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PTTGC Gets Board Approval to Invest In New Map Ta Phut Olefins Facility

Bangkok—PTT

Global Chemical (PTTGC) has received board of directors' approval to invest in a new olefins project at Map Ta Phut Industrial Estate, Rayong Province, Thailand (PCN, 29 Feb 2016, p 4).

The project, expected to cost about \$985-million, involves a new facility with a production capacity of 500,000 t/y of ethylene and 250,000 t/y of propylene, using naphtha and liquefied petroleum gas as the main feedstocks. Commercial operations are planned to begin in 2020.

Once complete, PTTGC's nameplate olefins capacity will increase to more than 3.7-million t/y from nearly 3-million t/y currently.

An engineering, procurement and construction (EPC) agreement for the project was signed on 23 Jan. 2018, the company noted. Details of the agreement were not given; however, according to a Korean press report, the EPC contract was awarded to Samsung Engineering.

In 2016, PCN reported that the company was also planning to carry out a feasibility study for downstream production of acrylic acid, styrene, acrylonitrile butadiene styrene and polystyrene, among others.

Kinder Morgan Announces Start-Up Of Its New Utopia Pipeline System

Houston—Kinder

Morgan Inc. (KMI) said its new Utopia pipeline system has been placed into service and has begun delivering ethane from Harrison County, Ohio, to Windsor, Ontario, Canada (PCN, 4 July 2016, p 1).

The approximately \$500-million pipeline system extends about 270 miles and has an initial capacity of 50,000 b/d, which can be expanded to over 75,000 b/d.

The pipeline was built entirely within Ohio, from Harrison County to Fulton County, and connects with an existing KMI pipeline and associated facilities to transport the ethane to petrochemical companies operating in Ontario.

In 2016, KMI announced it was selling a 50% equity interest in the Utopia project to Riverstone Investment Group. KMI confirmed to PCN that the transaction was completed in June 2016.

Wanhua Begins Operations in Yantai At First Phase Polycarbonate Plant

Yantai—Wanhua

Chemical has successfully launched a first phase polycarbonate facility at the Yantai Industrial Park in Yantai, China.

The 70,000-t/y polycarbonate plant, which utilizes the company's own phosgenation interfacial polycondensation technology, is part of a project that includes a second phase. No other details were given.

Last July, Linde Group signed an agreement with Wanhua to build two additional air separation units (ASUs) to expand gas supply to the second phase (PCN, 31 July 2017, p 4).

The ASUs are scheduled to come on stream in 2019.

KBR Awarded Contract from Indorama Eleme For Second Ammonia Unit at Port Harcourt

Lagos—

KBR has received a contract from Indorama Eleme Fertilizer & Chemicals and Toyo Engineering for a second ammonia plant (Train 2), which is planned for Indorama's Port Harcourt site in Nigeria.

Under the terms of the contract, KBR will provide technology licensing, basic engineering design, proprietary equipment and catalyst for Train 2. No other details were available.

In late 2016, Indorama commissioned its first urea facility with a production capacity of 4,000 t/d, "one of the largest" single line plants in the world, the company said at the time.

The project, which cost around \$4.4-billion, included a 2,300-t/d ammonia plant, a urea granulation unit, associated infrastructure and utilities (PCN, 18 July 2016, p 2).

Grupa Azoty Chooses Grace to Provide PP Process Technology to PDH Polska

Police—Grupa

Azoty has awarded a contract to W. R. Grace & Co. to supply its Unipol polypropylene (PP) process technology for PDH Polska's new PP line planned for Police, Poland (PCN, 1 Jan 2018, p 3).

PDH Polska, a special purpose vehicle of Grupa Azoty, is planning to build the new 400,000-t/y PP plant, as part of a project that includes a facility for propylene production, based on Honeywell UOP's Oleflex PDH technology.

The project, estimated to cost €1.27-billion, is scheduled to start construction in late 2019 with operations expected to begin in 2022.

