialties are a robust solution to the challenging quest for profitability.

In August, Mexico surpassed Brazil to garner the title of seventh largest automotive producer, on top of its rank as the world's fourth largest exporter. Auto OEMs are flooding into the country with a focus on high-end vehicles, including BMW, Kia, Mercedes-Benz and a joint venture between Renault-Nissan and Daimler. Conscious of this golden opportunity, Mexico's chemical manufacturers are gearing up their specialty divisions to meet the needs of these luxury vehicles. "Mexico is becoming a key market for our products in the automotive manufacturing sector, which is growing very fast. The boom in the automotive industry is one of the most important expectations that we have in 2015 and the coming years," said Álvaro Galindo, sales manager for Dow Corning de México.

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*- Álvaro Galindo,
Sales Manager,
Dow Corning de México.*

Dow Corning's products for the Mexican automotive sector are targeting performance improvements such as reducing noise, vibration and harshness; long-term lubrication and extreme temperature resistance. The Mexican Association of the Automotive Industry (AMIA) forecasts Mexican automotive production reaching 4.5 million vehicles by 2020, up from an expected 3.2 million vehicles for 2014, meaning the market has huge growth potential for chemical suppliers.

EIQSA, a PVC compounding company founded in 1954, like many of its counterparts is making the automotive sector a key focus for research and development activities. "Our main plan is to be more present in the automotive industry, which is growing very quickly in Mexico," said Ezra Bejar, deputy director general of EIQSA. "The aeronautical industry is also growing in Mexico and we are looking to penetrate this market with our materials, specifically in compounds." Specialty giant Eastman, which grew from an import office in the country to owning two plants in Mexico via its global acquisitions. "Mexico represents a significant portion of Eastman's Latin American market," said Juan Carlos Parodi, vice president and managing director of Latin America at

Image: Clariant

Eastman. "We have very diversified markets that we work in, with a key focus on the automotive sector, building and construction and industrial intermediates."

Global specialties company Evonik has manufactured chemicals in Mexico since 1968 and expects manufacturing to remain the company's main focus in Mexico in spite of the expected changes coming to the market. "The Mexican population will have more buying power and will consist of a larger middle class that is able to afford higher value products. These shifts in the market will lead to more opportunity for Evonik requiring more specialty chemicals and products," said Herwig Bachmann, general director of Evonik Mexico.

Echoing this strategy, the Brazilian chemicals giant Oxiteno has doubled its capacity in Mexico over the last decade. "Our first priority is to look after the local Mexican market because there is a great demand that is not yet fully developed. There is a very low consumption per capita of personal hygiene products as well as foods, so these are great areas to grow. We want to serve these industries and use Mexico as an export platform to look after the NAFTA market and Latin America. We export products to Colombia, Costa Rica and elsewhere in Latin America," said Gerson Moacir Secomandi, commercial director of Oxiteno Mexico.

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*- Herwig Bachmann, General Director, Evonik Mexico*

For its part, Evonik Mexico is planning to partner with Grupo Idesa through its 100%-owned subsidiary CyPlus GmbH in a joint venture for the construction of a 40,000 mt/y capacity sodium cyanide plant in Coatzacoalcos. "This sodium cyanide plant will utilize cutting-edge technology in order to produce a raw material that is currently imported into Mexico. The market in Mexico continues to grow in an interesting way, and this partnership will yield substantial production over the next few years," said Bachmann of Evonik Mexico.

As the Mexican market grows in importance for international producers, local specialty chemical companies with manufacturing capacity have proved to be crucial in providing a foothold for the region. Organo Síntesis, a Mexico-based producer of fine chemicals for personal care, water treatment and disinfectants, offers toll manufacturing to international companies that do not have their own production facilities in Mexico and want to export to Latin American countries. "In such cases, they seek out Mexican companies like ours to deliver high quality results. Approximately 35% of our revenue comes from toll manufacturing," explained Federico Soto, marketing and sales director for the company. "We expect our toll manufacturing business to continue increasing in the next few years. We are looking to cooperate with more international companies. These companies are not always interested in building new plants because such investments require a lot of capital; it is often better to have a local partner for manufacturing such as Organo Síntesis."

Such local-international tolling partnerships pave the way for joint ventures that can benefit not only production but also innovation, a key area the industry is looking to improve.

**Mexico's potential as an innovation hub**

As opportunities for specialties growth emerge from automotive and aerospace manufacturing, specialty players are also hopeful that the energy market will soon become more innovative as Pemex transforms. With Pemex looking to be more profitable and private oil and gas investors coming in, Mexico has the potential to become a center of excellence for energy-focused performance chemicals.

"With the new reforms, many players will have the opportunity to offer new technologies and products. For Dow Corning, we are focusing particularly on our products that have applications in the oil and gas industry. Our silicones are very well-recognized for their high efficiency in antifoams and demulsifiers," said Galindo of Dow Corning de México. "We plan to develop synergies with service providers to Pemex by offering new technologies and improving the productivity in Pemex.

For global specialties giant Clariant, its modern ethoxylation plant located in Coatzacoalcos is 2 km from Pemex's ethylene oxide facility, which makes the Clariant facility one of the company's stronger manufacturing sites for ethylene oxide derivatives. At its Santa Clara complex, Clariant has applications labs, a distribution center and a multi-business site with productive plants belonging to pigments, masterbatches and industrial and consumer specialties. Its Puebla production site also houses laboratories for its functional minerals business unit.

While multinationals and large domestic players are relying on their global R&D centers and deeper pockets, innovation is occurring on smaller scales thanks to cross-industry partnerships and collaboration with institutions. "Unfortunately, the government does not provide enough incentives to promote innovation; this comes from within the industry. Most companies here reinvest their profits to fund expansions and research, which becomes difficult for smaller companies like Macropol," said Eloy Cordero, general director of Macropol. "The current reforms are a step in the right direction, but it will be some time before we see government-funded innovation here."

"The first challenge for innovation is to develop new molecules for different market applications, which must be eco-friendly and approved by the different relevant agencies. The second challenge for conducting R&D is capital, which we need for further investments in our plants. Although some financial supports from the government and banks exist, they are limited; therefore we usually finance new projects," echoed Soto of Organo Síntesis.

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*- Federico Soto,*
*Marketing and Sales Director,*
*Organo Síntesis*



In the absence of adequate government support, agile domestic players are consulting academic and research institutions to leverage their chemical expertise. "Resymat has an important agreement with the National Autonomous University of Mexico (UNAM), whose graduates with doctorates and master's degrees we have working in our plants. We also have a partnership with Tecnologico de Monterrey focused on plastics. In addition to academic partnerships, we also have agreements with research companies such as Ciqua and Ciateq," said Aldimir Torres, commercial director of Resymat, a market leader in polyester polyols.

Going forward, Mexico's potential to become a regional center for innovation in the chemical industry will depend upon Mexican companies taking a similar approach to research and development. Furthermore, as de Vecchi of AP predicts, the country's strong demographics will prove to be a significant advantage. "Mexico is poised to become a leader in innovation. Never before in the history of Mexico have we had such a demographic balance where 50% of the country's population is less than 25 years of age. The country's young people will help Mexico to become an innovation hub, providing products and solutions that will be used around the world," said de Vecchi. •

# Eloy Cordero

General Director
**MACROPOL**

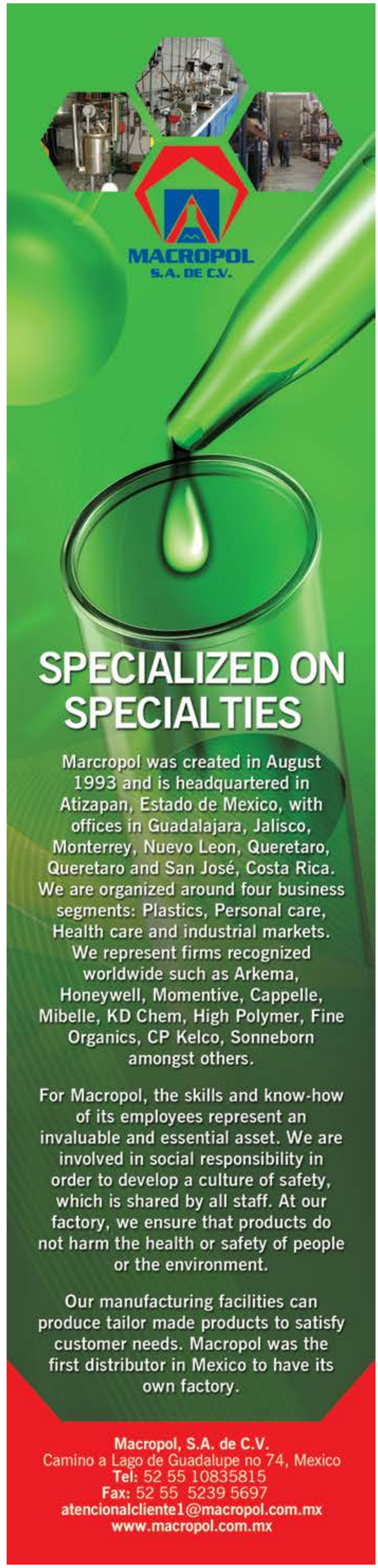
**Please could you provide us with an overview of Macropol and how you have kept up with such a rapidly evolving industry?**
Macropol was originally devoted to selling additives to the plastics industry, but when we saw that these could be used elsewhere, we decided to expand our presence. We now participate in the plastics, personal and household care, coatings, and healthcare markets. The healthcare market has three segments: human health, animal health, and agriculture. At present, we do not want to diversify too much, so as to avoid losing focus on what we do best. Since 2007, we have been running a factory and produce chemical products as well; the idea is to support our commercial lines with this. In the past, products evolved every 20 to 25 years. Today the rate is much faster.

**What is the breakdown of Macropol's activities between manufacturing and marketing?**
Macropol's activity is currently split between 70% distribution and 30% production. Our goal is to increase production to between 50% and 60% by 2016. Our current output at our production plant is 300 metric tons (mt) per month and 3,600 mt per annum.

**Which areas of Macropol's portfolio are seeing the most demand growth, and why?**
Plastics will be the most important area of growth for us. With new investments in petrochemicals, polyethylene and polypropylene, we will have many more products and much more raw material supply. This will put both the economy and our plastics division in a good position to grow. Macropol also expects to see the personal healthcare industry grow. This is one part of the market that never suffers through a crisis; even in the worst of times, people need basic grooming products. Only 20% of Mexico's population falls in the socioeconomic category with the purchasing power to buy products that our clients produce. As the economy grows, so will this percentage of the population, meaning that our client base will indirectly increase at the same time.

**How will reforms affect Macropol's business and the more competitive market it will usher in?**
With added investment in petrochemicals, overall infrastructure projects should increase. There will be more resins needed. More masterbatches and plastics will be required. This will, of course, bring in more competition, but we only see this as healthy. With the purchasing power of the Mexican population growing at the same time, there is enough in the market for all of us to grow.

**How would you describe the pool of talent available to you here?**
The talent pool in Mexico is one of great potential. There is competition amongst companies for top talent, but Macropol works hard to train its employees and give them the tools that they need to maintain a healthy career. We are very focused on having bilingual employees and send many of our employees to the United States or Europe for training. We are also focused on creating a safe and happy workplace. •



# Fernando Hernández

Head of Country Services
**CLARIANT**

**Clariant is a global giant in the industry. Can you please tell us about business in Mexico?**
With more than 50 years in Mexico, Clariant has a consolidated presence in the market through our corporate offices, applications labs, distribution center and a multi-business site with productive plants belonging to pigments, masterbatches, and industrial and consumer specialties, all based in Santa Clara, Estado de México. In Puebla we have a production site and labs for our functional minerals business unit, and in Coatzacoalcos, Veracruz we have a production site for the industrial and consumer specialties business unit, as well as the oil and mining services business unit.

**The market today is quite different to what it was five years ago, at the peak of the global financial crisis. How has Mexico grown and been affected by this?**
Mexico has developed quite well since the crisis. We suffered perhaps the most in Latin America due our proximity to and close relationship with the United States, but this also helped our companies to make the most with our resources and become stronger. We had to focus on reducing complexity and improving efficiency. In this matter, President Peña Nieto and his team have worked very hard to launch several reforms that have been approved in the last months that make our country a more attractive destination for long-term investment. It is important, however, for companies in the country not to rely on these reforms for increased business alone; they must continue to improve their standards so as to keep up with an evolving global market.
That said, even with the growth and improvements in Mexico's market, we are still not where we need to be. There is a lack of availability of raw materials, resulting in a negative balance of chemicals. Even though Mexico is a producer and exporter of oil, our trade balance remains negative as a country.

**Clariant has been working on diversifying its business units. Pigments is currently the main focus globally, but what is the focus in Mexico?**
Clariant now has seven business units, in four clusters regarding its market applications. In Mexico we have production activities for five of the business units, only additives and catalysts are produced in Europe and the United States.

**Clariant is a global company with a global vision and mission statement. Do you find it difficult to coordinate this with local standards and business practices?**
Clariant has certain standards that are common worldwide. We definitely aim to embrace the 'think global and act local' mindset, and are focused globally on preserving our planet, people and performance. As long as these remain our focus, we have found that we can adapt locally to whatever specialties this market may require, which it certainly does.

**So far, we have discussed Mexico's survival during and growth after the financial crisis; what about Clariant's strategy and success in overcoming such a widely devastating experience?**

*Clariant has certain standards that are common worldwide. We aim to embrace the 'think global and act local' mindset, and are focused globally on preserving our planet, people and performance.*

We understood the difficult economic environment and implemented many measures to survive: we took care of our resources, reduced complexity and talked in a very open way with our customers' suppliers, employees and stakeholders. Overall, we defined an integrated way to run our business and after this survival period we moved to steady growth, taking advantage of the lessons learned and working with a continuous improvement concept, implementing the Clariant Excellence concept based in four pillars: operational excellence, commercial excellence, people excellence, and innovation excellence.
Our company is very aware of the constant change not only in the chemical industry but in every economic activity. In 2011, for example, Clariant acquired Sudchemie, integrating two business units into our portfolio: functional minerals and catalysts. On the other hand, in 2012 we sold our textiles, emulsions and paper business. In 2013 we also sold the leather business as part of our portfolio review to achieve strong, sustainable growth.

