

- ✓ استفاده از فناوری CB & I در واحد PDH چین ۱
- شرکت CB & I قراردادی را با شرکت چینی Xuzhou HaiDing به امضاء رسانده که براساس آن فناوری مورد نیاز و عملیاتی مهندسی واحد جدید التاسیس PDH به ظرفیت سالانه ۶۰۰ هزار تن پروپیلن را در این کشور به عهده گرفته است.
- ✓ پیش بینی افزایش تقاضای پلاستیک ها در چین ۱
- محدودیت های دولتی در جهت جلوگیری از واردات ضایعات پلاستیکی می تواند بر روند رو به رشد تقاضای انواع پلاستیک ها در چین بیافزاید. صنایع بازیافت پلاستیک چین تحت تاثیر این محدودیتها قرار خواهند گرفت که به دلیل نگرانی های زیست محیطی وضع شده اند. میزان واردات ضایعات پلاستیک چین در سال گذشته حدود ۷/۳ میلیون تن بوده است.
- ✓ سرمایه گذاری ۴ میلیارد دلاری در طرح های شیمیایی تایلند ۲
- شرکت شیمیایی PTTGC تایلند اعلام کرده در صدد سرمایه گذاری ۴ میلیارد دلاری برای توسعه صنایع شیمیایی در شرق این کشور طی یک برنامه پنج ساله می باشد. این سرمایه گذاری شامل یک واحد کراکر نفتا به ظرفیت سالانه ۵۰۰ هزار تن اتیلن و ۲۵۰ هزار تن پروپیلن خواهد بود که با مشارکت شرکتهای ژاپنی سانپو و توپوتا احداث می شود.

- ✓ ادغام شرکتهای داو کمیکال و دوپونت ۳
- شرکتهای آمریکایی داو کمیکال و دوپونت در صدد ادغام در یکدیگر و تشکیل شرکت (Dow DU Pont (DWDP با سرمایه ۱۳۰ میلیارد دلار هستند.
- ✓ عواقب طوفان دریایی هاروی بر صنایع شیمیایی در سواحل آمریکا ۳
- براساس اعلان دپارتمان انرژی آمریکا نزدیک به ۱۳/۵ درصد از ظرفیت تولید نفت خام و ۱۷/۶ درصد از ظرفیت تولید گاز طبیعی آمریکا در نواحی طوفان زده در خلیج مکزیک از مدار تولید خارج شده اند. تعطیلی ده واحد پالایشگاهی (معادل ۱۷/۶ درصد ظرفیت پالایشگاهی آمریکا)، کاهش تولید ۴۷ درصدی اتیلن، ۳۷ درصدی بنزن و ۳۱ درصدی پلی اتیلن آمریکا نیز از عواقب این طوفان دریایی بوده است. طوفان دریایی هاروی مجموعاً ۲۰ درصد ظرفیت محموله های دریایی صنایع شیمیایی آمریکا را کاهش داده است. (ظرفیت کل معادل ۱۵۵ میلیارد دلار)

✓ احتمال تاخیر در راه اندازی واحدهای شیمیایی جدید آمریکا ۶
وقوع طوفان دریایی هاروی در سواحل آمریکا می تواند بر راه اندازی واحدهای شیمیایی این ناحیه تاثیر گذار باشد، تعطیلی واحدهای پالایشگاهی و تولید گاز طبیعی، آسیب دیدن زیرساختهای جاده ای و راه آهن از مهمترین دلایل تاخیر در بهره برداری از واحدهای جدید می باشند.

✓ تملک واحد آروماتیک سنگاپور از سوی اکسون موبیل ۸
شرکت اکسون موبیل تملک و خرید واحد آروماتیک در جزیره جورانگ سنگاپور را به پایان رسانده است، این واحد سالانه ۸۰۰ هزار تن پارازایلین، ۴۳۸ هزار تن بنزن و ۲۰۰ هزار تن ارتوزایلین تولید می کند.

