



11 APRIL 2016 (Vol. 54, No. 14)

## **IVL Completes Acquisition of 100% Stake In Cepsa Spain's PTA, PET & PIA Assets**

*Madrid—*

Indorama Ventures (IVL) has completed the purchase of a 100% interest in the purified terephthalic acid (PTA), polyethylene terephthalate (PET) and purified isophthalic acid (PIA) business of Cepsa Quimica, a subsidiary of Cepsa in Spain (PCN, 16 Nov 2015, p 1).

The acquired business, located in Guadarranque-San Roque, Cadiz, Spain, will be renamed Indorama Ventures Quimica. The Guadarranque plant produces 480,000 t/y of PTA, 175,000 t/y of PET and 220,000 t/y of PIA. Value of the transaction was not disclosed.

"Our Spanish assets will complement Indorama Ventures' existing portfolio in Europe with consolidation of PTA and PET assets and with addition of PIA, a high value add business," said IVL Group Chief Executive Alope Lohia. "We see some debottlenecking opportunities at the plant that will increase efficiency," he added.

## **KBR Upgrading Chinese FCC Unit To Utilize Its Maxofin Technology**

*Shandong—*KBR

has received a license and basic engineering design contract for the revamp of a fluid catalytic cracker (FCC) unit in China's Shandong Province with its Maxofin technology.

Under the terms of the contract with an unidentified client, KBR will provide the licensing package for the Maxofin conversion, which will enable the existing FCC unit to produce higher amounts of propylene, while retaining the flexibility to produce more gasoline when market demand or prices are favorable.

"Maxofin technology is a flexible option to help clients increase their propylene production without major grassroots capital investment," explained John Derbyshire, president of KBR Technology & Consulting.

## **Kinder Morgan Lets IHI E&C Contract For Planned U.S. LNG Export Facility**

*Savannah—*

Kinder Morgan subsidiaries, Elba Liquefaction Co. and Southern LNG Co., have awarded a contract to IHI E&C for the engineering, procurement, construction, commissioning and start-up of Kinder Morgan's liquefied natural gas (LNG) export facility at Elba Island, Ga.

The approximately \$2-billion project will consist of 10 Movable Modular Liquefaction System trains using Shell's proprietary technology. The new units will connect to Kinder Morgan's existing regasification terminal at Elba Island, which will be modified to receive LNG from the new liquefaction facilities.

The project, when complete, will process and liquefy about 2.5-million t/y of LNG. Shell will receive all of the product through new ship-loading services.

IHI E&C will perform initial engineering, procurement and construction planning through its Houston, Texas, office while awaiting project approval by the Federal Energy Regulatory Commission.

## **Braskem Idesa Begins PE Production At Ethylene XXI Complex in Mexico**

*Veracruz—*Bras-

kem Idesa, a joint venture of Braskem and Idesa, has begun producing polyethylene (PE) at its Ethylene XXI complex in Veracruz, Mexico (PCN, 22 Feb 2016, p 1).

The \$5.2-billion project includes a 1-million-t/y ethane-based ethylene cracker based on Technip's technology, which was started up in March, two high-density PE units with a combined capacity of 750,000 t/y based on Ineos' Innovene process and a 300,000-t/y low-density PE plant using LyondellBasell's Lupotech T technology. Pemex will supply ethane to the complex through a 20-year contract.

The company said it plans to reach full production "over the coming months."

## **China Prosperity Launches Production On Second Invista PTA Line in China**

*Shanghai—*

China Prosperity recently started up its second purified terephthalic acid (PTA) plant in China based on Invista's technology.

Located at the site of the first line in Shizhuang, Jiangyin, the plant incorporates Invista's E2R, Solvent Interchange and R2R technologies. On-spec product was achieved within 24 hours of start-up. Capacity of the plant was not given.

China Prosperity started up its first Invista line, with 600,000 t/y of PTA capacity, in early 2011 (PCN, 14 Mar 2011, p 1).

A polyester resin plant, which will also utilize Invista's technology, is being constructed at the site. No details were given.