**In your opinion, what are some of the main areas of the Mexican market that need servicing?**
FHE: Consumer care is one of the most important elements that we have currently, as our population is constantly growing. Automotive is also growing quite rapidly, as more companies establishing new plants in Mexico. There are a number of opportunities that Clariant expects to see in the coming year, and with careful attention to growth, Mexico can expect the same.

# Federico Soto

Marketing and Sales Director
**ORGANO SÍNTESIS**

**Can you provide us with a brief introduction to Organo Síntesis and your operations in Mexico?**

Organo Síntesis is a Mexican company founded in 1966. From the beginning, our focus has been on producing biocides, especially for personal care. In the 1970s, we began producing triclocarban, which is an antibacterial used in the manufacture of soaps by international companies such as Procter & Gamble, Colgate and Unilever. Today, Organo Síntesis is the world leader in the market for triclocarban. We export this product to more than 20 countries worldwide. Our main markets currently are fine chemicals for personal care, cosmetics, water treatment, disinfectants and specialized products. Our export markets account for 80% of our revenue because this is where we see the highest demand for our specialty products.

**Can you walk us through the typical product development process for Organo Síntesis?**

We have several different processes for product development, although new product ideas usually come from the market itself. The process sometimes begins with an internal idea from our R&D department that we then develop into a molecule. The marketing department then has to develop the market for this new product, which can be difficult as it is innovative. Our development process can also begin as a response to a customer demand for certain products, such as preservatives. We then meet with the customer and develop a customized product for them. After the customer approves the product in the pilot stage, it is produced in high volumes. Organo Síntesis has had success working with many big clients such as Procter & Gamble and Colgate. When these clients need the supply of a new molecule, we develop it in our lab for them.

**Can you give us some examples of where you are currently focusing your R&D?**

We are looking to develop innovative products, with a focus on water treatment products, oil extraction, personal care products, preservatives, and disinfectants. Due to the recent energy reforms, we are trying to enter the secondary oil recovery market with our products. Secondary production is now very important to PEMEX because some of the oil wells are now almost completely depleted.

**Organo Síntesis also offers toll manufacturing. What is the strategic significance of this business?**

Organo Síntesis has a plant near Mexico City that offers toll manufacturing to international companies who do not have their own production facilities in Mexico and want to export to Latin American countries. Approximately 35% of our revenue comes from toll manufacturing and we expect this business to continue increasing in the next few years.

**What makes Organo Síntesis an attractive manufacturing partner for international companies?**

Organo Síntesis is well recognized for the high quality of its products and has been in the market for 50 years. We have never had a recall in our entire history. The company has received approvals from the U.S. FDA and EPA Finally, we offer services along with our products, which distinguishes us from similar companies in India, for instance. •

# Roberto Ortiz

General Director
**NYNAS MEXICO**

**Nynas has a long history as a specialty oils producer. Can you introduce us to the company on a global level and tell us about your business in the Mexican market?**
Nynas is an oil company established in 1928 that today is a joint venture with 50% ownership by the Finnish company Neste Oil and 50% ownership by the Venezuelan oil company PDVSA. We have offices in more than 30 countries and sell our products in over 100 countries globally. Nynas is a different kind of oil company. We are specialized in oil applications and are a world leader in the supply of naphthenic oils. Our products have industrial applications as transformer oil, adhesives, greases, printing inks, and metal working fluids. This translates into oils that are used in a wide variety of applications as transformers in the electrical industry, as a binding agent in the manufacturing of diapers and appliances, or tires, and in newspapers. Within Mexico, we are established since 2001 and we have experienced a rapid growth selling to a variety of clients that operate in these industries. Overall the company has three naphthenic refineries, which are located in Sweden, Curacao and Germany. In Mexico, the Nynas office acts as a distribution and service center for our clients in the country. Mexico is the second largest market for Nynas in Latin America after Brazil, and in the future, we expect Mexico to play an increasingly important role in our business.

**2013 was a difficult year for the Mexican economy with 1.1% GDP growth. While 2014 has improved, growth remains slow at rates expected between 2.1% to 2.3%. How has Nynas reacted to this environment and put measures in place to ensure long-term, sustainable growth?**
The past year was no doubt a difficult one for the chemical industry. The slow growth in the overall economy has had a fundamental effect on the chemical industry, and Nynas has seen this result in our activity in the sector. While so far this year on a global level Nynas has seen positive trends in our business segments for naphthenics, the Mexican market has been challenging as a result of increased competition and slow growth in the context of the global recession. Going forward, we are optimistic that the reforms will bring more opportunities for growth in the country's main markets and Nynas is looking forward to better results. Nynas Mexico is currently working to develop a more competitive logistics infrastructure and adding some resources to consolidate our presence in the marketplace and to provide for sustainable growth.

**How is the company working to not only maintain its market share in Mexico, but also increase its activity in the many sectors where your specialty oils are applicable?**
Nynas' competitive advantage lies in its local presence in terms of having people and products as close to the market as possible, consistent high quality of product and also technical support. As an example of how Nynas approaches technical support in Mexico, is how we sell transformer oil. Nynas counts with experienced technical experts that participate in global committees that develop specifications and set industry trends, also, we present lectures and conferences all over the World, and, more importantly, these experts work close to our customers to constantly monitor our product performance and to develop new ideas or applications.

**Nynas was awarded by Prolec GE the "Supplier of the Year Award" for 2014, which recognizes the supplier with the best performance in service, quality, delivery, cost and innovation. What differentiates Nynas' product and service offering from**

**the rest of the market?**

This was a great achievement for Nynas in Mexico, and a testament to the great emphasis that we put on the service that goes along with our products. At Nynas we ensure that not only are our materials of the highest quality, but that we also provide efficient and quick solutions that are specialized to our customers. Our over 15-year relationship with Prolec supplying transformer oils is a good example of the long-term relationships that we develop with our clients. We understand that our clients need the best products possible in their supply chains so that they can establish their own sustainable growth. Nynas is a supplier that can grow alongside them.

**Speaking of the supply chain, you mentioned the high cost of some raw materials as a key challenge for your clients. In Mexico this is a particular challenge given the country's growing raw material trade deficit. How does Nynas work to improve the efficiency of its clients' manufacturing processes?**

Nynas leased a terminal in Altamira for transformer oil and other products, from which we service our clients in this market. Currently we import these oils from our refinery in Curacao, which we have refined from crude oil. While Nynas imports its products from outside of Mexico, the company focuses on providing efficient logistics along the whole value chain that creates a reliable and competitive supply, thereby lowering working capital for our clients.

**In light of the reforms and the projected upswing in Mexico's economy, what expectations do you have for the performance of the national chemical industry in the medium term and how will this affect Nynas?**

The growth in the chemical industry is going to be driven by value chain integration or import substitution, meaning local production at a lower cost, efficient supply, organic population growth and export markets. We are looking forward to seeing positive outcomes from the structural reforms, which should strengthen the economy. With more investment in the chemical sector, we are hoping to see the growing trade deficit in raw materials reverse. I have been in the chemical industry in Mexico for many years and I have witnessed the local chemical industry decline in the last two decades, as a result of the North American Free Trade Agreement (NAFTA) and other factors, and we hope that we can rebuild a strong industry for tomorrow.

While there are many challenges to doing business in Mexico, there are clear success stories of companies that are able to run efficient operations and Nynas is a perfect example. In our economy, we have to look at structuring our companies as productivity islands that operate under the best practices globally.

**As for Nynas, what are your expectations for growth in the Mexican market in the next three to five years?**

In the next three years we plan to be growing aggressively. Many of our customers have growth plans and we will grow with them. We will see more U.S. companies coming south to Mexico as the economy offers large growth potential and a strategic market. We look forward to commercial partnership opportunities in this environment and we are optimistic for the growth of our company and the growth of the sector in the longer term. •

# Herwig Bachmann

General Director
**EVONIK**

**Can you please tell us about Evonik and the strategic importance of opening an office in Mexico?**

Evonik has a long history in Mexico, which began in 1968. In these early days, the main focus of our operations was manufacturing of dental alloys, heat treatment chemicals for metals and ceramics colors. Thanks to the opening of the Mexican economy in the late 1980s, Evonik began to grow substantially by importing products manufactured in our European and U.S.-based plants.

Evonik has grown into a truly global player that focuses on specialty chemical products. Beginning in 2000, a number of mergers, partnerships and acquisitions led to a shift in the name Degussa to Evonik in 2007. The reason for the name change was to give the company a new face, structure, image and character in order to become truly independent under a new corporate brand.

In terms of sourcing, 95% of our products imported now to Mexico are supplied by Evonik subsidiaries. The vertical integration of our business units is a key competitive advantage and allows us to offer products that complement our entire portfolio.

**What have been the most significant changes that Evonik has seen in Mexico over the past five years?**

The most significant change is related to the integrated government reforms that are being introduced in Mexico. These reforms in energy, labor, and tax will touch everyone in some way or another. Substantial growth is around the corner and Mexico will be attractive for many businesses. Currently, Mexico is the 11th largest economy worldwide and the fifth largest producer of automobiles. The country has a population of 120 million, 50% of which is 26 years of age or younger. All of these factors have led businesses to begin to invest or reinvest. We have seen a clear improvement in the workforce with 115,000 new engineers graduating yearly. Many companies that moved to China are now returning to North America and to Mexico in particular. The Mexican workforce is competing in cost and in quality against Asia, while the lead-time for deliveries to the United States is four to five days, compared to four to five weeks from Asia.

**What is the importance of the Grupo Idesa and CyPlus GmbH project that Evonik is currently pursuing?**

This sodium cyanide plant will utilize cutting-edge technology in order to produce a raw material that is currently imported into Mexico. The market in Mexico continues to grow in an interesting way, and this partnership will yield substantial production over the next few years. Evonik will continue to position itself as a local producer and hopes to take advantage of Mexico's forthcoming growth.

**Evonik has implemented a strategy that focuses on certain "megatrends" that are occurring in the market. What is the significance of these megatrends for Evonik's business?**

Evonik has focused on these areas of business long before they were labeled as "megatrends." One example is health and nutrition, where Evonik is investing additional resources. We expect major growth, as the world begins to have an older age demographic needing more pharmaceuticals and food. The megatrend resource efficiency is focusing on new technologies like green tires, designed to have a lower rolling resistance using our technologies, thereby giving in excess of 8% in fuel savings, while reducing the environmental impact and the carbon footprint. The megatrend specialty materials offer many solutions supporting the oil and gas business, polymers, plasticizers, resins and others.

**We noticed in the lobby that Evonik now has 1,600 days without an accident. How has Evonik been able to achieve such an impressive safety record?**

Evonik in Mexico has been ISO 9001 certified since 1995. ISO certification leads to standardization, which in turn creates a culture around safety and awareness. We also comply with the Responsible Care programs promoted by the ANIQ, the Mexican Chemical Industry Association, under the name of SARI. We try to nurture a consciousness about safety in our people and provide training and a safe environment. One of Evonik's most recent efforts to improve safety included the redesign of job responsibilities to prevent chronic physical injuries. We have an active EHS&Q program, in short, we live and breath safety and security.

**As we often produce our reports every three to five years, what can we expect to see change for Mexico and Evonik the next time we meet with you?**

A different picture will be painted for the macro-environment in Mexico in five years. Mexico will move from the 11th largest economy in the world to the sixth or seventh largest. The markets will have shifted to some extent but manufacturing will remain our primary focus. The Mexican population will have more buying power and consist of a larger middle class that can afford higher-value products. These shifts will lead to more opportunity for Evonik and require more specialty chemicals and products. Mexico is well prepared for the future, as the country has 12 free trade agreements with 44 nations, which provides access to 80% of the world's GDP.


CLY


JC

# Clyde Louis Young & Jesus Carrete

CLY: General Director
JC: Commercial Director
**WATSON PHILLIPS**

**Can you please give us a short introduction to Watson Phillips and tell us about your recent accomplishments?**

CLY: Watson Phillips was founded in 1824 and is the oldest commercial company in Mexico. We represent 15 foreign, specialty chemicals manufacturers on an exclusive basis for the Republic of Mexico. We have achieved good growth over the last 10 years. We distribute to a variety of industries including cosmetics, automotive and pharmaceuticals. If one industry is not performing well, we can always shift our focus to a different industry.

JC: Our main import markets are the United States, United Kingdom, Germany and Austria. Our operations are focused strictly on the Mexican market, but we also export on a small scale to Guatemala.

**Which product areas form your main focus?**

JC: Our main focus areas are food, pharmaceuticals and coatings. Our other areas of specialization are plastics and adhesives. Food is driven by population growth and coatings mainly by the automotive industry. About 30% of our business revolves around the automotive industry so Watson Phillips is very much dependent on the performance of this sector. More and more companies are investing in this industry in Mexico, which presents an excellent opportunity. The opening up of Mexico's economy has introduced large, international distributors to our market, which has made the competition among chemical distributors increasingly tougher. We are quite diversified and we sell around 300 different products.

**What is Watson Phillips doing to stay ahead of its competition?**

CLY: We differentiate ourselves by providing excellent service and technical expertise. Watson Phillips is a fairly small, private company, which enables us to be flexible and give more personalized attention to our clients than larger distributors can. Mexico will continue to import a number of specialty products that are unlikely to be manufactured domestically. The production infrastructure is already well developed in the United States, so they will continue to export to Mexico and Watson Phillips, with its extensive experience, can distribute these products.

