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### **DuPont Updates Expected Closing Date Of Proposed Merger with Dow Chem**

*Wilmington—*

DuPont, in its fourth quarter and full year results for 2016, said it now expects its planned merger with Dow Chemical to close in the first half of 2017, pending regulatory approvals (PCN, 12 Sept 2016, p 1).

DuPont and Dow last July received approval from the stockholders of both companies for the proposed merger of equals and the subsequent separation of the combined company, which will be named DowDuPont. The transaction, valued at around \$130-billion, was originally expected to close by the end of 2016.

DowDuPont is planned to be separated into three independent, publicly traded companies—Material Science, Specialty Products and Agricultural.

European Commission antitrust regulators recently suspended an in-depth review of the proposed merger. The commission said it was waiting to receive additional information from the companies.

"We look forward to closing the merger with Dow and are continuing to have constructive discussions with regulators in key jurisdictions," noted DuPont Chairman and Chief Executive Ed Breen.

### **Chandra Asri's PBI Awards Contract For Butadiene Expansion at Cilegon**

*Cilegon—*Chan-

dra Asri, through its Petrokimia Butadiene Indonesia (PBI) subsidiary, has awarded an engineering, procurement and construction contract to Toyo Engineering Korea and Inti Karya Persada Teknik for a butadiene expansion project at Cilegon, Banten, Indonesia.

The expansion will increase butadiene capacity by up to 37% at the company's integrated naphtha cracker complex. Completion and start-up is expected in the third quarter of 2018.

PBI has already signed an agreement with Lummus Technology for the license and engineering design of the expansion, which will be based on BASF/butadiene extraction technology.

### **Versalis & Sonatrach Sign MoU to Study Algerian Integrated Petchem Complex**

*Algiers—*Eni's

Versalis and Sonatrach have signed a memorandum of understanding to carry out joint feasibility studies for a new integrated petrochemical complex to be built in Algeria.

The companies will evaluate the proposed project, which is aimed at enhancing hydrocarbons with value added petrochemical products through the development of one or more world-scale industrial petrochemical facilities in Algeria. No specific details were given.

"This agreement represents an opportunity for Versalis to collaborate with an integrated oil corporation, to which the Italian chemical producer will offer its industrial experience in managing large petrochemical plants, and the access to its proprietary technologies, within the framework of strategic joint projects," Eni explained.

### **Sabic Agrees to Acquire Shell's 50% Stake In Sadaf Petrochemicals Joint Venture**

*Jubail—*Sabic

and Shell have signed an agreement whereby Sabic will acquire Shell's 50% interest in the Sadaf petrochemicals joint venture in Jubail, Saudi Arabia, for \$820-million.

The Sadaf joint venture has six world-scale petrochemical plants with a total production capacity of over 4-million t/y. The transaction, expected to be completed later this year, is subject to regulatory approval.

Sabic's purchase of Shell's stake in the joint venture will enable Sabic to further optimize operations at Sadaf and further invest in the facilities, integrating them with Sabic's other affiliates, Shell explained.

This step will allow Shell to focus its downstream activities and make selective investments to support the growth of its global chemicals business, it added.

"We will continue to explore potential future opportunities with Sabic," said Graham van't Hoff, executive vice president of chemicals at Shell.

Sadaf produces ethylene, ethylene dichloride, styrene, caustic soda, methyl tertiary butyl ether and crude industrial ethanol.

### **Saudi Aramco Shelves Plan with Petronas To Partner in Malaysian RAPID Project**

*Johor—*

Saudi Aramco has suspended plans to partner with Petronas in the \$27-billion Refinery and Petrochemical Integrated Development (RAPID) project in Johor, Malaysia, reported Reuters citing sources familiar with the matter.

The two companies were believed to be in an "initial discussion phase" for a joint venture in the RAPID project, noted Sadad al-Husseini, an energy consultant and former senior executive at Saudi Aramco.