## **Inovyn Planning Investment to Convert Stenungsund to Membrane Technology**

*Antwerp—*

Inovyn has announced its intention to undertake a "major investment" to convert its mercury chlorine cellroom at Stenungsund, Sweden, to membrane technology.

Without disclosing the amount of the investment, the company said initial design and feasibility studies are currently underway, with completion of the conversion expected by the end of 2017.

Inovyn's wider chlorine strategy includes the expansion of its membrane chlorine cell room at the Antwerp/Lillo site in Belgium, which is due for completion in the fourth quarter of this year (PCN, 15 Feb 2016, p 2). Inovyn is also building a 155,000-t/y potassium hydroxide facility at the Lillo site that is scheduled for completion in late 2017.

These projects will complement the company's existing membrane-based production portfolio with assets in Belgium, France, Germany, Italy, Norway and the U.K.

Inovyn noted that it is still evaluating options for the mercury cell room at its Martorell site in Spain, but said that the lack of competitively priced raw materials makes future investment in cellroom conversion significantly less attractive.

### **Sibur's Makes Organizational Changes; Tobolsk Site Becomes a Business Unit**

*Moscow*—Sibur said it has completed organizational and staff changes, including the transfer of several management functions to the regional level, which is designed to facilitate the implementation of its development strategy in the most balanced way.

Included in the changes: Mikhail Karislov, previously executive director, has been appointed chief operating officer, while Vladimir Razumov will head Sibur's Research and Development, Organizational Projects Management, and Ethics and Discipline Committees.

The Plastics and Organics Synthesis Division and the Synthetic Rubbers Division have merged into one business unit, the Plastics, Elastomers and Organic Synthesis Division. Pavel Lyakhovich continues to head the Division.

Sibur's Hydrocarbons Division has been reorganized to streamline production assets performance management. Sibur Tyumun Gas, formerly part of the Hydrocarbons Division, now reports directly to Karislov. Uralorgsintez has become part of the Plastics, Elastomers and Organic Synthesis Division.

Also announced, Sibur's Tobolsk production site has been assigned the status of a standalone business unit. The new business unit is similar to a division and will be headed by Konstantin Belkin, management board member of Sibur and managing director of the Tobolsk site.

### **Zhongjing Petrochemical Producing PP Under First Phase of Project in Fujian**

*Fujian*—Zhongjing Petrochemical has started up the first phase of a polypropylene (PP) project at Fuqing, in China's Fujian Province, according to a report by the China Chemical Fiber Group.

The facility, which is currently operating at about 50% of its capacity, is designed to produce 350,000 t/y of PP for local distribution.

The two phase project, requiring a total investment of 15-billion RMB, includes a liquefied natural gas terminal and a warehouse for the storage of 5-million tons of propane and propylene. Details on the second phase were not available.

### **REG Begins Expanding, Upgrading Ames Lab To Enhance Renewable Chem Capabilities**

*Ames*—Renewable Energy Group (REG) has begun an expansion and upgrade of its Ames, Iowa, laboratory to further enhance renewable chemical related biotechnology research, development and commercialization.

New fermentation equipment will be installed, as well as significant analytical capabilities. Once complete, new full-time positions will be added to focus on commercialization and integration of products to be developed by REG in south San Francisco into production and delivery platforms, the company explained.

"These upgrades will allow us to increase our Midwestern focus on product development for renewable chemicals," said REG President and Chief Executive Daniel Oh.

Legislation is expected to be signed soon, which will provide tax credits for the renewable chemical industry. This should provide "extra momentum" for REG's investment in the field, Oh noted.

### **Westlake Increases Proposal for Axiall; Offer Again Rejected by Axiall's Board**

*Houston*—Westlake Chemical Corp. has increased its proposal to acquire all of the outstanding shares of Axiall Corp. to \$23.35 per share from its original offer of \$20 per share, which had been unanimously rejected by Axiall's board earlier this year (PCN, 22 Feb 2016, p 2).

The revised proposal was also unanimously rejected, confirmed Axiall President and Chief Executive Timothy Mann Jr. "Despite its request, Axiall was not provided the opportunity to conduct due diligence with respect to Westlake's business, which it would need given the substantial stock component to Westlake's proposal," Axiall noted.