**What challenges do you face in doing business in Mexico?**

JC: Security is an ongoing problem, and a recent shipment was stolen en route to Guadalajara. People think that we are transporting TVs because of the word Phillips in our name. The deteriorating value of the peso also greatly affected Watson Phillips, as we sell our products in U.S. dollars. We are hoping the dollar exchange rate will fall back down to 13 or 14 pesos.

**Where can we expect to find Watson Phillips in five years?**

JC: We have been growing by 3% to 5% per year and continue to expect to grow larger and alter our product offerings as necessary. The growth of Mexico's pharmaceutical companies has helped us very much as well. We have certainly also been affected by consolidations and remains a future concern. The automotive industry is booming in Mexico and in five years, at least 50% of the industry's needs will be supplied locally and not imported. •

Image: DVA Mexicana

# ATTRACTING AMPLE ATTENTION DISTRIBUTION

"The usual progression when entering a new market is to start by shifting commodities and then move on to specialties. However, when Brenntag came to Mexico, commodities distribution was already well covered but there was a noticeable gap in the area of specialties. We therefore decided to invert the usual progression and focus our business on specialties before breaking into commodities. Today the split is around 50% specialties to 50% commodities. There is potential to expand our market share for commodities in both organic and inorganic products."

- Guillermo Bellot,
General Director,
Brenntag Mexico

# CONSOLIDATION BREEDS COMPETITION

## Mexico's Chemicals Distribution Sector

As consolidation occurs on a global scale for chemical distribution, growth opportunities are heating up for the remaining players. On a regional scale, Latin America saw chemical distribution growth rates of 8.6% according to a recent report issued by the Boston Consulting Group. Within the Mexican context, on top of this growth chemical distribution enjoys a vital importance to the industry's value chain.

As the trade imbalance persists for Mexican chemicals, distribution will continue to play a crucial role in the industry's value chain. "Mexico continues to rely heavily on imports, as is evident by the 10% growth in imports annually, which is the result of growing demand for materials but flat domestic production," said José Carlos Tapia, general director of chemical distributor Trichem. "There is a net deficit of production close to $20 billion. Relative to the size of the industry, the chemical distribution market is huge," added Othón Canales, chairman of the board of directors at Quimi Corp, a Mexican-based Latin American chemical distributor.

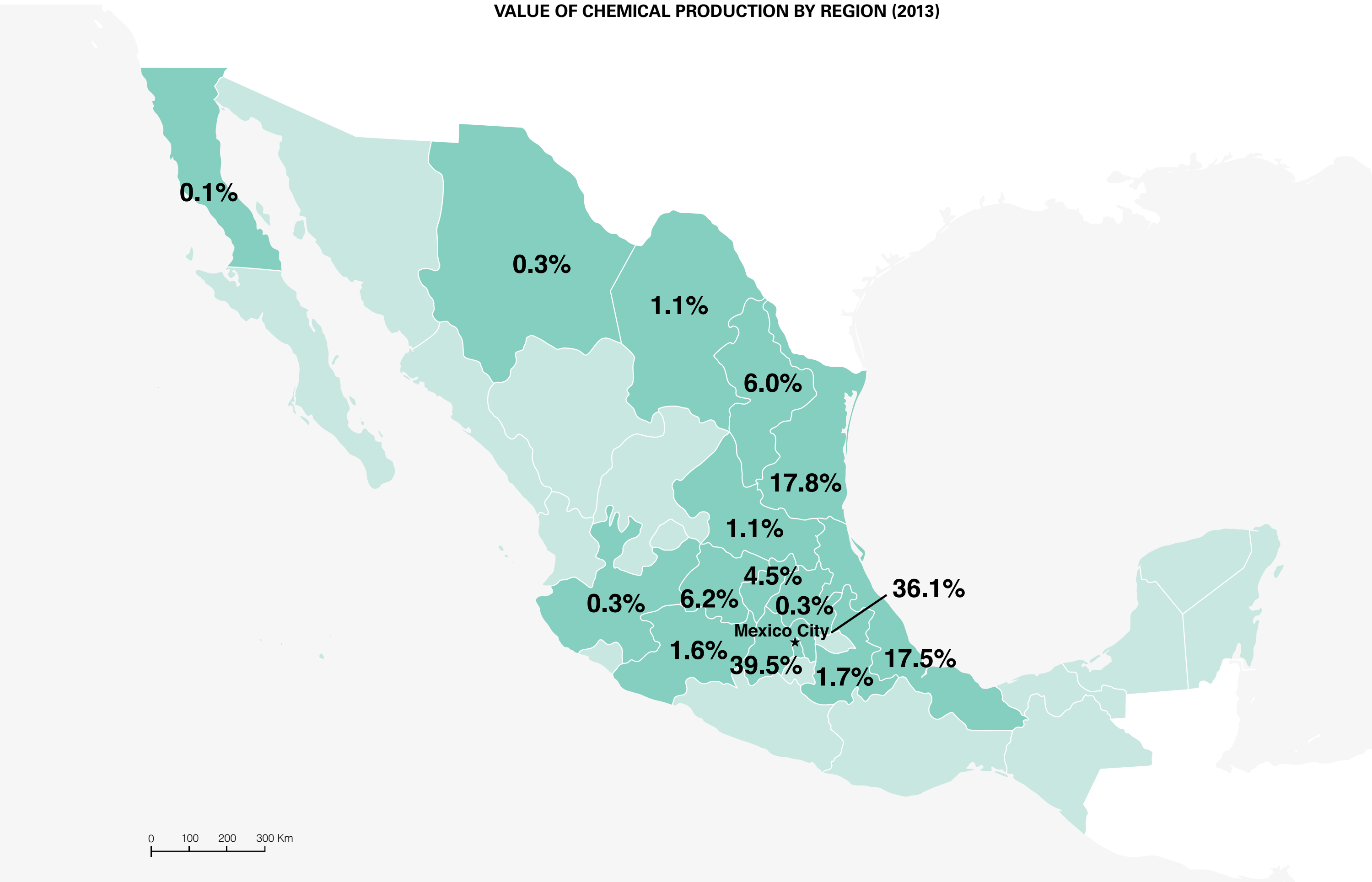
In recent years, as chemical consumption continues to grow, the distribution market has attracted the attention of multinational distributors who are increasingly identifying Mexico as a prime target for expansions. Multinational interest has manifested itself in significant market consolidation as international distributors are entering the market by acquiring local players. "In the early 2000s, the top ten chemical distributors in Mexico were all family-owned companies. Today it is a new world where big multinationals like Brenntag and Univar are acquiring more businesses," said Johnny Silva, managing director of Disan Mexico, the Colombia-based Latin American chemical distributor.

As a result, much of the distribution business has been transferred to the accounts of very few. This is in line with global trends, as chemical manufacturers are increasingly rationalizing their distribution channels. "Today, six or seven companies control approximately 30% of the market," said Alfredo Ison, general director of Química Delta, one of the last remaining distribution leaders that is family-owned.

Remaining players in the market are either international companies with aggressive growth plans or small, specialized distributors. "The distribution space in Mexico is a very fragmented one. The top few are very focused on commodity-type products, with the rest focused on a variety of products and services to support the industry. There are 80 registered distributors within ANIQ, but perhaps over 100 including those who are not registered," said Arturo Hoyo, country manager of Nexeo Solutions.

Market consolidation is showing no signs of stopping as global companies like Nexeo are continuing to enter Mexico and looking for fast growth. "It is a large but somewhat disorganized market. As such, there are a number of distributors ready for partnerships

VALUE OF CHEMICAL PRODUCTION BY REGION (2013)




in the interest of consolidating and combining efforts. Nexeo's strategy is not about expanding our footprint so much as it is about improving our offering, so we have to conduct a very careful assessment of any potential partners. Not every company is a viable option for partnership, but we do see immense potential as we evaluate the market," added Hoyo.

### Taking control of the supply chain

To combat the fierce competition driven by a shrinking playing field, chemical distributors are finding more ways to participate in the value chain, whether it is increasing value added service offerings or moving fully into production.

Mexican specialty chemical distributor Macropol has responded to the quickened evolution of the market by adding in production capability. "Since 2007, we have been running a factory to produce chemical products as well; the idea is to support our commercial lines with this. In the past, products evolved every 20 to 25 years. Today the rate is much faster. Macropol's activity is currently split 70% distribution and 30% production. Our goal is to increase production to between 50% and 60% by 2016," said Eloy Cordero, general director of Macropol.

Pursuing a similar strategy, distributor Trade Chemicals is currently manufacturing and importing products in equal measure. "We hope to increase our manufacturing. The most important products for us are silicon emulsions, which are used in many markets," said Miguel Valdivia, commercial director at Trade Chemicals. "A number of distributors are moving into manufacturing, which is a smart way to develop the supply chain. Overall, this move means better prices and increased competitiveness with other companies. We also have more control over the quality of our products when we are producing them since we know how they are made."

While specialty chemicals and niche materials have traditionally been left to small players, Mexico's leading distributors are increasingly targeting specialties for growth, putting further pressure on small and medium-sized companies.

Química Delta, which is aiming to increase its specialties and differentiated products business from 40% of overall sales to 60%, joins a rank of larger distribution players aiming to grow through specialties. "In the context of the market consolidation, it is important to find ways to add more value for our customers. This can be achieved not only through a focus on specialties but on products with higher value added in general," said Ison of Química Delta.

Colombia-headquartered distributor Disan has been in the Mexican market for ten years and is also targeting specialties for growth. “Disan has put a bigger focus on specialty products where there is room to grow and larger margins,” said Silva of Disan. “Large chemical manufacturers want to focus on their production, R&D, and key customers. This creates more and more opportunities for distributors to add value into the supply chain.”

**Taking advantage of global supply networks**

Only twenty years after the North American Free Trade Agreement (NAFTA) opened up Mexico’s markets to the world, chemical distributors are taking full advantage of Mexico’s geographic positioning and numerous free trade agreements to optimize their sourcing networks. Increasingly, even domestic companies are opening branches in key markets around the world to find better prices and quality. “Charlotte Chemical has an office in San Antonio, which is mostly strategic. Most of our products are imported. Two percent of what we sell is locally produced, with the rest coming from the United States, the United Kingdom, India, China and Japan. Until the current reforms take effect, we will continue to import. We aim not to compete with local producers, so we sell things that are not available here,” said Gómez of Charlotte Chemical.

Charlotte Chemical is one of many Mexican distributors scouring the globe, with many looking to China as the country’s reputation for quality improves. “More distributors are bringing items from China because the quality is getting better, but not in all cases. You have to be very selective in what you import from China. We were the first company in Mexico that imported products from China for the textile industry. In every case we have to double check the quality of the products, which involves asking for all of the specifications and certifications from companies before we start doing business with them,” said Salvador Solodkin, president of Mexican chemical distributor Materias Químicas de México (Maquimex).

This global strategy succeeds in price competition and is enjoying greater acceptance in the market. “Five years ago, quality control would have been a major concern for us when working with companies in Asia. Nowadays, we are happy to say that suppliers there are equally as reliable as their European or American counterparts,” said Alonzo Autrey, general director of DVA Mexicana. •

*Five years ago, quality control would have been a major concern for us when working with companies in Asia. Nowadays, we are happy to say that suppliers there are equally as reliable as their European or American counterparts.*

*- Alonzo Autrey,*
*General director,*
*DVA Mexicana.*

# José Carlos Tapia

General Director
**TRICHEM**

**Can you please tell us about Trichem's operations in Mexico and the company's relationship with Tricon Energy?**

Trichem is a subsidiary of the U.S.-based company Tricon Energy. Tricon is a $5-billion group with more than 30 offices around the world that employs over 300 people. The main focus of Tricon is trading chemicals. However, five of Tricon's offices focus on distribution, including the Mexican office.

Trichem Mexico was founded 10 years ago and began with a focus on commercial operations. It has experienced tremendous growth and in 2013 reported revenues in excess of $30 million. The core component of Trichem's business is the relationships that it has built with its suppliers around the globe. Trichem can source most products that its customers request, which has led to a growing demand for our products and services.

**What has led to Trichem's success and quick growth in the Mexican market?**

Despite a difficult 2013, Trichem experienced substantial growth because of the relationships that it built with suppliers and customers. Strong relationships are the core component of Trichem's business and the company's top-notch employees make these relationships possible. Trichem hires employees with technical skills, who then spend a significant amount of time not only serving the customer but also learning and understanding the customer's business. The combination of dedication, trust, and knowledge is the key to a successful distribution business.

**How have you managed to find such strong talent?**

Trichem searches for people with a technical background and with advanced degrees. The average age in Trichem is less than 30 years old, which creates a dynamic and fast-paced work environment. Trichem's growth can truly be attributed to the dedication that the company puts into finding and training the right people here in Mexico.

**With the structural reforms and opening of Pemex, will Mexico's dependence on imported raw materials diminish?**

Although there will be new production plants set up to create raw materials domestically, such as the Braskem IDESA project, imports will continue to be vital. Currently, Pemex is able to supply approximately 40% of the materials needed. This means that 60% of these materials still need to be imported, and Mexico will continue to be a net importer of these raw materials for the near-term.

**What can we expect to see change for Mexico?**

This is an interesting time for Mexico. We do not fully understand the details of the reforms yet, but many perceive them with great optimism. The United States is experiencing a boom, and business is beginning to return to North America, presenting an amazing opportunity for Mexico. One must look beyond how the reforms affect the oil and gas industry and consider how they impact the entire value chain. For example, the automotive industry is seeing production return to North America and specifically Mexico. In order for the government to fully achieve success, it remains vital that it coordinate with the private sector to implement and draft long-term plans and also assure that objectives are defined.