In December 2017, Grupa Azoty announced that Grace technologies had been selected for the PP plant, but approval was still required from the extraordinary general meeting of PDH Polska. At the time, PDH Polska said it was also in the process of selecting a future general contractor under a lump sum turn-key contract.

Sabic Purchases Interest in Clariant Previously Held by 40 North, Corvex

Muttenz—Sabic

announced it has acquired a 24.99% stake in Clariant, which was previously held by hedge funds 40 North and Corvex, creators of White Tale Holdings, a Cayman Island-based investor.

The acquisition, for which a value was not given, makes Sabic the "largest" Clariant shareholder, Clariant noted. Over the coming weeks, Clariant intends to engage in discussions with Sabic on ways to create value, it added.

Last October, Huntsman and Clariant terminated a proposed merger of equals transaction, citing the continued accumulation of shares by White Tale and its opposition to the transaction (PCN, 30 Oct 2017, p 1).

The companies explained at the time that there was too much uncertainty as to whether Clariant would be able to secure the two-thirds shareholder approval that was required to approve the transaction under Swiss law.

Air Products Building New Syngas Facility To Supply BPCL's PDPP Project at Kochi

Kochi—Air Products has signed a long-term agreement with Bharat Petroleum Corp. Ltd. (BPCL) to build, own and operate a new syngas facility in Kochi, India, to supply BPCL's new Propylene Derivatives Petrochemical Project (PDPP).

The new syngas unit, which will be located at BPCL's Kochi refinery, will utilize Air Products' proprietary cryogenic gas separation technologies to produce a hydrogen/carbon monoxide syngas, which will feed the PDPP (PCN, 31 Oct 2016, p 4).

The PDPP involves the production of acrylic acid acrylates and oxo alcohols. Production is expected to begin during fiscal 2018-2019.

Air Products already operates a world-scale industrial gas complex at the same location, which was started up last year to support BPCL's refinery expansion project. The gas complex supplies hydrogen, nitrogen, oxygen and steam to the refinery.

The Kochi refinery, being expanded to 15.5-million t/y from 9.5-million t/y, is expected to supply polymer-grade propylene feedstock to the PDPP.

Arlanxeo Increasing Chloroprene Rubber Production Capacity at Dormagen Site

Dormagen—Arlanxeo, a 50-50 joint venture of Lanxess and Saudi Aramco, will expand chloroprene rubber production capacity at its site in Dormagen, Germany, beginning in the second quarter of this year.

The company said it is investing an "upper single-digit million" in the project to increase chloroprene rubber capacity to as much as 70,000 t/y, which will be available to the market during the first quarter of 2019.

As part of the expansion, a production line will be renewed and equipped with new reactors, having a higher capacity.

"The strong global demand for our chloroprene rubbers will continue in the coming years," noted Stefan Rittmann, head of the Arlanxeo business line that produces chloroprene rubber and managing director of Arlanxeo Deutschland GmbH. Arlanxeo supplies its global customers from the Dormagen site.

Genomatica & Aquafil Partner to Develop Process to Make Bio-Based Caprolactam

San Diego—Genomatica and Aquafil, a nylon yarn producer based in Italy, have entered into a multi-year agreement to develop a commercially-advantageous bioprocess (Geno CPL) to make caprolactam from plant-based renewable ingredients.

Genomatica's Geno CPL process aims to provide an environmentally-friendly way to make caprolactam with better economics, including for smaller-scale plants, said Genomatica. The process will not require any machine or process adjustments by the nylon supply chain.

The process also eliminates the significant amount of by-products common to most crude oil-derived caprolactam production, and will allow producers to diversify their raw material sources.

Chemical producers and product makers are encouraged to join the program, where they can engage, influence priorities and gain access to Genomatica's technologies and supply of bio-based chemicals, the companies noted.