"We are not opposed to a strategic transaction, provided that it delivers full and fair value to Axiall shareholders," said Mann in a letter to Westlake. "We remain willing to share information and have further discussions, but the value you currently propose simply ignores the high quality of our assets, the significant growth potential of our business and the powerful synergies available in a combination," he explained.

Westlake President and Chief Executive Albert Chao notified Axiall that given their response, Westlake intends to proceed with a proxy contest to replace Axiall's directors with new independent directors who are willing to evaluate all options, in accordance with their fiduciary duties.

### **People on the Move**

**Mitsui & Co. (USA)**—*Yasushi Takahashi* has been appointed president and chief executive, effective 1 Apr. He will concurrently serve as senior executive managing officer and chief operating officer of the Americas business unit of Mitsui & Co. Ltd. in Tokyo. He succeeds *Motomu Takahashi*, who will continue to serve as executive vice president of Mitsui & Co. Ltd., following his two-year tenure as president and chief executive of Mitsui USA.

**Nova Chemicals**—*Arnel Santos*, previously regional vice president of manufacturing at Shell Eastern Petroleum, will join Nova as senior vice president of operations, effective 18 Apr. He succeeds *Bill Greene*, who will retire at the end of next month.

**Honeywell**—*Darius Adamczyk* has been appointed to the newly created role of president and chief operating officer, effective immediately. Previously president and chief executive of Honeywell Performance Materials and Technologies (PMT), he is succeeded by *Rajeev Gautam*.

*Rebecca Liebert*, most recently senior vice president/general manager of the Catalysts, Adsorbents and Specialties business, will replace Gautam as president of Honeywell UOP.

**KBR**—*Greg Conlon*, most recently leader of global business development at WorleyParsons, will join KBR as president of Engineering & Construction, Asia-Pacific, effective 1 May.

**Anellotech**—*Dr. Charles "Chuck" Sorensen* has been appointed chief technology officer. He was previously vice president of Research, Development & Engineering.

**Odfjell Terminals**—*Frank Erkelens* has been named chief executive, effective 1 May, to succeed Odfjell Group Chief Executive *Kristin Morch*, currently serving as interim chief executive of Odfjell Terminals. Erkelens was previously president of EMEA for Vopak.

### **America Becomes World's 'Most Attractive' Place to Make Chemicals, Says the ACC**

*Washington*—Investments in U.S. shale gas have reached \$164-billion, as America has become the "most attractive place in the world to make chemicals, and a historic wave of expansion and investment is underway," said Owen Kean, the American Chemistry Council's senior director of energy policy.

The \$164-billion in capital spending could lead to \$105-billion per year in new chemical industry output and support 738,000 permanent new jobs across the U.S. by 2023, including 69,000 new chemical industry positions, 357,000 jobs in supplier industries and 312,000 jobs in communities where workers spend their wages.

"America enjoys a robust supply outlook, expected to last for decades, and a price environment that's the envy of the world." However, "we need the right regulatory and policy approaches in order to fully realize the potential of shale gas as an engine of manufacturing growth," he said.

Kean believes that policymakers must avoid unreasonable restrictions on oil and gas production on public lands; keep oversight of production on private lands in the hands of the states; and expedite the construction and permitting of infrastructure, such as pipelines to transport natural gas and natural gas liquids to market.

The \$164-billion in investments involves 264 projects, with 40% of the projects completed or underway and 55% in the planning phase.

### **Air Products Decides on Write-Off Of Energy-from-Waste Business**

*Lehigh Valley*—Air Products will exit its Energy-from-Waste (EfW) business because of challenges with the Tees Valley, UK, projects.

The Tees Valley 1 and Tees Valley 2 facilities are based on advanced plasma gasification technology and are located next to the North Tees chemical complex. Both facilities produce renewable electricity from non-recyclable residual waste.

"Testing and analysis completed during the company's fiscal second quarter indicated that additional design and operational challenges would require significant time and cost to rectify," the company explained. "Consequently, the board of directors has decided that it is no longer in the best interest of the company and its shareholders to continue the Tees Valley projects."