# Othón Canales

Chairman of the Board of Directors
**QUIMI CORP**

**Can you introduce us to Quimi Corp and its history in the market?**
Quimi Corp was founded in 1962, when we started representing U.S. catalyst companies in Mexico. At this time Pemex had decided to enter into the petrochemical business and had built its first ammonia plant. Some of these companies had operations in Mexico; however, they decided to leave their catalyst businesses in Mexico in the hands of Quimi Corp. When it comes to commercializing products such as petrochemical catalysts into Pemex, you need to have deep knowledge of how the entity works. Later on we added other types of products and today represent a wide range of catalysts from Albemarle and Clariant to Scientific Design and Caravan Ingredients.
The other major component of Quimi Corp's business is distribution. In some instances we are bringing products from China and reselling them into Mexico, while in others we are exporting Mexican products to Venezuela. For example, we sell sodium tripolyphosphate produced by Mexichem to the Venezuelan market because Mexichem trusts Quimi Corp and knows that we can mitigate the risk of selling to this market.

**Besides catalysts, what are growing product areas for Quimi Corp?**
We also supply tertiary amines, brominated and non-brominated flame retardants for polymers, and antioxidants for polymers. Quimi Corp is focused on chemicals that are considered specialties or based on the difficulty of handling them. Quimi Corp is equipped to handle very delicate, hazardous products. Another important business for Quimi Corp is aluminum alkyls, which are used for the polymerization of polyethylene or polypropylene. These are also products that are difficult to handle.

**As manufacturers look to get more out of their supply chains, how is Quimi Corp offering more value added services?**
For our chemical products, the support that we offer to our customers is primarily logistics. We have a division in Quimi Corp that deals with logistics; in which we help customers with everything from negotiating freight rates to custom brokerage and importation documents. For our hazardous products, we also offer training services on handling these very dangerous products. For our catalysts, we offer technical consulting services. Catalysts are the least understood part of the plant by the operators. Whenever something goes wrong, the prime candidate to blame is the catalyst. From time to time Quimi Corp send teams to evaluate the performance of plants and trouble shoot problems that arise.

*The quicker we have an abundance of raw materials, the sooner we will have good incentives for international capital to invest in petrochemical capacity in Mexico.*

**How do you see Mexico's global standing as a chemical distributor?**
In 2013 the value of production in Mexico was $16.7 billion, while imports were $30 billion and exports were $11 billion. This is a net deficit of close to $20 billion. Relative to the size of the industry, the chemical distribution market is huge.

**Mexico's chemical industry has contracted in the last two decades. Can you give us an overview of Pemex's petrochemical history and how this has impacted private sector development?**
At the time that Pemex invested in its first ammonia plant, Mexico was a closed economy. When the ammonia and other products plants were built, the private sector immediately invested in

downstream plants. This created a scenario unique to Mexico in which primary petrochemicals were made by Pemex and secondary petrochemicals were made by private industry. By the 1980s Pemex was one of the main producers of ammonia in the world. As a result the private sector was investing in more downstream capacity. Not long after, however, Mexico signed the General Agreement on Tariffs and Trade (GATT) in the early 1990s and eventually NAFTA. With the opening of the economy, Mexico was flooded with petrochemicals. At this time the government decided to discontinue its focus on the petrochemical industry and stopped investing in Pemex's petrochemical plants. This brought the private sector to a halt, as they were not able to back integrate raw materials.

Under the regime of President Carlos Salinas, Pemex was broken into five independent entities (one corporate and four subsidiaries), which had negative implications for the private sector. The Ministry of Finance interfered within transactions between the subsidiaries and determined the price at which Pemex's gas was sold. The price of gas was based on the price of gas in Texas and adjusted for freight and transportation cost. Immediately the price of gas soared in Mexico and Pemex decided to shut down its ammonia plants. Urea producers in Mexico lost their source of ammonia and $CO_2$ and many producers collapsed. Over these years there were only a few survivors in the private petrochemical sector, including Grupo Idesa, Alpek, Kuo and Mexichem.

**What impact will the structural reforms have on the petrochemical industry in the short term?**

The country will continue to depend on Pemex for its main gas and associated liquids; however Pemex will be transformed by being able to receive its revenues directly, rather than receiving a budget from Congress. Pemex typically does not receive its budget until June, which gives them only six months to spend it. With Pemex in a better position and the Ministry of Finance no longer setting the price of gasoline at the pump, there will be more efficiency.

In the very short term, the opportunities from the reform will be upstream. The reform is very unclear downstream, and it is unlikely that any company in the short term will come to Mexico and build a refinery. We will see the majors come to Mexico and set up marine terminals to import gas, gasoline and diesel before they decide if building a refinery is possible.

**In the long-term, what expectations do you have for the chemical industry in Mexico and Quimi Corp's position within it?**

In the medium-term, more gas will be available and more treating facilities will be built in Mexico, which will open up opportunities for chemicals. The quicker we have an abundance of raw materials, the sooner we will have good incentives for international capital to invest in petrochemical capacity in Mexico. We will also see a big opportunity coming in the building of pipelines. While the gas lines were already opened to private investment, Pemex has never had the budget to make investments into gasoline and crude oil pipelines. Quimi Corp is looking to partner with engineering companies to take advantage of these growth opportunities. •

# Alfredo Ison

General Director
**QUÍMICA DELTA**

**Could you start us off with a brief history of Química Delta?**

2014 marks Química Delta's 40th year in the market. When my father first set up the company in 1974, Mexico's borders were still closed and there was a high level of activity in the domestic petrochemical sphere. We started off distributing products for major players such as Pemex, Celanese and Polioles. Since the signing of NAFTA in 1994, the arrival of foreign companies transformed the industry. Several major companies discontinued certain products, as they were unable to remain competitive with the global market. In fact, domestic production of petrochemicals has continuously fallen over the past 20 years. The new energy reform will help remedy some of the problems with Pemex but there is a risk that this shakeup has come 20 years too late. Now that the United States is well on the path to becoming a major shale gas producer and petrochemical hub, there may be much lower demand for Mexican products. Since 2013, oil prices have been declining and lower prices for derivatives have followed, so producers will have to increase production in order to maintain current profitability levels.

**In an increasingly competitive market how has Química Delta structured its business to ensure maximum efficiency?**

Since 2009, the Mexican distribution sector has undergone a process of consolidation. Today, six or seven companies control approximately 30% of the market. In this context it is important to find ways to add more value to our customers, which can be achieved not only through a focus on specialties but on products with higher value added in general. We divide our business into three units: commodities, specialties and differentiated products. Commodities account for 60%, with the remaining 40% split between specialties and differentiated products. The goal now is to continue growing the specialties area and four years from now we hope that these proportions will have been reversed.

Within specialties, personal care is a particularly dynamic sector, with annual growth of 7%. We see huge potential in the mining, oil and gas and automotive industries. Mexico is now the seventh largest automotive producer in the world and the sector continues to draw high-level foreign investors. The country must now work to attract similar levels of investment in oil and gas, particularly in downstream processing and petrochemical production.

**Química Delta represents many large global chemical companies that are already present in Mexico. Why would such a company prefer to work with Química Delta rather than handling their own distribution?**

Realistically, a chemical producer is only going to work with us if we can add value to their business. Sometimes we can achieve this through our logistics services. We import high volumes of certain chemicals into Mexico on barges, which creates economies of scale and reduces costs. A further benefit is that we assume the risk. Large companies may not want to sell to small customers because the risk of non-payment could be too high. We can also add value by working closely with individual clients to develop very specific products. This process can take several years and, given the small volumes involved, is not a worthwhile investment for major producers.

**What kind of logistic capacity does Química Delta have in terms of fleet and coverage?**

We have one site in Teoloyucan, which holds approximately 10 million liters of liquid capacity and 5,000 metric tons of dry capacity. We also store some materials in Altamira. We use railcars to transport raw materials to various points including Tula, Guadalajara and Monterrey. Most of our products are distributed in Mexico but 8% is exported to Central America. We plan to further grow our transport capacity through the use of third-party providers.

**Química Delta is a member of Responsible Care. What interest have you seen from other Mexican companies to push for similar high standards?**

Many years ago I was president of the distribution section of the Mexican Chemical Producers Association (ANIQ). During my tenure, I became aware of the importance of health and safety practices, and Química Delta became one of the first certified members of the Responsible Care program. Our accident rates have subsequently been decreasing steadily year on year. Transnational companies are generally more willing than local companies to alter their practices in order to be certified. Modifying internal processes requires significant investment, which smaller companies may struggle to make. Nevertheless, ANIQ is pushing hard to encourage more local companies to sign up and for suppliers to audit their distributors to ensure compliance. After carrying out such an audit, Pemex had to reduce its distributors from roughly 70 to 25.

**Looking forward, what are Química Delta's plans to grow in Mexico?**

We want to become one of the sector's leading companies by staying ahead of the market and proactively searching out new opportunities. 2014 has been a disappointing year for the industry, largely because of tax hikes, which have caused consumption to decline. However, we still managed to grow 10%. Within five years we hope to be one of Mexico's top three chemical distributors.

# Alonzo Autrey

General Director
**DVA MEXICANA**

**Could you tell us about DVA Mexicana's growth in Mexico since its establishment in 1998?**

Alonzo Autrey (AA): Headquartered in Hamburg, Germany, DVA has been active for 40 years. DVA entered the Mexican market in 1998 through a partnership with a local company, eventually becoming DVA Mexicana. DVA Germany has a partnership with Velsimex Mexico. These two businesses are operated separately, though we do collaborate on best practices issues. In Mexico, DVA has five business units comprised of pharma, food, industrial chemicals, specialty chemicals, and animal health. Pharma are its largest business, with food, industrial chemicals, specialty chemicals and animal health following respectively. Our current strategy is to focus more on pharma, food, and agrochemicals, while moving out of the animal health sector. This is a very competitive industry, and the margins are very low. Going forward, we see the most potential in pharma and food.

**85% of your products come from overseas. How do you develop your sourcing networks?**

Much of the work that DVA Mexicana does overseas involves visiting suppliers and auditing their sites and practices. The real added value that we bring to clients in Mexico is our close relationships with our partners abroad to ensure that they are reliable, safe, and of a high quality. The majority of our imports come from China, India and Europe.

**DVA Mexicana has its own logistics network. How would you rate the logistics framework in Mexico?**

DVA tries as much as possible to use its own network, but occasionally we have to rely on third-party networks. Within Mexico, the framework is suitable for our needs, but the biggest problem is when vessels coming from abroad do not arrive on time. This often happens with vessels from China, and importing smaller quantities by air has similar problems. Either way, it can take two to 12 weeks, depending on the method of transport, for orders to reach us. This makes it logistically quite challenging to coordinate efficient and timely client deliverables.

**What is the significance of the Mexican market to DVA's regional presence?**

Mexico is an extremely important market for DVA globally; we rank in the top five performing countries for the company out of 13 total worldwide. Of all DVA offices, Mexico is the only one doing the type of work we do. Other centers sell the product at the port, but we work directly with clients and provide training. Almost half of DVA's global employees are in Mexico. As we expand in the coming year, we will be increasing our storage space and laboratory capabilities in a new 20,000-square meters facility close to the north of the Mexico City metropolitan area.

**How do you hope to see DVA develop in Mexico?**

DVA Mexicana aspires to become more than just a buyer and seller of products; we want to bring more value-added services to our clients and provide tailor-made solutions for our customers in the pharma and food segments. DVA's goal is to grow 45% by 2018 in the Mexican market. •

# Arturo Hoyo

Country Manager
**NEXEO SOLUTIONS MEXICO**

**Could you provide us with a brief overview of Nexeo's operations here in Mexico and an idea of how they fit into Nexeo's overall global strategy?**

Nexeo was formed as an independent chemical distribution company in April 2011 and is already the fourth largest distributor on a global basis. Global expansion is a key part of our corporate strategy, and Mexico is a gateway to Latin America with a strong base from which to establish wider regional operations. Our growth has been organic since we began our operations in 2011, and we have achieved double digit growth every year. We started as only a sales team with no assets or infrastructure but today have four distribution centers, with a fifth opening up later this year.

**Nexeo is present across a number of industries, with oil and gas, mining and automotives being some of the more prevalent areas. What are your main growth engines in Mexico?**

Nexeo's core business in Mexico is in the plastics, chemicals and environmental services arenas. 95% of our revenue comes from plastics, but our aim is to grow our chemical line of business. A key component of growth is a strong supply base and customers that see value in our services. We are supported by large multinational principals that also see promising signs of growth in many areas in Mexico. In terms of market segments, our plastics line of business has been focused on automotive, health care, and caps and closures. Nexeo wants to make these areas our strengths by going beyond the usual distributor role and providing comprehensive service offerings to our customers.

**Nexeo is also a distributor of chemicals. What sort of value do you add to your services for your customers?**

Nexeo has technical and laboratory capabilities that accelerate product introduction for customers in terms of new products, plastics, tool design and optimization. We opened a new state-of-the-art lab in Houston that services customers in Mexico as well, and the proximity allows us to help with application development for oil and gas, cosmetics, coatings, adhesives, and inks.

Another of Nexeo's value added differences is the provision of real time information for our customers. The distribution business is in large part a matter of connecting people with great service, and our professionals have the tools to provide real-time inventories, customer performance updates and other key indicators. Our goal with these is to have a greater role in the supply chain of our clients, and these tools allow us to provide a greater degree of transparency.

What is Nexeo's approach to retaining talent, which is an industry-wide challenge?

Nexeo aspires to be a company that is recognized by our employees as a great place to work. The market in Mexico is ripe, with many people looking for more talented professionals than there currently are. We must provide benefits that keep the headcount turnover to a minimum. To this end, we make sure that all of our employees are trained in all of the safety and compliance factors that our equipment requires and that Mexican law prescribes. Nexeo has a global network which we make sure our employees are aware of, so that they can take advantage of growth opportunities not just here, but across the globe. Each of our professionals has the chance to grow and learn from any of our offices, which, combined with a generous benefits package and safe work environment, has allowed us to maintain our workforce so far.