Honeywell UOP Starts Production in China At New MTO Catalysts Production Line

Shanghai—Honeywell UOP has begun production at a new methanol-to-olefins (MTO) catalysts production line in Zhangjiagang, Jiangsu Province, China (PCN, 30 May 2016, p 1).

The new production line manufacturers state-of-the-art catalysts used in Honeywell UOP's Advanced MTO process technology, which converts methanol from coal and natural gas into olefins.

Honeywell's Zhangjiagang facility, which opened in 2015, also produces catalysts used in Honeywell UOP's Oleflex process, which converts propane into propylene, and in continuous catalyst regeneration (CCR) Platforming, which is used to produce high-octane gasoline.

Separately, the company inaugurated a new engineering center, also located in Zhangjiagang, to support Honeywell UOP's technology delivery, project commissioning, ongoing technical support and revamp projects.

The center will provide greater service capabilities, including new software-enabled services that improve the efficiency of refineries and petrochemical plants, Honeywell noted.

CB&I and McDermott Make Progress On Proposed Business Combination

Houston—CB&I and McDermott International have been granted early termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, with respect to their proposed business combination (PCN, 1 Jan 2018, p 2).

On 18 Dec. 2017, the companies announced an agreement to combine in an all-stock transaction valued at approximately \$6-billion.

The combination is expected to create a fully integrated onshore-offshore company with a broad service offering and "market leading" technology portfolio, the companies earlier said.

Under the terms of the proposed transaction, McDermott stockholders will own about 53% of the combined company on a fully diluted basis and CB&I shareholders will own approximately 47%.

The combination is expected to be completed in the second quarter of this year, subject to regulatory clearances in Russia, approval by McDermott's and CB&I's shareholders, completion of financing and other customary closing conditions.

Air Liquide Inaugurates Malaysian Center To Remotely Manage Production Plants

Selangor—Air Liquide has opened its Smart Innovative Operations (SIO) Center in Malaysia for the remote management of 18 Air Liquide Large Industries production units for the Southeast Asia Pacific region.

The SIO Center, which serves eight countries across the region, integrates, optimizes and remotely controls the operations of the production facilities, leveraging predictive analytics and digital technologies.

It will allow the company to better predict and accommodate changing customer needs, especially regarding the supply of oxygen, nitrogen, argon and hydrogen.

"This new SIO Center complements the one the group opened in Shanghai in September 2017, dedicated to the production units in China," Air Liquide noted.

Honeywell Introduces New Retrofit Units To Extract Over 99% of Ethane from Gas

Chicago—

Honeywell announced that its UOP Russell business has introduced a new high recovery retrofit unit to upgrade existing cryogenic units to extract more than 99% of high-value ethane from natural gas.

The unit uses an advanced cycle process to extract the ethane from residue gas and can be easily deployed on an 200-million standard cu ft/d gas plant that utilizes standard technology.

"Many gas processing plants today use the gas sub-cooled process—or GSP—to recover about 85% of the ethane in the gas stream," noted UOP Russell Business Director Craig Ranta.

UOP Russell's modular retrofit unit is designed to upgrade GSP-type cryogenic units, allowing gas processors to provide more value for gas producers. The retrofit technology is scheduled to go into commercial service early this year.

The unit incorporates high-performance retrofit technology from Ortloff Engineers, developer of ultra-high natural gas liquid (NGL) and liquefied petroleum gas (LPG) recovery technology. With the support of Ortloff's technology and expertise, UOP Russell offers its GSP retrofit customers guaranteed ultra-high NGL and LPG recoveries, Honeywell added.

BASF Declares Force Majeure in N. America On 1,4-Butanediol, Derivatives at Geismar

Geismar—

BASF has declared force majeure in North America on 1,4-butanediol (BDO) and its derivatives following two separate recent events that impacted production at its Geismar, La., manufacturing facility.

On 14 Jan. 2018, a natural gas fire between International-Matex Tank Terminal and the Geismar manufacturing facility damaged a natural gas pipeline, resulting in the shutdown of operations at Geismar. BASF uses the natural gas for chemical production.