"In any case, considering the scale of the investment, China's growing regional exports of refined products, Singapore's existing refining capacity and the competition this project would have created to Aramco's own JV [joint venture] refineries in Korea, China and Japan, its deferral was probably a very well considered and prudent Aramco management decision at this time," he added.

The RAPID project consists of a 300,000-b/d refinery and a petrochemical complex, which will have the capacity to produce over 7-million t/y of products, including ethylene, propylene, butadiene and other derivatives (PCN, 16 Jan 2017, p 1). Operations are scheduled to begin in early 2019.

### **BASF Completes MDI Boost at Antwerp**

*Antwerp—*

BASF has completed an increase of its diphenylmethane diisocyanate (MDI) production capacity at the company's Verbund site in Antwerp, Belgium.

The project increases BASF's MDI production to 650,000 t/y from 560,000 t/y. No other details were disclosed.

### **Trinseo in Definitive Agreement to Transfer Shares of Polycarbonate JV to Sumitomo**

*Berwyn—*

Trinseo Holding and Sumitomo Chemical have signed a definitive agreement for Trinseo to sell its 50% interest in their Sumika Styron Polycarbonate (SSPC) joint venture to Sumitomo, for an undisclosed amount.

SSPC produces polycarbonate resins in Niihama City, Ehime, Japan, and serves customers throughout Asia. The transaction is scheduled to close on 31 Jan. 2017.

"Sumitomo Chemical is a natural owner for this Japan-based polycarbonate plant, and as an industry leader in the region, Sumitomo Chemical is better positioned to manage and deliver value from this asset in the future," noted Tim Stedman, Trinseo's senior vice president and business president for basic plastics and feedstocks.

"At the same time, Asia Pacific continues to be an important growth region for Trinseo, and the company is strongly committed to growing our performance businesses in the region," he added.

The parties have also agreed to continue the long-term supply of polycarbonate resin to Trinseo's performance plastics businesses.

Following the close, SSPC is expected to operate as a wholly-owned subsidiary of Sumitomo. It will be renamed Sumika Polycarbonate Ltd., after a transitional period.

SSPC was originally formed as Sumitomo Dow in 1996 and was a 50-50 joint venture of Sumitomo and Dow Chemical.

### **EIL Awarded Contract from Sonatrach To Rehabilitate Skikda Ethylene Unit**

*Algiers—*

Engineers India Ltd. (EIL), in a letter to the Bombay Stock Exchange, said it has signed a contract with Sonatrach for the rehabilitation of an ethylene unit at the Skikda petrochemical complex in Algeria.

Under the contract, EIL will carry out studies and provide project management consultancy services for the project. The schedule is 23 months.

The project involves the renovation of the Skikda plant to produce 120,000 t/y of ethylene, the Algeria Press Service recently reported, citing Sonatrach Chief Executive Amine Mazouzi.

### **KPIC & Amec Foster Wheeler Sign Contract For Design of Olefins, Aromatics Projects**

*Kuwait—*

Kuwait Petrochemical Industries Co. (KPIC) and Amec Foster Wheeler have signed a \$34-million contract for the project design of a third olefins project and second aromatics venture to be integrated with the Al-Zour refinery in Kuwait, reported state-owned news agency KUNA.

The project is "one of the important strategic initiatives ever undertaken by the KPIC," said the report citing Haniyah Hashem, deputy chief executive for olefins and aromatics at KPIC. Completion is expected by the second quarter of 2022.

The Al-Zour refinery, which is currently under construction, will have a refining capacity of approximately 615,000 b/d and will feed the new petrochemical plants (PCN, 17 Oct 2016, p 3).

Initial operations at the refinery are expected to begin in December 2018, with commissioning planned in July 2019, according to a KPIC subsidiary's website.

### **Ineos to Acquire Arkema's 50% Share In Oxochimie Oxo Alcohols Business**

*Lavera—*Ineos

Oxide is planning to acquire Arkema's 50% stake in their Oxochimie oxo alcohols manufacturing joint venture in Lavera, France. Value of the transaction was not given.