**The industry in Mexico is experiencing a growth in competition and significant consolidation. Part of Nexeo's growth strategy is to look into acquisitions; how ripe are distributors in Mexico for any sort of partnership?**

The distribution space in Mexico is very fragmented. The top few are very focused on commodity-type products, with the rest focused on a variety of products and services to support the industry. There are 80 registered distributors within ANIQ, but perhaps over 100 including those who are not registered. It is a large but somewhat disorganized market. As such, there are a number of distributors ready for partnerships in the interest of consolidating and combining efforts. Nexeo's strategy is not about expanding our footprint so much as it is about improving our offering, so we have to conduct a very careful assessment of any potential partners. Not every company is a viable option for partnership, but we do see immense potential as we evaluate the market.

**How do see Nexeo and the Mexican industry evolving in the coming years?**

Nexeo hopes to be in the top three players in its field in Mexico, with a larger share of the market. Nexeo sees Mexico as a major growth opportunity and plans to dedicate more resources to creating a solid growth strategy.

For the industry in general, consolidation is going to continue. With over 100 distributors in the market, we expect to see more deals. This should make the industry more efficient and competitive. •

# Maggie Flor Gómez

General Director
**CHARLOTTE CHEMICAL**

**Please could you provide us with an overview of services that Charlotte Chemical provides?**

Charlotte Chemical supplies specialty chemicals to the polyvinyl chloride (PVC) and coatings industries. We offer technical support to our customers, working with them to develop their new products or improve their current ones. We work in conjunction with our suppliers who train us, and we are able to customize solutions for each client's needs.

**PVC and coatings are your main business; how do you expect that these segments will evolve?**

PVC has been a very stable market in the past few years, due in large part to the construction industry. We are expecting PVC to grow at a rate of 2% per year, which is stable but not outstanding. The coatings industry, on the other hand, is growing much faster with the introduction of numerous specialty products for the energy sector and the automotive industry. There have been a growing number of parts manufacturers coming to Mexico that can provide an expanded market for us. Companies are very interested in trying new technologies and developing new products as the market matures.

At the same time, the average customer has changed. Price is no longer the main issue; environmental friendliness, performance, and quality are all drivers for improvement in the industry to keep up with changing demand.

**Charlotte Chemical is headquartered in Mexico with U.S. offices. Do you see the United States as a growing market or a strategic office?**

Charlotte Chemical has an office in San Antonio, which is mostly strategic. Most of our products are imported. Two percent of what we sell is locally produced, with the rest coming from the United States, the United Kingdom, India, China, and Japan. Until the current reforms take effect, we will continue to import. We aim not to compete with local producers, so we sell things that are not available here.

As we work to expand into the automotive industry, we will look for partners who want to enter Mexico. As an established company that knows the market and has a solid financial base, we see it as important to be at the forefront of potential partners' minds.

**How does Charlotte Chemical plan to deal with the current influx of international players?**

Many companies are looking at investing in Mexico and are coming directly here, rather than working through distributors like us. In the last five years, we have seen a number of companies come in, but they often acquire or partner with local companies. It should be interesting to see how things change, but we are confident that we can be a good partner to such companies, rather than a competitor.

**What are your goals for Charlotte Chemical in the coming five years?**

Charlotte Chemical aims to grow significantly in the coming five years. We are working with new products and have expanded our team by 25% this year. With an improving economy and product offering, we are expecting to see this growth continue.

Image: Kathion

# EVEN FLOW SERVICES, INFRASTRUCTURE, AND LOGISTICS

After Brazil, Mexico has the most complicated customs requirements in the world, and we are able to place people in-house with clients to ensure that their equipment is transported seamlessly into and around the country."

- Mauricio Boy,
President and CEO,
Cargo Group International

# GAS, ENGINEERS, AND WAVES

## Servicing Mexico's Chemicals Industry

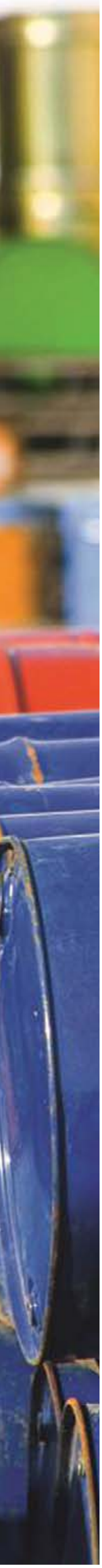
Supporting the chemical and petrochemical manufacturers and distributors of Mexico, an array of service providers have come from abroad or sprung up locally to provide sophisticated solutions to the industry's non-core activities.

### Industrial gas heats up

Mexico's industrial gas market has seen considerable growth in the last five years as a result of the country's strong manufacturing sector and its oil and gas activity. In 2012, according to a report by CryoGas International, the industrial gas market in Mexico grew by 6%, although this growth was tempered by the peso's deflation. Overall, on a regional level, Mexico has grown to now account for 30% of the Latin American market, gaining 2% in 2012.

Evidence of this boom can be found in a spate of investments from the country's main industrial gas players. Leading industrial gas suppler Cryoinfra, a partnership between Grupo Infra and Air Products, completed a new merchant liquid plant in Veracruz this year. The facility, Coatzacoalcos Dox, was built to fulfill the nitrogen gas supply contract that Cryoinfra won for Braskem IDESA's Etileno XXI plant. "In addition to supplying to Braskem IDESA, the plant will also supply oxygen and nitrogen to Pemex's Cangrejera and Morelos complexes, as well as liquefied oxygen, nitrogen and argon to other customers in the petrochemical and chemical industries. This plant has new technology as well as a very good regional location," said Dieter Femfert, commercial director of Cryoinfra.

Image: Leschaco Mexicana



Beyond servicing Mexico's petrochemical and chemical producers through its merchant plants, Cryoinfra has also developed expertise to provide turnkey projects to the sector. "At Clariant's Coatzacoalcos plant we have developed a turnkey liquid hydrogen system to supply hydrogen for their amine process. We not only provided the product, but also the tank installation, pipeline, and flow meters, as well as preventive and corrective maintenance," said Femfert.
Joining already-established Mexican players such as Cryoinfra and Praxair de Mexico, Air Liquide completed in 2013 a new air separation unit to supply industrial gases to Altos Hornos de Mexico (AHMSA), adding over 1,500 mt/d of industrial gas to the Mexican market. Air Liquide's investment marks a growing capacity and growing interest from international industrial gas providers.
As the energy reforms attract new industrial gas suppliers aiming to work with a newly liberated Pemex and the nascent private sector, competition within Mexico's industrial gas space is set to grow fierce. "In the next five years, other players will enter the market, so it will be a very hard fight for us. We have a very good structure in place. The new players coming to Mexico will be looking for the good price, service and experience that Cryoinfra can provide," said Leopoldo López, director of special nitrogen services at Cryoinfra.

**Engineering demand on the rise**

Even before the excitement generated by the structural reforms, international engineering and construction companies were moving into the country to service its growing industries. In the chemical space, multinational firms such as Ferrostaal, Tecnimont (Maire Tecnimont Group), and CH2M HILL are competing with local companies to meet needs from the basic to design engineering for petrochemical and chemical plants. Rather than having a cannibalizing effect on the market, however, international and local firms are joining together to take on the industry's projects. Most notably, a joint venture between Odebrecht, Technip and ICA Fluor was awarded the engineering, procurement and construction of Braskem Idesa's Etileno XXI complex.
As the automotive, aerospace and energy sectors ramp up, their chemical suppliers are dusting off their expansion plans for the coming boom, requiring significant engineering capacity from suppliers.
"CH2M HILL's clients in the chemical industry need new facilities, improvements at existing plants, and assistance complying with regulations and wastewater treatment requirements," said Elisa Guinea, regional business group manager of environmental services for engineering firm CH2M HILL. "To meet these needs, we offer a cross-market, integrated service approach where we provide engineering services to clients throughout all the phases of their projects, including basic and detail engineering."
In time to meet increased demand for engineering in Mexico is a new generation of engineers coming out of the country's universities. By 2012, Mexico was graduating 130,000 engineers and technicians a year, surpassing graduate numbers of countries such as Canada and Germany. Gradually local engineering offices are taking on greater shares of projects and are set to increase this workload given the ample supply of engineers. "Most of the engineering work we do in Mexico is done by our local teams. From time to time we need support in basic engineering from our experts in other countries; however in the last nine months we have done work for our office in Houston, as well as worldwide installations with different clients," said Guinea of CH2M HILL.
Engineering support is not the only prerequisite to promote the development of the chemical industry in the country. Mexico is lagging behind in infrastructure, as Maximo Roberto Pepe, Hispanic Latin America area manager and managing director at Maire Tecnimont Mexico, points out: "For petrochemical plants you need either naphtha or gas. Mexico should, first of all, upgrade their logistics. They still need a lot of pipelines to connect the reservoirs with the areas where new plants could be built. Secondly, they need to modernize their existing refineries to keep up with the new sulfur content requirements. Thirdly, Mexico should expand their oil and gas resources, or they could use the shale gas from the U.S. but this would require more pipelines and connections through the border."
Listed on the Milan Stock Exchange, Maire Tecnimont provides EPC solutions in areas such as polyolefin projects, urea and ammonia plants and sulfur recovery systems. The group, that has the Middle East and Russia as its main markets, expects to strengthen its presence in Mexico in the upcoming years, thanks to its capacity to develop projects in the $4-5 billion range. Through its subsidiary Kinetics Technology (KT), it is already working with Pemex in a hydrogen production project, while it also participates in the Etileno Siglo XXI private venture. For Pepe, the energy reform will bring great opportunities to do more work with Mexico's NOC: "The new situation in Pemex is very favorable in our view, because they would like to open up to new companies. The reform will allow Pemex to incorporate a more agile management to speed up the process for the new required projects. They are now using an open book model to avoid surprises with the lump sum projects that incurred in cost overruns".

**Water treatment rides the wave**

With high expectations in Mexico's energy sector, producers and service providers for the water treatment market are preparing their offerings to meet this eventual growth. With global players expected to come in, along with their international standards, the market is readying itself for an uptick in demand for specialized solutions.

SNF Floerger, a France-based provider of water-soluble polymers and the largest global producer of polyacrylamides, views the country as a key market for marketing its products. "Today, Mexico is the biggest country in Latin America in terms of the market for water soluble polymers, with the polyacrylamide business worth $100 million a year," said Rubio of SNF Floerger.

For ChemTreat, a US-based water treatment company, demand for their products and services within Mexico's chemical industry has been flat; however the company still counts among its clients some of Mexico's large chemical players, providing water treatment services to the Pemex and Mexichem propylene joint venture, while also working with DuPont at their expansion in Tampico and with Mexichem again at Matamoros.

As water treatment chemicals within the chemical sector specifically have not seen much growth, suppliers are looking at niche markets to apply their expertise. "We are very active in specialties such as home care and personal care. These specialties are driving the growth of the business here in Mexico," said Rubio of SNF Floerger.

The most promising applications for such specialties are in Mexico's oil and gas market. The energy reforms have already prompted plans to enter the market for many of ChemTreat's customers. "We have a lot of customers in the United States that are planning to come to Mexico with whom we already have corporate agreements. We also plan to eventually do business with Pemex," said Raúl Morales, director of ChemTreat Mexico.

SNF, which is making considerable investments into its chemical production facilities in North America, is also targeting the oil and gas market, creating polymers for Gulf Coast projects. When Mexico's energy sector will partake in this North American boom remains a matter of debate. "In Mexico, this kind of growth is expected in the next five to ten years as investments are made in shale gas and offshore oil. We will not see the impact of the structural reforms for another five to 10 years. If the market evolves as expected, Mexico's consumption of these kinds of chemicals will increase quickly," said Rubio.

As Mexico's market grows and becomes more sophisticated, water treatment suppliers are looking to innovation to reduce safety risks and service costs. "We are offering smart release technology to our customers, which uses pellet chemicals instead of liquid chemicals. By packaging the chemicals in a bag in pellet-form and not in barrels, humans do not have to touch the chemicals and there is no chance of spills. It is a secure method that can be delivered through DHL or UPS and is biodegradable and phosphorous-free," said Morales of ChemTreat.

Speaking of the crucial importance of recycling water, SNF Floerger is devoting resources to developing new technologies. "There are many technologies like graphene, ultra filtration, and nuclear energy that will help us to treat water at lower costs. This is a focus for chemical companies right now because we have less and less water available from wells," said Rubio of SNF Floerger. "Companies require intensive water consumption and must recycle as much as they can." •

DF

LL

# Dieter Femfert & Leopoldo López

DF: Commercial Director
LL: Director of Special Nitrogen Services
**CRYOINFRA**

**Cryoinfra built three new merchant liquid plants in Mexico in 2014, one of which is aimed at supplying to Braskem IDESA's megaproject Etileno XXI. Can you give us an overview of this facility's development?**
DF: 2014 was a very good year for Cryoinfra, despite the difficulties in the world economy and those coming from the reforms, the political environment, and security issues in Mexico. One of the three merchant liquid plants that we built this year is our facility Coatzacoalcos Dos. The purpose of this production plant is mainly to supply nitrogen in gaseous form to Braskem IDESA's Etileno XXI plant, which is the biggest project at the moment for polyethylene and PVC production. The startup of Etileno XXI will be next September, but Cryoinfra finished its merchant plant one year ahead of schedule and is already running the facility. In addition to supplying to Braskem IDESA, the plant will also supply oxygen and nitrogen to the petrochemical complexes as well as liquefied oxygen, nitrogen and argon to other customers in the petrochemical and chemical industries. This plant has the most advanced technology as well as a very good regional location.

**What specific services do you provide to the chemical and petrochemical sectors?**
DF: We have a lot of applications that we offer to these sectors, such as inerting and purging processes, as well as water treatment and controlling exothermic and cooling reactions. We strive to help chemical and petrochemical clients increase their production and encourage environmental safety. One of our biggest advantages is not just delivering products on time, but also providing the necessary technical support. Cryoinfra has a special division for the application of technology in which it works with its customers to understand their needs and meet their goals, which range from reducing their costs to increasing productivity and quality and strengthening safety.