Air Products expects to record a pre-tax charge in the range of \$900-million to \$1-billion in discontinued operations, mainly to write down assets associated with the EfW business to their realizable value.

### **Petronas & Sarawak Eye Joint Study On Development of State PC Sector**

*Kuching*—Petronas and the government of the Malaysian state of Sarawak have signed a memorandum of understanding to jointly conduct a study for the Sarawak Petrochemical Master Plan, local sources reported.

Under the agreement, the two will undertake a technical, commercial and economic feasibility study for the joint development of the petrochemical industry in Sarawak.

At the same time, Petronas has signed an agreement to supply Sarawak Energy with 250-million standard cubic ft/d of natural gas for an existing power plant and a new power plant, with 200-million standard cubic ft/d to be used as feedstock for the state's petrochemical sector.

### **LyondellBasell Completes Purchase Of Zylog's PP Compounding Assets**

*Houston*—LyondellBasell has completed the acquisition of Zylog Plastalloy's polypropylene (PP) compounding assets in India (PCN, 7 Dec 2015, p 3).

With the acquisition of Zylog's manufacturing operations in Sinnar, Maharashtra, and Chennai, Tamil Nadu, LyondellBasell is now the third largest producer of PP compounds in India with a capacity of 44,000 t/y, and the third largest PP producer in the world with 1.4-million t/y of capacity.

LyondellBasell late last year acquired SJS Plastiblends PP compounding assets in India.

"Our investments in India demonstrate LyondellBasell's continued focus on strategic growth projects that increase our competitive advantage and provide a strong return on assets," said Bhavesh (Bob) Patel chief executive and chairman of the management board of LyondellBasell.

### **Sabic, Saudi Aramco Reportedly Considering Refinery to Produce Chems from Crude Oil**

*Yanbu*—Sabic and Saudi Aramco are mulling construction of a joint venture refinery in Yanbu, Saudi Arabia, to produce chemical products from crude oil, reported Bloomberg citing people close to the matter.

"This move is long overdue given that both companies are operating and competing in the same markets," said the report quoting Energy Analyst Mohamed Ramady. "Sabic and Aramco cooperation will ensure that both companies will avoid duplication of projects in this period of Saudi economic rationalization and cost effectiveness."

Aramco is testing a new technology to produce chemicals from crude oil, according to Aramco Chief Executive Amin Nasser, the report said.

### **Sibur & Aekyung Sign \$10-MM Contract For Plasticizer Production Technology**

*Seoul*—Sibur and Aekyung Petrochemical have signed a contract, valued at \$10-million, for the export of Aekyung's eco-friendly plasticizer manufacturing technology to Sibur, according to a Korean business report citing Sibur.

The technology, developed by Aekyung in 2008, uses steam generated during the manufacturing process, which helps reduce production costs. It also addresses phthalate plasticizer mixing problems.

### **Dow Enters Settlement Agreement In Urethanes Opt-Out Litigation**

*Midland*—Dow Chemical Co. has entered into a settlement agreement that will resolve claims from purchasers who elected not to be class members in the previously settled urethanes class action litigation (PCN, 7 Mar 2016, p 3).

The agreement provides for Dow to pay the opt-out plaintiffs \$400-million, which is estimated to result in net cash payments of approximately \$250-million.

Based on the risk assessment and potential outcomes, Dow said it believes this settlement is the right decision for the company and its shareholders.

Dow maintains that consistent with its position in the class action litigation, it "never agreed with its competitors to fix polyurethane prices at any time."

### **Chemical Industry Is Facing Record Year In M&A Activity, Predicts A.T. Kearney**

*Chicago*—On a global basis, the value of mergers and acquisitions (M&A) deals in the chemical industry rose 30% in 2015 to \$110-billion, a fourth straight annual increase, which lays the ground for an all-time record spike this year, according to A.T. Kearney's fifth edition of *Chemicals Executive M&A Report*.

The report notes the pending \$130-million Dow Chemical and DuPont merger and ChemChina's \$43-billion bid for Syngenta, as well as potential large new transactions generated by emerging market players, and predicts total chemicals M&A values for 2016 could double the level reached in 2015.