Oxochimie produces butanols, 2-ethyl hexanol and oxoaldehydes, which are used for the production of Arkema's acrylic esters in Europe, as well as for sale to customers.

As part of the agreement, Ineos will continue to supply Arkema's acrylic esters units. The transaction, subject to customary closing conditions and competition approval, is planned to be completed early this year.

"Oxo alcohols are a core business for Ineos Oxide, both supplying the European and global markets and supporting the manufacturing of our fast growing downstream intermediates business," said Ineos Oxide Chief Executive Graham Beesley.

"We look forward to integrating the Oxochimie joint venture and growing our global market presence in oxo alcohols, aldehydes and derivatives," he added.

### **Uhde Inventa-Fischer Building PET Unit For SASA Polyester Sanayi in Turkey**

*Adana—*Uhde

Inventa-Fischer, a subsidiary of ThyssenKrupp Industrial Solutions, is building a polyethylene terephthalate (PET) plant for SASA Polyester Sanayi in Adana, Turkey.

The 380,000-t/y PET unit will be based on Uhde Inventa-Fischer's energy-efficient 2R polyester technology, which comprises the patented Espree and Discage reactors. Completion is planned for the end of next year.

Uhde Inventa-Fischer, under a contract that came into effect in December 2016, will handle basic and detail engineering, technical services for erection, pre-commissioning and commissioning supervision, and deliver proprietary equipment and key components of the plant.

"At a capacity of 1,050 tons per day, we have reached a project size that could make it economically viable for our customers to operate their own PTA [purified terephthalic acid] plant," said Uhde Inventa-Fischer Chief Executive Werner Steinauer. "This provides potential for further process integration and optimization."

### **SPIC Shuts Down Fertilizer Facilities Due to Lack of Water in Tamil Nadu**

*Mumbai—*Southern

Petrochemical Industries Corp. (SPIC) was forced to shut down its fertilizer units on 24 Jan. 2017, due to a water shortage in Tamil Nadu, India.

The southern states of Tamil Nadu are experiencing a "worst ever drought, probably in the last 150 years," said SPIC. "All the water sources are fully dried up," it added.

The plants have been using water from SPIC's additional storage water reservoir (ASR) and from nearby desalination plants. The available amount of water, however, is inadequate and water quality has deteriorated.

SPIC noted that all efforts are being taken to replenish the water in its ASR and restart the facilities as soon as practically possible.

To deal with similar situations in the future, SPIC will, among other things, modify the design of its ammonia plant to require about 15% less water. This will be done as part of its ammonia plant revamp.

### **AkzoNobel & Itaconix Sign Agreement To Cooperate in Bio-Based Polymers**

*Amsterdam—*

AkzoNobel and specialty chemicals company Itaconix have signed a framework joint development agreement to explore opportunities for the production of bio-based polymers.

With the agreement, AkzoNobel will pursue the development and commercialization of bio-based polymers. Itaconix will contribute a proprietary polymerization technology to turn itaconic acid, which is obtained from sugars through fermentation, into polymers.

"This innovation enables the production of polymers from renewable ingredients, which fits closely with our Planet Possible agenda of doing more with less," said Peter Nieuwenhuizen, director of RD&I for AkzoNobel's specialty chemicals business.

### **Evergas & Eletson Form Trading Venture For Semi-Ref/Ethylene Capable Vessels**

*Piraeus—*

Evergas and Eletson Gas have formed a commercial venture, named E3 Pool, that will trade the companies' semi-refrigerated/ethylene capable vessels, beginning 30 Jan. 2017.

E3 Pool will control the 15-strong fleet of modern gas carriers that are currently trading, creating a single point of contact for cargo owners. Over the next 12 months an additional four carriers will be delivered to Eletson.

"The petrochemical market has a number of established trade routes that require critical mass to service properly," said Vassilis E. Kertsikoff, chairman and chief executive of Eletson. "The cooperation with Evergas in the context of the E3 Pool will give us the ability to offer our customers the high level of service and the optionality that they require," he added.