← خاورمیانه

✓ سرمایه گذاری ساییک و آرامکوی سعودی در طرح تبدیل نفت خام به محصولات شیمیایی ۹
شرکتهای ساییک و آرامکوی سعودی در صدد انجام ۲۰ میلیارد دلار سرمایه گذاری مشترک در طرحهای شیمیایی هستند و در همین راستا اسناد مناقصه مهندسی را برای طرح تبدیل نفت خام به محصولات شیمیایی ارائه نموده اند. در این طرح (تحت نام COTC) روزانه ۴۰۰ هزار بشکه نفت خام سبک به محصولاتی از قبیل پلی اتیلن، پلی پروپیلن، بوتادین و آروماتیک ها تبدیل می شود.

✓ تکمیل عملیات مهندسی واحد پتروشیمی کویت در سال ۲۰۱۸ ۱۰
عملیات (FEED (Front End Engineering Design) یک واحد پتروشیمیایی در ناحیه الزور کویت مطابق برنامه ریزی صورت گرفته تا پایان ژوئن ۲۰۱۸ به اتمام می رسد. این واحد در مجاورت واحد پالایشگاهی عظیم شرکت KIPIC (با سرمایه ۱۷ میلیارد دلار) که در حال ساخت می باشد، احداث خواهد شد. در این واحد پتروشیمیایی محصولاتی از قبیل پلی پروپیلن، پارازایلین و بنزن تولید می شود.

تهیه و ترجمه: احمد کشوری

CB&I announces technology award for petchem plant in China

9/11/2017

THE WOODLANDS, Texas — CB&I announced it has been awarded a contract by Xuzhou HaiDing Chemical Technology Co. Ltd. for the license and engineering design of a grassroots propane dehydrogenation unit to be built in Pizhou, Jiangsu Province, China.

The unit will use CB&I's CATOFIN catalytic dehydrogenation technology and Clariant's tailor-made, non-noble, CATOFIN catalyst to produce 600,000 mtpy of propylene.

CB&I's CATOFIN technology continues to be the propane dehydrogenation technology of choice, the company stated in a press release, which consistently exceeds customer expectations for overall performance.

China's plastic demand to rise as foreign garbage ban to curb recycled supply

9/13/2017

SINGAPORE (Reuters) — China's already soaring plastic demand may rise even further as the government plans to ban waste-plastic imports by the end of this year, which will curb domestic plastic recycling.

The expected increase in plastic demand highlights the consequences of China's pollution fight and its efforts to modernize its industry. As part of this drive, the world's top importer of rubbish said in July that it would stop importing garbage by the end of this year.

To make up for the loss of recycled plastic, petrochemical producers and exporters to China from the Middle East, South Korea, Thailand and Singapore are expected to receive more orders for products including polyethylene, a thermoplastic found in almost everything from grocery bags to bubble wraps, pipes, medical devices and even bulletproof vests.

"From next year, demand for polyethylene would get even better as the impact of the ban would be felt," said a source from a Chinese firm that produces and markets petroleum and petrochemical products.

China imported 7.3 MMt of waste plastics last year, taking in over half the world's leftover plastic.

Of the 7.3 MMt, polyethylene made up about 2.53 MMt in 2016, and this is expected to fall to between 1.7 MMt and 1.8 MMt this year, data from IHS Markit Chemical showed.

IHS Markit expects China's polyethylene demand to grow by 6.6% from 2017 to 2018, outpacing Asia's overall growth of 5.5%.

"The ban of scrap/waste plastics is definitely positive for polyethylene producers as there will be a shift of consumption from recycled polyethylene to prime virgins polyethylene," said J.P. Nah, director of polyolefins at IHS Markit Chemical.

Nah said Asia's 2017 total polyethylene demand would be around 41.5 MMt, with China accounting for some two-thirds of total demand.

China's position as a key Asian producer of disposable medical devices will add to the country's demand for polyethylene, said Nikhil Vallabhan, a senior consultant at Frost & Sullivan for Asia Pacific.