**Can you tell us about a recent project that you have done with a chemical client that showcases Cryoinfra's full-service approach?**
DF: We have worked closely with chemical clients to complete turnkey projects. For example, at Clariant's Coatzacoalcos plant, we have developed a turnkey, liquid hydrogen system to supply hydrogen for their amine process. We not only provided the product, but also the tank installation, pipeline, safety services, control systems and flow meters, as well as preventive and corrective maintenance.

**More international players are entering the industrial gas supply market in Mexico. How is Cryoinfra differentiating itself?**
DF: Cryoinfra differentiates itself with its services and being close to its customers, as well as cutting-edge technology. Through our partnership with Air Products, we develop our own technology and take advantage of Air Products' research and development (R&D) centers around the world. We also have extensive geographical reach. With more than 30 air separation units across the country, we always have a plant that can provide backup in case of trouble.
Additionally, Cryoinfra has almost a century of experience in Mexico, which is why we are able to start up our plants a year ahead of schedule. Last year, we celebrated our 95th anniversary. We also make safety an utmost concern, as this is an industry where we deal with dangerous, flammable products.

**Cryoinfra started out in oxygen production, but which gas is the most important driver of your business today?**
DF: We have five products: oxygen, nitrogen, argon, hydrogen, argon and carbon dioxide. The importance of our products depends on the given situation in a given time and place. Right now with the petrochemical sector, a lot of nitrogen is required, so we are focusing our production there. With the growing automotive and aerospace industries, a lot of argon and nitrogen are needed.

**As Pemex changes many of its operational and procurement procedures, how is Cryoinfra adapting?**
LL: The market for technology is shifting, as Pemex is changing the way that it procures products from its suppliers. They are increasingly looking for suppliers to offer them all the services and products that they need under one roof. Companies must take the risk to invest in a project to develop what Pemex needs.

**What goals do you have for the growth of Cryoinfra?**
DF: We see our company growing and retaining our top position in the market. We will move even closer to our customers and increasing our investments. Not only have we opened the Coatzacoalcos Dos plant, but we have also opened a new facility for carbon dioxide in Minatitlán where the capacity is 300 metric tons per day, using the newest technology available. Quality is also very important to us and to our customers, especially in the beverage industry. With this new plant, we can fulfill the ever-increasing purity requirements that our customers demand. Our third new plant this year, which is supplying oxygen, was opened in the north of Mexico to meet the needs of our steel-producing customers. In addition, we have several other projects that will be announced soon.

# Maximo Roberto Pepe

Hispanic Latin America Area Manager
**TECNIMONT (MAIRE TECNIMONT GROUP)**

**Could you give us some background about Maire Tecnimont?**
Maire Tecnimont is an Italian group that resulted from the merging of two main companies, one chemicals group and another entity from the Fiat group. We are listed on the Milan stock exchange. The group has different companies, one of which is Tecnimont, which is dedicated to engineering and construction activities in different sectors. We also have Stamicarbon, the owner of proprietary urea technology, as well as a civil construction company dedicated to infrastructure. Finally, there is Kinetics Technology (KT), a process-engineering contractor with high expertise in the chemical, petrochemical and refining industries. The group has a strong organization in Milan, Italy and Mumbai, India, where we have our engineering hubs.
Tecnimont is a company devoted to EPC projects in the petrochemicals area. We are one of the leading international players in polyolefin projects. We are also very strong in urea and ammonia plants and provide the oil and gas sector with very good sulfur recovery systems and hydrogen production and process units. We are also active in power generation: we have completed some large power units in Brazil and Chile, including another project in Dominican Republic, which is currently underway. For several years, our biggest market has been the Middle East and Russia, while we have been expanding in the Far East and Latin America. Now, with shale oil and gas developments in North America, we wanted to be present in the United States, because there are many new petrochemicals projects emerging. We won a project for an ammonia plant in Iowa and look forward to participating in more projects in the future.

*We want to strengthen our presence in the country considering the important position it has taken worldwide. At the moment, we are working on one project for hydrogen production with Pemex through KT and in the most important petrochemical private investment in the "Etileno Siglo XXI" project for the polyethylene area.*

**What are your goals for Mexico?**
We want to strengthen our presence in the country considering the important position it has taken worldwide. At the moment, we are working on one project for hydrogen production with Pemex through KT and in the most important petrochemical private investment in the "Etileno Siglo XXI" project for the polyethylene area. We want to participate in some of the large projects that the country is planning for the future. The new situation in Mexico after the approval of the energy reforms and specifically for Pemex, is very favorable because it will open Mexico up to new companies to enter the country. The implementation of the actual energy reforms will allow Pemex to incorporate a more agile management to speed up the process for new projects. They are now using an open book model to avoid surprises with the lump sum projects that incurred cost overruns.

**What are Mexico's urgent needs in the downstream business?**
For petrochemical plants, you need either naphtha or gas. Mexico should, first of all, upgrade its logistics. It still needs pipelines to connect the reservoirs with the areas where new plants could be built. Secondly, they need to modernize existing refineries to keep up with the new sulfur content requirements. Thirdly, Mexico should expand its oil and gas resources. It is working hard on the offshore part, and hopefully this is an area that will develop in the medium-term. Without more oil and gas, it is difficult to anticipate new fertilizers or petrochemicals projects. They could use the shale gas from the United States, but this would require more pipelines and connections through the border, which are being executed to a large extent.
Mexico, as well as many other countries, suffers from the age of its refineries. The instrumentation and controls have changed consid-

*We have very good capabilities through our Italian and Indian engineering groups with the capacity to develop big projects.*

erably since they were built. It is a difficult task to modernize existing refineries but has to be done. You cannot always build everything from scratch.

**What are Tecnimont's competitive advantages?**

We have very good capabilities through our Italian and Indian engineering groups with the capacity to develop big projects. We participated in a joint venture in the Persian Gulf for a project worth $4.5 billion, for instance. We are very flexible, and that has allowed us to tackle projects of different sizes, providing our expertise and thereby offer a real contribution to value added.

We have the best safety rates among our competitors. We are a leading international company in petrochemicals and olefins, and other companies cannot show similar levels of experience. We have a good track record in the oil and gas sector and power industry. We only participate in projects where we know that we can bring value through our expertise and technological background.

**What are the prospects for Tecnimont in Mexico and Latin America?**

Moving forwards, Mexico should become a major market for us. We are focusing our efforts on Mexico, Bolivia, Colombia, Peru and of course Brazil, where we will build several refineries and petrochemical plants when the pre-salt resources are made available.

In two to three years, we would like to see Tecnimont participating in one of the upcoming big projects in Mexico and strengthening its presence in the country as a technology-oriented, EPC contractor. In our plan, we are working to develop and growth our activities in the country by creating as many jobs as possible, working and contributing to the training of specialized personnel in all areas of expertise of our group. •

# Julio Rubio Padilla

General Director
**SNF FLOERGER**

**Could you give us an introduction to SNF Group and its strategic importance in Mexico as the largest polyacrylamide manufacturing company in the world?**
SNF is a French company founded in 1968, and today is a worldwide leader in water-soluble polymers used in water treatment, the paper industry, cosmetics, oil, agriculture, and many other specialties. The Mexico office opened in 1999, and last year we reached close to $60 million in business with 21 employees. It is a very efficient operation and our strategy is very clear. We buy the products from our sister companies and sell these products in Mexico, giving added value to large accounts. We go to specific markets through resalers who have the expertise to apply our products to markets like paper, agriculture, cosmetics, and mining.
Today, Mexico is the biggest country in Latin America in terms of the market for water-soluble polymers, with the polyacrylamide business worth $100 million a year. In Mexico SNF has a big part of the market not only in basic areas like water treatment, paper, and agriculture, but we are also very active in specialties such as home care and personal care. These specialties are driving the growth of the business here in Mexico.

**On a global scale, SNF has invested in the last three years to double its capacity. What is driving this trend, and is Mexico following suit?**
The oil and gas market is growing worldwide and SNF is making big investments. For example, the Louisiana facility Plaquamine is going to be our biggest in the world. It will almost double the capacity of SNF worldwide, creating polymers for projects in the Gulf Coast. The consumption is extremely high for this kind of chemicals, so today in North America the market share for these kinds of applications is increasing very fast. In Mexico, this kind of growth is expected in the next five to ten years as investments are made in shale gas and offshore oil. We will not see the impact of the structural reforms for another five to 10 years. If the market evolves as expected, Mexico's consumption of these kinds of chemicals will increase quickly. SNF Mexico is growing fast today and has performed above average in sales. Last year the company grew 15%, and this year SNF Mexico expects to grow around 20%. Specialities are driving this growth and SNF Mexico is taking over business from our competitors in markets like paper.

**A large majority of SNF Mexico's business is in municipal water treatment. Can you describe this business?**
SNF Mexico has almost 100% of the municipal water treatment business in Mexico. Our products are used nationwide: from Cancun to Tijuana, and Acapulco to Veracruz. We have been able to manage a good combination of price, service, equipment, and technology, because this is the core of our business worldwide. SNF has the expertise and resources to be more effective than our competitors. While our competitors focus on specialties like paper and mining, we have taken over most of the market segments in Mexico.

**Management of water resources is an important issue worldwide. What is the biggest challenge in this respect?**
The first challenge is to find the water. We have to recycle water, develop new technologies, and reduce the cost of treatment. There are many technologies like graphene, ultra filtration, and nuclear energy that will help us to treat water at lower costs. This is a focus for chemical companies because we have less water available from wells, and companies in the paper and textile industry require extremely intensive water consumption and must recycle as much as they can.

**How will the structural reforms affect SNF Mexico?**
SNF Mexico expects more consumption of chemicals for the oil industry. We will have to buy more polymers for our plants and expect to develop locally to help build the infrastructure. Right now, we import most of our materials from the United States and about 10% from France. If everything happens as we expect with the reforms, we will import all of these chemicals in larger amounts rather than producing them locally. It will not be difficult in Mexico, because the plants in the United States are nearby.

**What objectives and goals does SNF Mexico expect to accomplish in the next five years?**
Our goal is to be a company with a minimum turnover of $100 million, with no more than 30 employees and having most of the market. We know this is difficult, but many of our competitors are leaving this market because the profitability is not very high and big chemical groups are focused on large returns. Our vision is to develop the polyacrylamide business as much as possible worldwide. For other companies, it is just one more business, but for us, it is our life. Mexico has a lot of potential if the government's initiatives today succeed. We will have to do to make this happen, and SNF will be here to be a part of this growth in Mexico. •

# Elisa Guinea

Regional Business Group Manager
**CH2M HILL MEXICO**

**Can you introduce us to CH2M HILL's practice in Mexico and tell about the firm's recent developments in the country?**

CH2M HILL is an employee-owned engineering company that was founded in 1946 in Oregon, and entered Mexico 22 years ago. Today we have operations throughout Latin America in, Mexico, Argentina, Brazil, Peru, Chile, Panama, Trinidad and Tobago and the Caribbean. In Mexico, we have around 500 employees, mostly working in the chemical and oil and gas industries. We also do work for the manufacturing, infrastructure, transportation, water and environmental sectors. In the last five years, CH2M HILL's business in Mexico has grown exponentially, particularly in the energy business. In that time we have grown from working mainly with infrastructure and manufacturing, to the broad portfolio that we have today.

**What has been the role of the chemical industry in terms of this exponential growth that CH2M HILL has seen in the last five years in Mexico?**

Our business in chemicals is related with the development of the country, especially in terms of the cycles of industries. During the 2008 financial crisis many automotive companies in Mexico cut back their operations, whereas now the industry is picking up and their demand for chemical and plastics supplies is increasing. Together with the energy reform, this is driving demand for the chemical industry.

CH2M HILL's clients in the chemical industry need new facilities, improvements at existing plants, and assistance complying with regulations and wastewater treatment requirements. We offer a cross-market, integrated service approach where we provide engineering services to clients throughout all the phases of their projects, including basic and detail engineering. We provide due diligence and environmental studies for site selection and remediation work. Although we do not yet provide construction services in Mexico, we provide construction phase assistance and in some cases, such as one chemical company in Mexico, we offer operation and maintenance services in addition to environmental work.

**CH2M HILL contributed to the EPCM work on the DuPont expansion of its titanium dioxide plant in Altamira three years ago. Can you explain how you applied your integrated services approach to this project?**

We set up a special task force dedicated to a confidential client for this project. The conceptual design they had for this plant was a very complicated process for one of the more complex components that can be produced for the paints and coatings industry. Because the plant is using chemicals that are dangerous and corrosive, we extensively studied the conditions of the site, as well as the process and standards. We complemented the basic design of the project with the scope of our process, mechanical, electrical, civil and architectural disciplines. We also provided construction support at the site to assist the client and the construction company. In addition, we took care of the environmental conditions to protect the plant, the equipment and the nearby communities to prevent accidents. At CH2M HILL we promote sustainability at all our projects by taking into account cost, people and environment equally.

**Out of your more recent projects with the chemical sector in Mexico, can you give us an example of CH2M HILL's work that has been directed at sustainability?**

We have recently put forth a proposal to a confidential client in Mexico that was accepted and the project could begin in 2015. The project is aimed at the company's interest in sustainability and green projects. They are looking to improve energy consumption and develop more efficient and economical handling of residues and emissions. Our proposal demonstrates how they can save money through process adjustment and minimizing energy consumption. This approach adds value to our clients because we are not looking only at the chemical process, we are also combining our skills and capabilities in environmental services to show them how they can contribute to green and clean design to manage their budget, improve operations, and encourage safety and sustainability.