The new venture will be operating out of Evergas' offices in Copenhagen, Denmark, and Singapore, and Eletson's offices in Piraeus, Greece, and London, England.

### **Indorama Ventures Completes Expansion Of Tire Cord Production Line at Kaiping**

*Bangkok—*

Indorama Ventures Pcl (IVL) has opened an expanded tire cord manufacturing line at its Performance Fibers facility in Kaiping, Guangdong Province, China.

"When this line starts in early 2018, Performance Fibers will be the largest tire cord producer in China and IVL will continue to be at the forefront of the industry," noted Alope Lohia, group chief executive.

The facility, which has 60,000 t/y of capacity, was acquired in 2015 from an affiliate of Sun Capital Partners (PCN, 15 Dec 2014, p 4).

### **Oxea Implements 100% Sales Control On n-Propanol and n-Propyl Acetate**

*Dallas—*

Oxea Corp. announced it will implement a 100% sales control, effective immediately, on n-propanol and n-propyl acetate, until further notice.

The sales control, being implemented in response to increasingly strong demand in the global market, will be based on the average monthly consumption over the last six months or as allowed by contract.

### **PL9SB Begins Commercial Operations At Its Ninth LNG Liquefaction Train**

*Sarawak—*

Petronas LNG 9 Sdn Bhd (PL9SB) has begun commercial operations at its ninth liquefied natural gas (LNG) liquefaction train at Petronas' LNG complex in Bintulu, Sarawak, Malaysia (PCN, 6 June 2016, p 2).

The 3.6-million-t/y state-of-the-art train will increase capacity at the Petronas LNG complex to approximately 30-million t/y.

JX Nippon Oil & Energy (JX NOE) last June acquired a 10% interest in PL9SB from Petronas. The partners "will strive towards expanding the LNG business and ensuring a reliable supply of energy for the customers," said JX NOE.

### **Covestro Partners in New Project to Recover Salt & Water from Wastewater for Chlorine**

*Krefeld—*

Covestro, along with industry and academia partners, are looking for new ways to recover salt and water from industrial wastewater and then use the treated salt and purified wastewater in electrolysis processes to produce chlorine.

"A key objective of this project is to increase the salt content of the salt solutions as much as possible in an environmentally friendly manner during the treatment process," said Dr. Yuliya Schiesser, a process researcher at Covestro. This will be done in part using the waste heat from adjacent production plants.

"Our ultimate goal is to develop a process that benefits not just the plastics industry, but other industry segments as well," Dr. Schiesser added. Covestro is planning a demonstration facility for testing purposes at its Krefeld-Uerdingen site in Germany.

In early 2016, Covestro brought a pilot plant on stream at the site that uses a recycling process developed in-house to purify salt-laden process wastewater so that it can be reused for chlorine production. This technology is the basis for the new "Re-Salt" project.

Re-Salt, being led by Covestro, is scheduled to run for a period of three years and is funded by the German Ministry for Education and Research. Other project participants include the German Water Center, Donau Carbon GmbH, the University of Duisburg-Essen University, Dechema-Forschungsinstitut, Envirochemie and TH Koln.

### **Air Liquide Inaugurates Operation Center For Remote Management of Production**

*Lyon—*

Air Liquide said it has launched an operation center that enables the remote management of production for 22 of its units in France, optimizing their energy consumption and improving their reliability.

Located near Lyon, in Saint-Priest, France, the new center is "unique" in the industrial gas sector, the company noted. It has a "nationwide vision" of customer needs for oxygen, nitrogen, argon and hydrogen.

The center is capable of stopping or restarting a site remotely and can adapt the production levels of the plants according to customer demand. The workflows of each unit are adapted in real time to the needs of the customers.

"We are proud to implement the first industrial gases remote operation center, which contribute to strengthen the group's competitiveness," said Guy Salzgeber, senior vice president and member of Air Liquide Group's executive committee supervising Europe industries.