Polyethylene makes up only about 9% of the total plastics used in medical devices because of its higher cost over competing plastic polyvinyl chloride. However, polyethylene demand for the devices is expected to increase in absolute terms, said Vallabhan.

"With countries and regions such as India and Southeast Asia being labelled as destinations for medical tourism, we could expect the demand for high quality medical devices to grow at a robust pace in the region," he said. "The usage of (polyethylene) in containers, syringe plungers and tubes will continue to grow."

PTTGC announces \$4 B 5-yr investment plan for eastern Thailand

9/12/2017

BANGKOK (Reuters) — PTT Global Chemical Pcl, Thailand's largest petrochemical producer, on Tuesday announced a \$4 B investment plan over the next 5 yr in an industrial development on the eastern seaboard.

It includes a polyols joint venture between PTTGC, Sanyo Chemical Industries and Toyota Tsusho Corp in Thailand's eastern province of Rayong, it said.

The investment plan also includes a naphtha cracker plant at the existing PTTGC facility in Map Ta Phut which will put production capacity at 500,000 tpy for ethylene and 250,000 tpy for propylene.

PTTGC also signed an agreement with Japanese Kuraray Co and Sumitomo Corp to study the possibility of producing High-Heat Resistant Polyamide-9T and Hydrogenated Styenic Block Copolymer.

Dow, DuPont complete planned merger to form DowDuPont

9/1/2017

(Reuters) — Dow Chemical Co and DuPont said on Friday the companies had successfully completed their planned \$130 B merger to form DowDuPont.

Shares of DuPont and Dow stopped trading at the close of Aug. 31 and will now trade on the New York Stock Exchange under the ticker symbol "DWDP."

Dow and DuPont announced the merger in December 2015.

"The true value of this merger lies in the intended creation of three industry powerhouses that will define their markets," Andrew Liveris, executive chairman of DowDuPont, said in a statement on Friday.

Post-merger, Dow and DuPont are expected to break up into three independent, publicly traded units.

Companies will have to learn from the cost of Harvey

01 September 2017 17:09

By **Nigel Davis**

LONDON (ICIS)--The photograph is from a US Coastguard flyover of the Texas ports of Houston, Freeport and Galveston this week looking for spills. Now, seven days after Hurricane Harvey came ashore and slowly dumped unprecedented volumes of water onto the Houston area and along the coastline into Louisiana, the ports are beginning to open.

Refineries and chemical plants remain shut but will resume operations as infrastructure returns to some semblance of normality. Unexpected incidents – such as the explosions and fires at the Arkema organic peroxides plant in Crosby, northeast of Houston – notwithstanding, production and output will be ramped up.

It is still a question of when and it remains difficult to determine the time needed for rail and road connections to clear. Employees have to be in a position too, to get to work. Many have been deeply affected even stranded by floods.

Terminals at Port Houston are expected to be re-open on Friday. Railroad companies are restoring services hit by the hurricane and tropical storm.

In an update on Thursday, ExxonMobil said impact assessments were underway at its Baytown complex, which had been shut down. The nearby Mont Belvieu plastics plant was also shut down; the company's Beaumont refinery and chemicals plants had completed safe and systematic shutdowns while the company's refining and chemicals plants in Baton Rouge, Louisiana, were operating as normal.

It is clear that it will not be possible to assess market conditions for a myriad of products until it is known whether plants were damaged by the storm and subsequent flooding or whether they have just been affected by restricted logistics.

The flooding in certain locations was severe and as the waters recede, the damage will become clearer. The construction of new facilities across the US Gulf Coast region are certainly expected to be hit.

Companies rightly put their employees' safety and well-being first. Those firms operating in the affected areas have sought to track the whereabouts of workers.

Shell's CEO Ben van Beurden heaped praise on staff who helped ensure the safe evacuations and shutdowns of rigs and refining and chemical operations, those who stayed behind to keep the plants safe and those who stepped out to help others.

It is good practice to give praise where praise is due, particularly after a natural disaster such as a hurricane. "Planning for hurricanes, tropical storms and floods is one thing," van Beurden said. "The last few days have been something else."