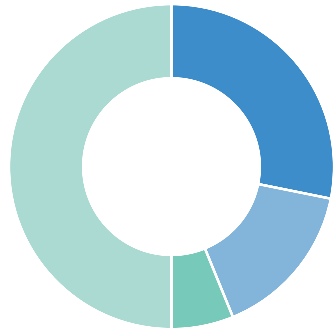
**As the chemical industry's interest in Mexico is expected to increase, what are your goals for the next five years?**

We will continue growing in size, value, and especially in experience, particularly our Mexican professionals who provide services that clients still tend to contract abroad at much higher rates. We see huge opportunities in the chemical industry in Mexico because the industry supports many businesses and is a part of the supply chain of many industries. We will continue doing work in the chemical sector, especially for plastics and polymers, which are directly related with industries that are growing such as automotive. In Mexico we use the tools and techniques for design that we use in our projects across the globe, offering state-of-the-art design resources to our clients. CH2M HILL in Mexico will move more towards clean industry development, combining chemical and environmental sustainability concepts, as well as clean fuel energies.

# UPGRADES IN THE PIPELINE

## Infrastructure and Logistics in Mexico

**CHEMICALS TRANSPORTATION BY MODE OF TRANSPORT (2013)**
Source: ANIQ



| MODE OF TRANSPORT | Metric Tons | % |
|---|---|---|
| Automobile | 513 | 56.2% |
| Sea | 287.9 | 31.5% |
| Rail | 111.93 | 12.3% |
| Air | 0.57 | 0.1% |
| TOTAL | 913.4 | |

As Mexico deepens its ties with global markets, logistics are increasingly affecting the industry's bottom line. Covering large distances across the country and managing shipments in Mexico's increasingly globalized economy has put stress on both manufacturers and distributors. As a result, the role of third party logistics is growing in the market, along with distributors who are stepping up to the logistics sphere.

One of the key challenges facing the industry from a logistics perspective is the need for updated transport infrastructure, particularly when it comes to links between its biggest trading partner the United States. According to 2012 data, 77.5% of Mexican exports go the United States, yet transporting across the border remains costly. "The price of raw materials and logistics continues to be a major problem here in Mexico. The government has abandoned rail freight and instead continues to transport everything by road. This means additional costs for distributors," said Julián Ibarlucea, general director of Grupo Ibarquim.

This additional cost comes from road and rail networks that cannot support the volumes that need to be transported. "We have an insufficient highway network and we need a better railway system. Rail has huge potential for the chemical markets, and some chemical industry customers are using the railways for long-distance transport into the United States. We would like to see more railway development inside Mexico to improve efficiency when it comes to time, flexibility and costs," said Martin Sack, general director of Leschaco Mexicana.

A national infrastructure plan unveiled in April 2014 has laid out a plan for $590 billion of public and private infrastructure investment between 2014 and 2018. The plan is an update to a 2013 predecessor that had outlined $340 billion, and is heavily focused on improving communications and transport for the energy sector. With six of every 10 pesos to come from the government, the developments will depend on the ability of the public sector to tackle this ambitious plan.

"We are optimistic that Mexico overall has a unique strategic geographic position. If our government puts these programs into place, we will have a very positive future in Mexico," said Sack of Leschaco Mexicana.

Upgrading capacity at Mexico's airports and ports will also be necessary going forward, as importers and exporters encounter delays at these hubs. DVA Mexicana, the Mexican subsidiary of German distributor DVA, relies heavily on Mexico's logistics infrastructure, as the company imports the majority of its products from China, India and Europe for use in Mexico's pharma, food, industrial and specialty markets. While delays occur often at points of origin, because of the heavy volumes of products being imported to Mexico, DVA Mexicana argues that port processes are sufficient to keep their business running on time. "In our experience, within Mexico the logistics framework is suitable for our needs, but the biggest problem we face is when vessels coming from abroad do not arrive on time. This happens a lot with vessels from China; given the demand they have, their freight needs are always chang-

*The price of raw materials and logistics continues to be a major problem here in Mexico. The government has abandoned rail freight and instead continues to transport everything by road. This means additional costs for distributors.*

*- Julián Ibarlucea, General Director, Ibarquim*

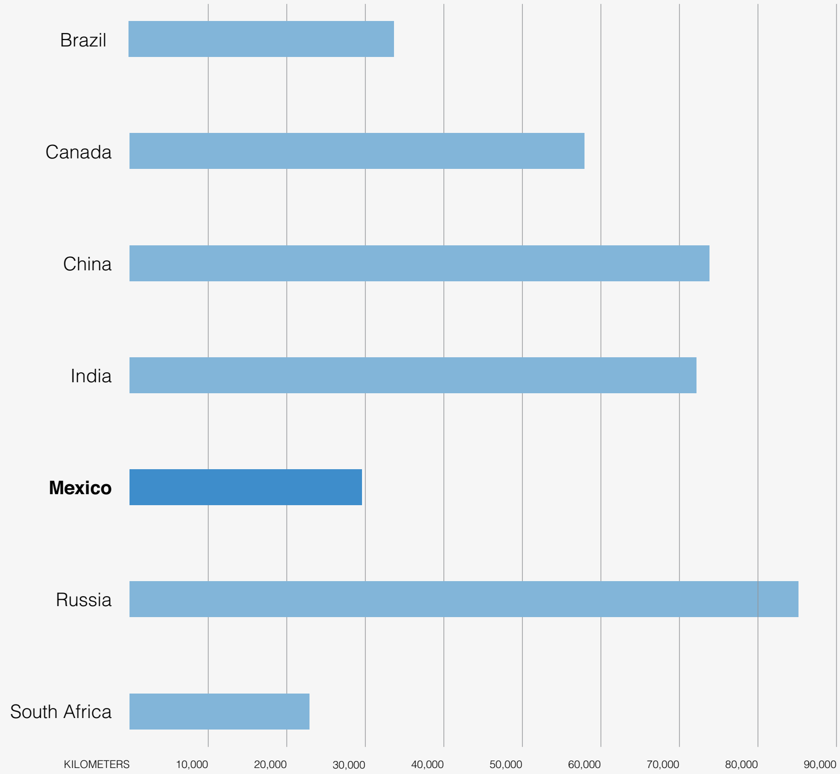
*We have an insufficient highway network and we need a better railway system. Rail has huge potential for the chemical markets, and some chemical industry customers are using the railways for long-distance transport into the United States. We would like to see more railway development inside Mexico to improve efficiency when it comes to time, flexibility and costs.*

*- Martin Sack, Managing Director, Leschaco Mexicana*

ing. This makes it logistically quite challenging to coordinate efficient and timely client deliverables. However, once products reach the ports, we have no issues," said Autrey of DVA Mexicana.

**TOTAL RAIL LINES BY COUNTRY (2012)**

Source: ANIQ



### Finding solutions to logistics bottlenecks

To meet the challenges, the logistics industry has boomed in the last 15 years in Mexico. Leschaco, one of the first foreign players to arrive in Mexico, noted that the industry has multiplied thanks to small and medium-sized local companies entering the market. “When we arrived in 1998, there were about 80 companies in freight forwarding. Fifteen years later we have more than 300 companies and another 300 to 400 indirectly linked to the market. More international players have come in, and small and medium-sized national companies have been established. Today Mexico has a developed open market as in Asia and Europe,” said Sack of Leschaco.

To help clients optimize their supply chains, logistics companies are dedicating more specialized attention to specific client needs and taking advantage of technological innovations to improve service offerings. “Especially in Mexico, we are developing in-house and in-plant presence with our employees. We already have Leschaco employees present in seven companies in Mexico working directly with customers. Leschaco is taking more and more control of the supply chain and implementing key account management activities, so our customers can focus on their core businesses,” said Sack of Leschaco Mexicana.

The need for specialized attention stems from challenging customs procedures that many manufacturers are not equipped to handle. “After Brazil, Mexico has the most complicated customs requirements in the world, and we are able to place people in-house with clients to ensure that their equipment is transported seamlessly into and around the country,” said Mauricio Boy, president and CEO of logistics provider Cargo Group International.

*After Brazil, Mexico has the most complicated customs requirements in the world, and we are able to place people in-house with clients to ensure that their equipment is transported seamlessly into and around the country.*

*- Mauricio Boy,*
*President and CEO,*
*Cargo Group International*

In addition to customs navigation, a key challenge for transport is the security risk in the north of Mexico, exacerbated for the chemical industry by the hazardous nature of the materials in transit. To protect against these risks, companies work to obtain and maintain certifications, including ANIQ’s Emergency Transportation for the Chemical Industry (SETIQ) and the International Cyanide Management Institute.

Distributors looking to gain an edge in the market are also focusing on expanding their logistics capabilities. One of Mexico’s largest chemical distributors, Alveg, is the only distribution player in the market to invest in its own maritime terminal. “We always deliver products with our fleet of 200 units controlled by satellite tracking. A problem that we see in the short term for the country is storage capacity,” said Rodolfo Ramírez, general director of Alveg.

With a clear vision from the government to expand transport capacity, the private sector will need to support these plans and follow suit with storage capacity expansion. •

# Martin Sack

Managing Director
**LESCHACO MEXICANA**

**Leschaco has had a presence in Mexico since 1998. Can you provide us with a brief introduction to the company's development in the market since then?**
Leschaco came to Mexico in 1998 at the invitation of one of our major global customers who invested significantly in new production sites in Mexico. For this kind of project logistics they needed one of their well-known specialists, so Leschaco signed the contract abroad under the condition that we would open an office in Mexico. Since then we were able to very successfully develop our business in Mexico. Today we have over 120 employees and several offices. On a global level, Leschaco is still a privately-owned company with 42 separate companies and more than 1,800 employees in more than 20 countries.

**How has the logistics market evolved in Mexico since Leschaco arrived in 1998?**
When we arrived in 1998, there were about 80 companies in freight forwarding. Fifteen years later, we have more than 300 companies and another 300 to 400 indirectly linked to the market. More international players have come in and small and medium-sized national companies have been established. Today Mexico has a completely developed, open market as in Asia and Europe.

**How significant are Leschaco's Mexican operations from a global perspective?**
Out of the 20 foreign subsidiaries outside of Germany, Leschaco Mexicana last year was ranked among the top three offices for development and revenue. While Leschaco Mexicana is not a regional office, there is already a trend in the organization to move further into regional development as our influence in the region grows.

**How does the potential for growth in Mexico compare to the wider region?**
We have been able to develop and grow our business in Mexico year after year, independent of external economic influence. This growth will continue for the next 10 to 15 years without major problems. Mexico has a strategic geographic location due to its proximity to the United States and its important trade relationships with most countries in Latin America. We see a lot of potential when it comes to future growth between Mexico and Latin America. Leschaco is focusing both on development inside Mexico, as well as growing our influence in the United States and Latin America.

**What strategies has Leschaco utilized to develop its business as a logistics provider in Mexico?**
When we arrived in Mexico, there was no main logistics provider for the chemical industry, and we worked hard to become this kind of dedicated and specialized service provider, which requires having specific knowledge and educated employees, and several specialized products. Also due to globalization, we need to be proactive and prepared for fast growth by taking internal measurements. Customers' demands are changing daily, and therefore we need to be much closer to them than 15 years ago. As our customers' businesses become more complicated they are no longer looking for a service contract, but for a real partnership.

**Can you give us an example of how you work as a partner rather than just as a service provider?**
We are developing in-house and in-plant presence with our employees in Mexico. We already have Leschaco Mexicana employees present in seven companies working directly with customers. Leschaco is taking more control of the supply chain and implementing key account management activities, so our customers can focus on their core businesses.

**What are the main services you provide to the chemical industry in Mexico?**
Our traditional services are international transport and the coordination of exports and imports by sea, air, truck, and rail. This includes documentation and customs clearance for exports and imports. We also offer specialized products for the chemical industry, such as our fleet of tank containers for liquid transport.

**Leschaco as a global company has worked in jurisdictions across the world. What challenges in the transportation industry are unique to Mexico?**
Mexico needs more investment in transport infrastructure. Overland transport is critical because of its huge traffic with the United States. We have an insufficient highway network and need a better railway system. Rail has huge potential for chemical markets, and some customers are using railways to transport to the United States. We would like to see more railway development inside Mexico to improve efficiency when it comes to time, flexibility and costs. The new government and future governments must invest in this development.

**What outlook do you have for your business and the overall growth of Mexico in the next five years?**
We are optimistic about Mexico and our business here. Leschaco Mexicana will most likely double in size in the next five years. We are well recognized in the Mexican market and see a lot of opportunities independent to the general growth of the country. If the country is able to grow at a higher level than in the past five to seven years, we will see an even more positive picture with growth rates for our business in the 10% to 20% range. •

# Santiago Cárus

Director and Environmental Packaging Technologies (EPT) exclusive representative

**EUROMEX LOGISTICA INTERNACIONAL**

**Euromex was established in 2000. Can you please give us an introduction to your company and tell us about your recent accomplishments?**

Euromex is part of a custom broker company that was established more than 60 years ago in Veracruz. We saw an opportunity to enter the freight forwarding market and specialized in importing and exporting wine and spirits. We made contact with an ISO-tank company, which began producing flexitanks two years later that enabled us to transport vegetable oil and other chemicals. In 2010 Euromex changed its flexitank partner to Environment Packaging Technologies (EPT) and has been focused on developing the flexitank market, which has made us industry leaders in Mexico. Euromex is continuously on the lookout for new companies interested in using flexitanks. Our staff is also involved in training our new clients on how to use these products. There are three or four companies in Mexico with this kind of technology, but Euromex controls roughly 80% of the overall market.

**Can you explain to our readers what flexitanks are and why companies would use them?**

A flexitank is a large bladder that is used in a 20-foot container. Most flexitanks are made from liners of low-density polyethylene and have between one to four layers. The bag exterior is made from polypropylene. Flexitanks range in cost from $700 to $900. Basically, most flexitanks look the same, but the differences are in the thickness, strength and manufacturing process. Our company uses tubular materials leaving no longitudinal seams, which prevents the pressure inside the container from increasing during transport. This is probably the safest type of flexitank in the world and has enabled Euromex to grow very fast in Mexico.