### **AltaGas, Montney Producer Sign LOI For New Natural Gas Liquids Project**

*Calgary*—AltaGas said it has entered into a non-binding letter of intent (LOI) with a "significant" Montney producer for a natural gas liquids (NGL) project in Montney, Canada.

The project involves construction of a 120-million cu ft/d deep-cut natural gas processing facility and an NGL separation train, capable of processing up to 10,000 b/d of NGL mix, and rail terminal.

Under the terms of the LOI, it is contemplated that the processing facility will be jointly owned and the separation train and rail terminal will be fully owned by AltaGas. The facilities are expected to be underpinned with long-term take-or-pay and dedication commercial agreements, AltaGas noted.

Cost of the processing facility is estimated between \$100-million and \$110-million, while the separation train and rail terminal are projected to cost between \$60-million and \$70-million. Subject to negotiation and execution of definitive agreements, which are scheduled to be signed in the first quarter of 2017, start-up is planned in early 2019.

The facilities are expected to have access to the CN rail network, allowing propane to be transported to the Ridley Island propane export terminal, which AltaGas made a positive final investment decision on earlier this year (PCN, 9 Jan 2017, p 2).

Expected to be the "first" propane export facility on Canada's West Coast, the Ridley Island propane export terminal will be designed to ship 1.2-million t/y of propane and is scheduled to be in service by the first quarter of 2019, AltaGas said.

### **Pakistan Planning to Set Up Its 1st NCC For Production of Petrochem Feedstock**

*Lahore*—Pakistan is planning to build its "first-ever" naphtha cracker complex (NCC) to produce petrochemical feedstock, reported the Express Tribune.

Pakistan Chemical Manufacturing Assn. (PCMA) recently met with Pakistan's Federal Minister for Planning, Development and Reforms, where it was announced that a new NCC would be built to boost the country's economic progress.

The minister recommended that PCMA prepare a feasibility report and business plan, with help from market experts and technologists, to enable the ministry to move forward with the project. No other details on the proposed NCC were given.

### **Sinopec Picks DuPont Clean Technologies For Alkylation Unit at Tianjin Refinery**

*Tianjin*—Sinopec has awarded a license and engineering contract to DuPont Clean Technologies for its Stratco alkylation technology for a new alkylation unit at Sinopec's existing refinery in Tianjin, China.

The new 300,000-t/y unit, to be located at the Sinopec Tianjin Co. (TPCC) refinery, will improve the quality of the existing gasoline pool to ensure compliance with the China V standard. Construction is expected to begin early this year with start-up planned by late 2017 or early 2018.

TPCC is the "largest" oil refiner in North China with primary crude oil processing capacity of 15.5-million t/y, DuPont noted. Cost of the unit was not given.

### **Omnova Solutions Announces Plan For Two New Business Segments**

*Akron*—Omnova Solutions plans to establish a new reporting structure with two new reporting segments—one focused on specialty businesses and the second for more mature businesses.

The businesses included in the current performance chemicals and engineered surfaces reporting segments will be folded into the new segments. Omnova expects to begin reporting under the new structure in its fiscal 2017 second quarter.

The specialty segments will include Omnova's higher growth business lines and is likely to include coatings, adhesives, sealants and elastomers, nonwovens, laminates and films, as well as oil and gas additives.

The second segment will include the mature businesses, which will probably include tire cord, coated fabrics, paper and carpet chemicals, and various individual product lines.

"These changes are expected to drive significantly improved performance and provide modest cost savings as efficiencies are realized," the company noted.

### **Atmosa Updates on PA Force Majeure**

*Schwechat*—Atmosa Petrochemie, which declared force majeure on 16 Jan. at its 50,000-t/y phthalic anhydride (PA) production plant in Schwechat, Austria, told PCN it is still in force majeure (PCN, 23 Jan 2017, p 1).

The unit was shut down due to damage on the oil heating system. "Our technicians estimate that it will take a few weeks to repair," said a company spokesman.

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