It is that "something else" which will be need to be assessed over the coming days and weeks.

The US Department of Energy said that, as of 12:30 EDT on Thursday, 13.5% of US Gulf of Mexico oil production and 17.6% of natural gas production in federally administered areas was shut in.

At 15:00 EDT the same day, ten refineries in the US Gulf Coast region were shut down according to public reports. Their combined capacity is equivalent 31.7% of US Gulf Coast capacity and 17.6% of total US refining capacity.

ICIS analysis indicates that 47% of US ethylene capacity was affected, 37% of US benzene and 31% of US polyethylene (PE). It tracked outages as the impact of the storm became significantly worse than any could have expected.

“And even now with the sun coming back out and freeways beginning to emerge again from the water, the challenges keep on coming,” van Beurden said, referring to the resilience of Shell’s workforce in Mumbai as the city was hit by devastating monsoon floods.

Texas is the largest chemicals producing state in the US and Louisiana the fourth largest, although the proportions of petrochemicals produced in that part of the world are much greater.

According to the American Chemistry Council (ACC), Texas chemicals shipments – the value of products leaving the factory gate – are \$129bn and Louisiana chemicals shipments are \$51bn. Harvey has affected a total of \$155bn of chemical shipments, about 20% of the US total.

The ACC’s CEO, Cal Dooley, on Thursday highlighted some of the issues that could come to dog the industry in the wake of the storm given the perceived vulnerability of some if not all chemical and refining facilities.

“Chemical facilities are designed and built with major storms in mind,” he said. A shutdown in the face of an approaching storm brings into play special regulations and emission limits that apply during shutdowns, start-ups and malfunctions. Flaring is an approved way to safely relieve pressure and considered as industry ‘best practice’,” he added.

Nevertheless, the extreme and unique challenges presented by Harvey have warranted an unprecedented response effort, including that by local industry.

“The top priority in any situation is the safety and well-being of employees and the surrounding residents,” Dooley said. “An abundance of caution has been and will continue to be taken in these instances to minimise any potential risks.”

As the recovery continues in Texas and Louisiana, companies will have to monitor and evaluate the developing situation. They will also have to see what additional measures might be required to deal with extreme weather events in future.

Their ‘licence to operate’ is governed by local acceptance as well as local, state and federal rules.

“In the coming weeks we will evaluate all learnings from this unprecedented hurricane and the resulting flooding, to assess if there are additional procedures and process safety efforts that could further inform and enhance the safety performance of our operations in the future.” Dooley said.

Hurricane Harvey may delay new plant start-ups

28 August 2017 04:13

By **Al Greenwood**

HOUSTON (ICIS)--The disruptions caused by Hurricane Harvey could delay the start-up of new plants that were expected during the upcoming months – on top of all the shutdowns it caused to existing sites.

Harvey made landfall on Friday just north of Corpus Christi, Texas, which is home to several petrochemical plants and refineries.

Companies had already shut down many refineries and plants in preparation for the storm, which was among the most powerful to hit the US.

Harvey also created bands of moisture that brought tremendous amounts of rain to Houston and regions to the south of the city, all of which make up the petrochemical hub of the US.

As a result, companies had shut down these plants even though they are far from where Harvey made landfall.

More could follow. Although Harvey is no longer a hurricane, meteorologists expect Harvey to produce a lot of rain as it moves through Texas.

Even the current number of plant shutdowns will disrupt markets, given their breadth and scale. Already, gasoline prices have risen because of the refinery shutdowns, and ethane prices have fallen because of the cracker shutdowns.

Meanwhile, companies are in the midst of starting up the new plants that make up the first wave of new capacity in the US.

The potential for any delays caused by Harvey will depend, in part, on which stage each plant is in the development process.

Some plants are mechanically completed and are in the process of being commissioned.

The following table lists the plants for which companies have announced mechanical completion. Capacity is listed in tonnes/year.