Separately, on 16 Jan. 2018, the southern Louisiana area experienced record low temperatures for several consecutive days, along with rain, sleet and snow, causing the company to shut down its plant operations at Geismar for operational and safety reasons.

Specific products impacted by the force majeure include 1,4-BDO, tetrahydrofuran, gamma-butyrolactone, N-methylpyrrolidone, polytetramethylene ether glycol, 2-pyrrolidone and N-vinylpyrrolidone. BASF expects the force majeure to last through the first quarter of 2018.

Asia Petrochemical Industry Conference Being Held 9-10 May '18 in Malaysia

Kuala Lumpur—

Malaysian Petrochemicals Assn. is hosting this year's Asia Petrochemical Industry Conference (APIC 2018) on 9-10 May 2018 at the Kuala Lumpur Convention Centre in Malaysia.

The conference theme is "Creating Value Through Collaboration." Conference sessions include *Vision of the Future* by IHS, *Challenges of the Petrochemical Industry* by Nexant, *Polyolefins Market Outlook* by Argus and *Chemical Value Chain* by Tecnon Orbichem.

For more information on APIC 2018 or to register, visit the conference website at <http://apic2018.org.my>.

Evonik, Siemens Launch Research Project To Produce Specialty Chems from CO2

*Marl—*Evonik

and Siemens have started up a joint research project, named Rheticus, which will use electricity from renewable sources and bacteria to convert carbon dioxide (CO₂) into high-value specialty chemicals.

The partners are working on electrolysis and fermentation processes, with the first test plant scheduled to go on stream in 2021 at Evonik's Marl, Germany, facility, where it produces chemicals such as butanol and hexanol.

Siemens is providing the electrolysis technology, which is used in the first step to convert CO₂ and water into hydrogen and carbon monoxide (CO) using electricity. Evonik is contributing the fermentation process, converting gases containing CO into useful products by metabolic processes with the aid of special micro-organisms.

The second stage could lead to a plant with a production capacity of up to 20,000 t/y, the companies noted.

"Evonik and Siemens see great future potential in the Rheticus platform," the partners said. "It will make it simple to scale plants to the desired size – the chemical industry will be able to adapt them flexibly to local conditions. In [the] future, they could be installed anywhere where there is a source of CO₂ – power plant waste gas or biogas for instance."

The project was launched on 18 Jan. 2018 and is planned to run for two years. Some 20 scientists from the two companies are involved in Rheticus.

Enerkem & Sinobioway Sign Agreement To Accelerate Enerkem's Global Growth

Beijing—

Enerkem and Sinobioway Group have signed an agreement to accelerate Enerkem's global expansion by opening the Chinese market to Enerkem's pioneering waste-to-biofuels technology.

Under the agreement, valued at more than C\$125-million, Sinobioway will collaborate with Enerkem in future licenses, equipment manufacturing and sales, as well as the creation of a major joint venture that will lead the construction of over 100 Enerkem state-of-the-art facilities in China by 2035.

"We are excited to partner with a leading Canadian cleantech company to help meet our country's commitment to reducing greenhouse gas emissions and move towards renewable energy," said Dr. Aihua Pan, chairman of Sinobioway.

Based in Beijing, China, Sinobioway is engaged in the bio-economy and invests in areas such as bio-energy and bio-manufacturing.

Mexichem Buys Sylvin Technologies

Tlalnepantla—

Mexichem has acquired Sylvin Technologies, a polyvinyl chloride compounds manufacturer based in Denver, Penn., at an enterprise value of \$39-million.

"The acquisition of Sylvin is a further step towards downstream integration in specialty products with higher margins that enables sustainable growth of our return on invested capital over our weighted average cost of capital in the long run," said Mexichem Chief Executive Antonio Carrillo.

Mexichem will consolidate Sylvin under its vinyl business group, as part of its compounds business unit.