**Companies like Orion Productos are growing 15% to 20% annually. What is Euromex's growth strategy?**

Euromex grew 10% to 20% annually from 2008 to 2012, but the market has become saturated, and we have little room to grow. We have to find new companies that are willing to try flexitanks, which is not always easy because companies are accustomed to their old technologies. One of our strategies is to advertise, but we also make direct contact with potential new clients that we would like to have onboard. It is difficult to acquire clients that are already using flexitanks, especially when they have not had any problems. One of our selling points is that Euromex uses high quality flexitanks made by EPT, a company based in Houston. The organization called Container Owners Association (COA) enforces a set of standard rules and practices among the shipping lines, container owners, flexitank makers and operators, and EPT complies with all of the COA-impact tests requirements.

**What is your level of interaction with the chemical industry?**

In Mexico, the chemical industry does not export a lot of non-hazardous bulk liquids; more products are imported than exported. Euromex has several chemical clients. There are roughly fifteen companies that export using flexitanks and ten of them are our clients. The others are our competitors' clients. Euromex works with one company that produces a product in Altamira, which is then exported to Colombia, Costa Rica, Brazil, and Argentina. We have had another client for the past two years and recently signed another two-year contract with them. They produce a special product that is used to clean up a contaminated river in South America. This liquid makes up a shipment of around 70 flexitanks per month. Oftentimes, some of our potential clients choose to hire the services of a lesser-known company, which may be cheaper, but also without the guarantees that Euromex and EPT can provide. Euromex currently processes around 2,000 flexitanks annually and has the advantage of being a Mexican company with good connections to other suppliers and logistics providers around the country. We operate in the ports of Manzanillo, Veracruz, Altamira, Mazatlán, Guaymas, and Lazaro Cardenas. Euromex has reliable truckers, customs brokers, and an excellent support network in all our locations.

**Where can we expect to find Euromex in five years?**

If the promised energy reforms get properly implemented, the chemical industry will benefit and grow. Our business will grow as well given the increased need for products and supplies to be imported and exported. For a long time, the chemical industry has remained largely stagnant in Mexico, which will now hopefully change. More must be done to support the industry so that our domestic production increases. My advice to potential clients is that they should do more research before signing contracts with logistics providers. Not all international companies can provide the customized service that Euromex can; our personalized approach with each client builds a long-lasting business partnership. Additionally, if some companies are looking to buy flexitanks, they should ask for the records and performance specifications. What matters are the type and how it is made as well as the kind of insurance policy given. Buyers should also focus on what kind of support and services are provided in the case of a reported leak.

# Mauricio Boy

President and CEO
**CARGO GROUP INTERNATIONAL**

**Please could you provide us with a brief introduction to Cargo Group International?**

Cargo Group International was created as the result of increased interest from a German just over 20 years ago. Eventually, we decided to split from our German partners and form Cargo Group International. Today, we are an independent Mexican company.

**In Cargo Group's experience, how has 2014 been for the industry and the Mexican economy as a whole?**

Both for Cargo Group and for the Mexican economy, 2014 has not been as good as everyone was expecting. The reforms are good news, but they are still in the process of being finalized and put into practice. The government predicted growth of 4% last year, but only experienced 1.2% officially. This year, the estimates were at 3.9%, but thus far we have not met those targets. The expectations are high because people are expecting the reforms to have an effect immediately, but it will take some time before they are manifested in the industry. We are glad to see the government taking a hand in changing the industry and are hopeful for the years to come, while still recognizing that we must temper our expectations and be patient.

**Could you please tell us about some of Cargo Group's bigger projects here in Mexico that best demonstrate the capabilities and services you offer?**

Cargo Group is currently involved in both the international and domestic transport of a DuPont plant into Mexico, which requires moving a great deal of specialized equipment. In the past, we have moved plants from the United States to Mexico for a number of companies across a number of industries. We have an office in Houston attending to oil and gas customers based there, all of whom are in many ways connected to the chemical industry here. Cargo Group has a very specialized and experienced team. After Brazil, Mexico has the most complicated customs requirements in the world, and we are able to place people in-house with clients to ensure that their equipment is transported seamlessly into and around the country.

# Rodolfo Ramírez

General Director
**ALVEG**

**Alveg was formed out of the merger with Negociacion Alvi and Egon Meyer. How has the company integrated and developed since the merger?**

Alveg is the result of a merger between Negociacion Alvi and Egon Meyer, which occurred in 2011. Both companies were purchased by Grupo Idesa in 2007 and 2010, respectively. The merger maximized the strengths and experience of both companies, strengthened our presence in the Mexican market, and consolidated our relations with suppliers and clients.

**Which industries have been the major engines for growth for Alveg in 2013 and 2014?**

The demand for products in Alveg's industrial division is very strong in sectors such as paints and coatings, pharmaceuticals, resins, adhesives and plastic products.

**As Alveg is one of the biggest chemical distributors in Mexico, could you give us an overview of your logistics networks and storage capacity?**

Alveg is focused on providing differentiated services with respect to the competition. For example, we always deliver products with our fleet of 200 units controlled by satellite tracking. A problem that we see in the short-term for the country is storage capacity. Alveg is the only distributor that has its own maritime terminal, which better serves its clients in an uninterrupted way.

**We have seen a trend among chemical distributors to play a more central role in the chemical supply chain. What is Alveg's approach to value-added services?**

Alveg has branch offices across Mexico, making our response times immediate. We serve 20 segments of the industry and each year the number of products that we offer to each segment increases. We are a complete supplier and serve customers integrally, not only by delivering products but also by offering infrastructure.

**Could you give us an example of how Alveg develops specific solutions for its customers?**

Alveg often works directly with suppliers to customize products. For example, if we need to substitute toluene for a customer because of ecological issues, then we work with our suppliers to develop an alternative to this product. For the automotive industry, we have worked with CDTI to develop customized formulations that support the increase of our products efficiency and, at the same time, improve our clients' processes.

Image: Tecnimont (Maire Tecnimont Group)

# INTO THE FUTURE FINAL THOUGHTS, COMPANY INDEX, AND CREDITS

"We have huge expectations not only for Dow Corning, but also for all the segments of the chemical industry in Mexico, especially the agro industry and the automotive industry. Dow Corning has very good opportunities to develop new services, introduce innovation in many areas, and enhance the ability of the natural talents of Mexicans. Gradually the chemical industry in Mexico will take on a new shape in providing solutions and innovation not only for the local market, but the rest of the world."

- Alvaro Galindo,
Sales Manager,
Dow Corning de Mexico

# DESPITE LARGE CHALLENGES, MEXICO'S CHEMICAL FUTURE IS BRIGHT

*Five years from now, Grupo Idesa plans to be in the expansion phase of our projects. The reforms are a powerful step in allowing greater access to feedstock, a necessity in increasing production in the future.*

*- José Luis Uriegas,*
*General Director,*
*Grupo Idesa*

While challenges lie ahead for the industry in the form of tough regional competition and a transforming economy in the wake of the historic reforms, Mexico's chemical industry has the potential to not only return to its levels of decades past, but also to become a leader in the chemical landscape of the Americas.

Close collaboration between the government and the private sector will be crucial to the industry's ability to leverage the new reforms into a growth opportunity. "The United States is experiencing a boom and business is beginning to return to North America, presenting an amazing opportunity for Mexico. You need to look beyond how the reforms affect the oil and gas industry and also consider how they impact the entire value chain," said Tapia of Trichem. "In order for the government to fully achieve success it remains vital that it coordinate with the private sector to implement and draft long-term plans and also assure that objectives are defined."

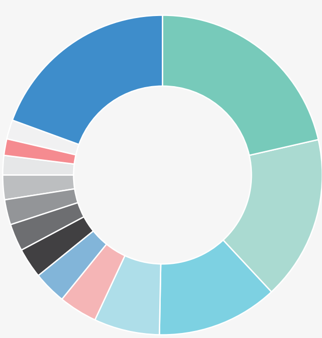
Beginning with petrochemical expansion, cheaper and more available raw materials can trickle downstream. The startup of Braskem Idesa's Etileno XXI project is a first step that could launch further investments up and down the chemical value chain. "Five years from now, Grupo Idesa plans to be in the expansion phase of our projects," said José Luis Uriegas, general director of Grupo Idesa. "The reforms are a powerful step in allowing greater access to feedstock, a necessity in increasing production in the future."

"With more investment in the chemical sector, we are hoping to see the growing trade deficit in raw materials reverse," added Ortiz of Nynas Mexico. "We have seen the overall chemical industry decline in the last two decades, as a result of NAFTA and other factors, and we hope that we can rebuild a strong industry for tomorrow."

A focus on locally-made raw materials, coupled with a distribution sector made strong by competition and a growing base of international and domestic manufacturers focused on quality, the correct ingredients are in place for a robust sector going forward. With more active government support for research and development and training, Mexico can have what it takes to play a larger role in the global chemicals marketplace. •

### VALUE OF CONSTRUCTION INDUSTRY BY COUNTRY (2013)

Source: Estimates made by CMIC 's Management of Economics and Finance with information from Oxford Economics and Global Construction Perspectives.

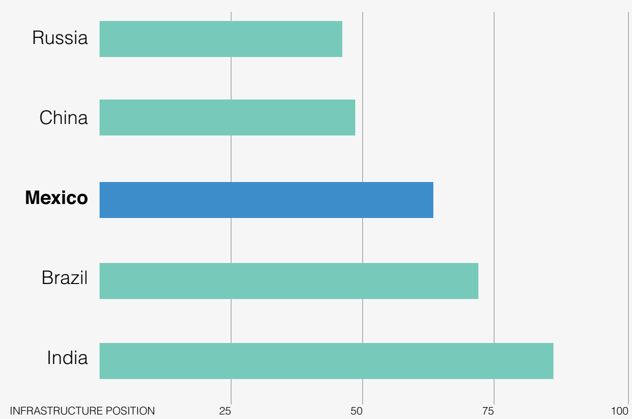


| | |
|---|---|
| China | 21,4% |
| United States | 16,9% |
| Japan | 12,0% |
| Germany | 6,9% |
| Brazil | 3,7% |
| India | 3,5% |
| France | 2,9% |
| Italy | 2,7% |
| United Kingdom | 2,7% |
| South Korea | 2,5% |
| Australia | 1,8% |
| **Mexico** | **1,8%** |
| Spain | 1,8% |
| Others | 19,4% |

*Mexico ranks 12th in the world*

### MEXICO'S INFRASTRUCTURE COMPARED TO BRIC COUNTRIES (2013-2014)

Source: Management of Economy and Finance, CMIC with data from World Economic Forum 2013-2014



Mexico is very well positioned from an industrial point of view. We are closely tied to the American manufacturing base and we have had double digit growth in our export focused manufacturing segment. Pochteca is close to that sector, which is a very positive thing for us. Mexico has become more competitive than China on a per unit production basis, which will have positive effects on demand for our products.

- Armando Santacruz,
General Director,
Pochteca

With growing competition from China and the United States, diversification is still an important trend for Trade Chemicals, especially as Chinese products and service offerings are improving in quality. Whereas previously it used to take several months to ship Chinese products here, now it only takes one month. Their techniques and procedures have improved drastically as demand has increased, so this is very serious competition for us.

- Miguel Valdivia,
Commercial Director,
Trade Chemicals

We provide the chemical treatment of boilers, steam, and cooling water, as well as the chemicals for cooling towers. We are seeing a lot of growth in reverse osmosis, which is attractive to customers because it uses less water more efficiently. We are offering mechanical solutions in addition to chemical solutions for reverse osmosis through a partnership with a company from Chile called Aguasin.

- Raúl Morales,
Director,
ChemTreat Mexico

The opening of the new AMSAN production facility at Altamira is certainly the standout achievement of the last 18 months. It is our only AMSAN manufacturing base outside of Germany. The new plant is in line with our global 'Triple Shift' strategy to focus on specialties markets, such as automotive and construction, across the Americas. The facility is one of the largest integrated styrenics production sites in the Americas.

- Ricardo Cuetos,
Managing Director,
Styrolution Mexicana

We participate in markets that grow above GDP average growth. In Mexico we are offering a range of products to the automotive and architectural markets, such as additives for protective coatings and tires, interlayers and protective films. We also offer several chemical intermediates that cover a broad range of applications that end up in the consumer markets.

- Juan Carlos Parodi,
President, Latin America,
Eastman

Even though there are other cement factories that offer the same services, Ecoltec's technological infrastructure is very well developed. We have seven facilities on a national level, which makes transportation more efficient and reduces costs. We are also able to guarantee clients that residues are disposed of finally and properly, which is not always the case with other companies.

- Eurípides Ángel,
Commercial Director, Central Region,
Ecoltec

Mexico is at an interesting and fragile point, where expectations can go up and down quite easily. We do not have a stable outlook of what the next few years might bring in the domestic market and we have not yet seen the implementation of these reforms. Last year we saw growth slow by almost 50%, which means that we will not see a buoyant economy for the next several years.

- Abraham Shabot,
Director,
Innophos

As an example [of a sustainable product], Eurochem sells detergents to the hotel industry for laundry. Normally, hotels wash their linens with an alkaline detergent, as well as chlorine bleach, and different types of chemicals. Washing linens in a hotel takes about 40 to 60 minutes in hot water with a high pH of 12 or 13. Eurochem created a sustainable line of detergents where you can wash the linens in less than 20 minutes using cold water. This process introduces 50% savings in water and 100% savings in caloric energy.

- Guillermo Colosía,
Director,
Eurochem

**This list contains those companies interviewed during the course of research for this publication and as such represents only a limited selection of the companies operating in the chemical industry of Mexico. It should not be considered a comprehensive guide. GBR holds an exclusive and extensive chemical database for Mexico and the wider region. For further information on database access packages, please contact info@gbreports.com or call +44 20 7812 4511.**

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Additional copies of this book can be ordered through Elif Ozturk (elif@gbreports.com).

## THANK YOU

We would also like to sincerely thank all the governmental bodies and associations that took time to share their insights into the market as well as their experience and knowledge.

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