Company	Capacity	Product	Site
Chevron Phillips Chemical	500,000	Bimodal HDPE	Old Ocean
Chevron Phillips Chemical	500,000	mLLDPE	Old Ocean
Dow Chemical	400,000	Elite PE	Freeport
ExxonMobil	650,000	mLLDPE	Mont Belvieu
ExxonMobil	650,000	LLDPE	Mont Belvieu

With the exception of Dow, these new polyethylene (PE) plants will ultimately be fed by crackers that Chevron Phillips and ExxonMobil intended to complete by the end of this year. Until those crackers are running, the companies expected to rely on other sources for ethylene.

Right now, it is too early to say if the companies will meet their target dates to start up of their new crackers. Chevron Phillips and ExxonMobil have not commented about how Harvey will affect their start-up schedules, if at all.

But if there is a delay, that means the new PE plants will be competing for ethylene at a time when several Gulf Coast crackers are already down because of Harvey.

In the case of Dow, it has completed its new cracker in Freeport and has already started feeding it feedstock.

Of course, these are not the only new plants that companies are building.

The table below lists the plants in Texas that are scheduled for start up in the upcoming months.

Company	Capacity	Product	Location
Enterprise Products	750,000	propylene	Mont Belvieu
Chevron Phillips Chemical	1.5m	ethylene	Cedar Bayou
ExxonMobil Chemical	1.5m	ethylene	Baytown
Formosa Plastics	1.59m	ethylene	Point Comfort
Formosa Plastics	567,000	LDPE	Point Comfort
Formosa Plastics	525,000	HDPE	Point Comfort

For the case of Enterprise Products, it expected to start up its propane dehydrogenation (PDH) unit in September.

ExxonMobil and LyondellBasell each have new PE plants that they expect to start up later in 2019. LyondellBasell has already broken ground at its plant, which is in La Porte.

As far as the existing plants that have shut down, it is still too early to determine how quickly they could resume operations.

In the best-case scenario, the plants would suffer no damage. If that happens, companies will inspect their plants during the weekend and look to restart as early as next week, said Kevin McCarthy, a partner at Vertical Research.

In the worst-case scenario, the damage inflicted by the storm could cause a plant to be down for several weeks, if not months, he said.

For the petrochemical plants and refineries, the biggest threat is flooding, McCarthy said. The plants are designed to withstand strong winds, but floods can cause problems with utilities, logistics and operations.

Even if the plant suffers no damage, floods can prevent employees from getting to the plant or material from entering and leaving the site, he said.

ExxonMobil completes acquisition of JAC's Singapore plant

28 August 2017 06:06

SINGAPORE (ICIS)--ExxonMobil has completed the acquisition of Jurong Aromatics Corp's (JAC) aromatics plant on Jurong Island in Singapore, the energy major said on Monday.

JAC's facility can produce 800,000 tonnes/year of fibre intermediate feedstock paraxylene (PX); 438,000 tonnes/year of benzene; and 200,000 tonnes/year of orthoxylene (OX) at the site, according to JAC's website.

The facility is located near ExxonMobil's integrated refining and petrochemicals complex that has an ethylene production capacity of 1.9m tonnes/year, ExxonMobil said.

"The acquisition will strengthen both sites with operational and logistical synergies, as well as increase ExxonMobil's Singapore aromatics production to over 3.5m tonnes per year, including 1.8m tonnes of paraxylene (PX), and add about 65,000 barrels per day of transportation fuels capacity," the US energy firm said in a statement.

Financial details of the deal were not disclosed.

"Integration of the aromatics plant with our existing manufacturing facility will help us to better serve our customers in key Asian growth markets, as well as further establish Singapore as a hub for global trade and economic progress," said Gan Seow Kee, chairman and managing director of ExxonMobil Asia Pacific Pte Ltd.

Gan added that ExxonMobil has rehired major of the qualified employees of JAC.

ExxonMobil had announced in [May](#) its acquisition of JAC's plant following negotiations with accounting firm Borrelli Walsh, which was appointed as the receiver of the debt-laden Singapore aromatics producer's assets.