Air Liquide Building New Hydrogen Unit To Supply Kumho Mitsui's Yeosu Plant

Yeosu—Air Liquide has been awarded a contract by Kumho Mitsui Chemical Inc. (KMCI) to build a new, state-of-the-art hydrogen production unit to supply both hydrogen and carbon monoxide (CO) to KMCI's isocyanate production complex in Yeosu, South Korea.

Under the terms of the agreement, Air Liquide will invest around €100-million in a new Steam Methane Reformer (SMR), which will be designed, manufactured, owned and operated by Air Liquide.

The SMR, fully integrated with Air Liquide's existing hydrogen and CO supply system, will increase production capacity of both hydrogen and CO by about 50% and will support the expansion of KMCI's chemicals production at Yeosu. Operations are expected to begin in 2020.

Nippon Shokubai Plans Capacity Boost For Performance Chemicals in Japan

Tokyo—Nippon Shokubai said it is planning to increase production capacities for its functional monomer VEAA and functional polymers EPOCROS and EPOMIN at sites in Japan, in order to meet strong growth in global demand.

VEAA production capacity will be raised at the company's Himeji plant. Mechanical completion is scheduled for December 2019.

Nippon Shokubai will also increase EPOCROS production capacity at Himeji, with completion expected in August 2018.

At the company's Kawasaki facility, EPOMIN production capacity will be boosted. Mechanical completion is anticipated in September 2019. Nippon did not give the capacities of the plants.

LyondellBasell's Seward New WPC Chair

Houston—LyondellBasell Vice President of Joint Ventures and International Marketing James Seward has been elected chairman of the World Plastics Council (WPC).

The WPC was founded in 2014 with the goal of becoming the plastic industry's platform to accelerate cooperation and alignment, and to deliver improved outcomes for the benefit of society and the global plastics industry, the WPC explained.

Seward will serve as chairman of WPC for a period of three years, succeeding Sabic's Abdulrahman Al-Fageeh.

ADNOC Enters Three-Year Agreement To Supply Naphtha to Lotte Chemical

Dubai—Abu Dhabi National Oil Co. (ADNOC) announced it has entered into an agreement with Lotte Chemical Titan in which it will supply naphtha to Lotte for a period of three years.

"Demand for petrochemicals in South East Asia is expanding steadily and this three-year agreement with ADNOC will ensure security of naphtha supply," said Lee Dong Woo, president and chief executive of Lotte Chemical Titan.

Under the agreement, ADNOC will supply up to 1-million t/y of naphtha, Reuters reported. Value of the contract was not given.

Sabic Issues Notice of Force Majeure On SM Orders from Cosmar Facility

Carville—Sabic confirmed to PCN that it is declaring force majeure on styrene monomer (SM) orders from its Cosmar plant in Carville, La.

"As with other chemical companies in the Gulf Coast region, Sabic's Cosmar plant, our sole U.S. styrene monomer production facility, experienced unusually cold weather recently, causing equipment failure beyond reasonable control," said a Sabic spokeswoman.

Sabic has advised each customer of the percentage of their SM orders they can still expect to receive until full production capability has been restored, which is expected in early March 2018, she noted.

Sabic and Total are joint venture partners at the Cosmar production facility.

Separately, Dow and LyondellBasell have reportedly declared force majeure on diphenylmethane diisocyanate products in the U.S. and high-density polyethylene from Matagorda, Texas, respectively. PCN could not confirm the reports as of its press deadline.

PTTGC Establishes Vietnamese Subsidiary

Hanoi—PTT Global Chemical (PTTGC) announced that PTT Polymer Marketing (PTTPM), a wholly-owned subsidiary of PTTGC, has established Polymer Marketing Vietnam (PM Vietnam) in Vietnam.

PM Vietnam, owned 100% by PTTPM, was set up to support the trading business on import and export, for retail and wholesale distribution of polymers products and doing local in-depth market research, PTTGC explained.



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