This wave of activity comes as chemical conglomerates and their investors question the value of the traditional diversification model and look for stronger coherence in their portfolios.

"Chemical companies are taking a fresh look at their portfolios, divesting assets that do not fit with a clear portfolio logic," said Andy Walberer, A.T. Kearney partner and leader of the firm's Americas chemicals practice. "At the same time, they are looking for increased scale in their remaining businesses, driving increased M&A."

A.T. Kearney's research determined that chemical company executives see five core drivers of the surge in M&A deals: limited organic growth options; favorable feedstock prices, especially in the U.S.; lower oil prices; portfolio optimization, and pressure from activist investors.

The report shows that North America is the largest market for chemicals M&A activity, but China is a close second. "China's influence on the global M&A market is likely to increase in 2016 as more companies look to acquire world-class know-how and growth opportunities outside their slowing home markets," said Linus Hildebrandt, A.T. Kearney principal, Asia Pacific. "Undervalued targets in mature markets, such as Europe, are likely to be attractive targets for these acquirers," he added.

### **Linde Breaks Ground for Bangladesh ASU**

*Dhaka*—Linde Bangladesh, a member of Linde Group's Gases Division, has begun construction on a new €14.6-million air separation unit (ASU) in Rupganj, Bangladesh.

The state-of-the-art, energy efficient ASU, when completed in 2017, will produce about 100 t/d of liquefied gases to the country's growing healthcare, food and beverage, fabrication, pharmaceutical, shipbuilding and recycling industries. Linde will design, build and manage the plant.

### **Ube Merges Three Spanish Subsidiaries To Strengthen Business, Secure Growth**

*Tokyo*—Ube Industries has merged its three chemical subsidiaries in Spain in order to enhance the operational framework and achieve business efficiencies in the country, as the Ube Group moves to further strengthen its business platform and secure growth.

Ube Chemical Europe and Ube Engineering Plastics will be absorbed into Ube Corp. Europe, as the surviving company. Ube Corp. Europe will continue as a wholly-owned subsidiary of Ube Group and will be headed by President Bruno De Bievre.

Effective 31 Mar. 2016, Ube Corp. Europe manufactures and markets nylon resin, caprolactam, ammonium sulfate, fine chemicals and other products.

### **CVR Partners Gets Rentech Nitrogen, Becomes a Nitrogen Fertilizer Leader**

*Los Angeles*—CVR Partners has completed the acquisition of all outstanding shares of Rentech Nitrogen for \$533-million, creating a leader in the North American nitrogen fertilizer business (PCN, 21-28 Mar 2016, p 3).

The acquisition primarily includes Rentech Nitrogen's East Dubuque, Ill., facility, which produces ammonia, urea and urea ammonium nitrate (UAN).

The combination of the East Dubuque facility with CVR's Coffeyville, Kansas, plant, also producing ammonia, urea and UAN, "positions us as an emerging leader in the North American nitrogen fertilizer industry and makes us more competitive in a changing market environment," noted CVR Chief Executive Mark Pytosh.

Last year, the Coffeyville plant produced 385,400 tons of ammonia and 928,600 tons of UAN, and the East Dubuque facility produced 340,300 tons of ammonia and 279,000 tons of UAN.

### **China Places Duties on Acrylic Fibers Coming from Japan, Korea & Turkey**

*Beijing*—China's Ministry of Commerce has imposed anti-dumping duties on imports of acrylic fibers from Japan, Korea and Turkey, according to the Xinhua News Agency.


The decision follows a year-long investigation that found evidence that these imports are harming the domestic industry.

As of 2 Apr. 2016, importers of acrylic fibers from the three countries will be required to pay deposits ranging from 6.1% to 17.8%, based on the level of dumping.

### **Borealis, Gazprom Eye Joint Opportunities**

*Moscow*—Borealis and Gazprom have signed a memorandum of understanding related to the two companies' interest in evaluating opportunities to develop joint gas chemical projects in Russia.

Statements issued by Borealis and Gazprom gave no further specific details.



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