JAC went into [receivership](#) in 2015 after debt-restructuring talks with creditors failed.

Saudi Aramco, SABIC launch bidding at key chemical project

8/24/2017

JEDDAH, Saudi Arabia, Aug 24 (Reuters) - Saudi Aramco and Saudi Basic Industries Corp (SABIC) have launched bidding for engineering work on their joint crude oil to chemicals project, industry sources said, a key step towards developing the \$20-billion-plus complex.

The project, known as COTC, the first major scheme to bring the two giants together, is expected to process Arabian Light and Extra Light crude oil, one of the sources told Reuters.

Several plants are expected to be built including a 400,000-barrels-per-day integrated crude distillation and vacuum unit, a distillate hydrotreater, a vacuum gas oil hydrocracker, a residual fluid catalytic cracking unit, a mixed feed cracker, as well as polyethylene, polypropylene, butadiene and aromatics recovery units.

Aramco <IPO-ARMO.SE> and SABIC are still considering where to locate the chemicals site; at Yanbu, near a power plant; or in Jubail, close to Sadara, which is an Aramco joint venture with U.S. company Dow Chemical.

The closing date for bids for pre-front end engineering and design work (pre-FEED) and FEED for the COTC is Sept. 25, one of the sources said, adding that the plant is expected to be commissioned by the end of 2024.

Another source said pre-FEED is expected to be completed by late 2018, with FEED to be finalised by late 2019. Aramco and SABIC are expected to launch bidding for construction by mid-2020.

SABIC did not immediately respond to a Reuters request for comment. Aramco said it "declines to comment on rumor or speculation".

Aramco's chief executive has said it was a priority for the company to convert crude oil to chemicals as the state oil producer aims to diversify operations in the run-up to an initial public offering of shares next year.

Downstream, which covers refining and chemicals, will help Aramco boost value from hydrocarbons by securing revenue streams and become less vulnerable to oil price swings.

LESS GAS

Analysts say the project will help reduce natural gas usage in petrochemicals at a time when the kingdom is trying to use more gas to generate power, rather than burning crude oil, as it seeks to diversify its energy mix.

"What is new and different is that the prices of crude and gasoline/diesel have come down more than petrochemicals. This makes the incentive to produce petrochemicals greater than to make gasoline and diesel," Mark Routt, chief economist for the Americas at KBC Advanced Technologies, said.

"It certainly could usher in a new 'wave' of investments in producing those petrochemicals," he said.

The project is strategic for Saudi Arabia, which plans to expand further into the petrochemical chain to export more end products and grow beyond oil.

It is also crucial for Saudi Arabia's economic reform plan and could create as many as 100,000 jobs.

SABIC's CEO told Reuters in May that COTC could produce more than 18 million tonnes of materials yearly

Design work for Kuwait petrochemicals plant due for completion in June 2018

20 August, 2017 By [Wil Crisp](#)

Sources say the project is proceeding on schedule

Front end engineering design (feed) work for the planned petrochemicals plant at the Al Zour site in Kuwait is proceeding on schedule, according to industry sources.

"The feed contract was signed in January 2016," said one source. "It's a 17-month contract so if it's completed on time it should be done by the end of June [2018]. At the moment everything is going well and nothing suggests there will be any delays."

Estimates as to the estimated value of the main engineering, procurement and construction contracts vary \$2.8bn to \$5bn.

"We're expecting the project to be divided into three EPC packages. We're still not sure of the exact scale and scope of the project. That will become clearer when the feed is complete," said another source.

The planned petrochemicals facility will be integrated with the KIPIC megaproject to build a \$17bn refinery in the Al-Zour region, known as the New Refinery Project.

The facility is expected to include units to produce polypropylene, paraxylene and gasoline.

Technology providers are currently waiting to here the results of a tender process for contracts to provide proprietary technology for the petrochemicals facility.

The main EPC contracts for the New Refinery Project were awarded in mid-2015 and are currently under execution. The New Refinery Project is due to be completed before the end of 2019.