Technip and Chemetry sign agreement for licensing and engineering of eShuttle™ technology

December 12, 2016

Proven technology reduces energy consumption in chlor-alkali plants

Technip and Chemetry have signed an exclusive cooperation agreement for the licensing and engineering of Chemetry's eShuttle™ technology for the production of ethylene dichloride (EDC). EDC is a commodity chemical produced worldwide and used primarily for PVC(1) plastic production. The technology significantly lowers energy use, reduces the carbon footprint and improves the safety of the chlor-alkali and EDC industries.

The technology uses a unique metal halide ion process to produce high purity EDC without the generation of harmful chlorine gas. The process significantly reduces electrical power consumption compared to latest generation chlor-alkali processes. Power savings can be reduced by nearly half compared to older diaphragm or mercury-based processes. Additionally, the process is ideally suited for integration with oxygen depolarized cathode technology(2), which further increases energy savings. The technology was pioneered in Chemetry's laboratory and integrated pilot demonstration facilities in Moss Landing, California.

The agreement leverages Chemetry's expertise in electrolyzer design and halide chemistry with Technip's global strength in technology licensing, process scale-up, engineering and procurement.

Technip's operating center in Boston, Massachusetts, United States, will manage the agreement, with support from Technip's office in Lyon, France. Both centers have first-of-a-kind technology development and engineering experience and are part of Technip Stone & Webster Process Technology, which looks after Technip's expanding portfolio of onshore process technologies in petrochemicals, refining, hydrogen and syngas, polymers and gas monetization.

Dr. Ryan Gilliam, Chemetry CEO, said: *"Since its founding, Chemetry has been focused on redefining how chemicals are made. From lower energy requirements and improved margins, to less impact on the environment and safer operation, we are developing a technology platform that will have a lasting impact."*

The eShuttle™ technology uses the same feedstocks and produces the same products (EDC, caustic and hydrogen) as conventional processes, making it ideal for retrofitting existing chlor-alkali/EDC plants especially where electrical costs are high. It also offers EDC producers the ability to expand production within the same cell room footprint and power requirements.

Stan Knez, President, Technip Stone & Webster Process Technology, added: *"Technip is pleased to work with Chemetry on this innovative project. Our strong technology, engineering and commercialization experience coupled with Chemetry's catalysis and electrochemistry expertise will enable us to provide customers with a complete technology and engineering package, a single point of interface and the highest quality standards. With the support of Technip's technical teams in Boston and Lyon, we look forward to bringing the technology forward to full commercialization."*

(1)PVC (polyvinyl chloride) is a widely produced synthetic plastic polymer that comes in two basic forms. The rigid form is used in construction of pipe, doors and windows; the flexible form is used for cable insulation and signage.
(2)The eShuttle™ platform is compatible with Covestro's oxygen depolarized cathode technology which introduces oxygen into the standard chlor-alkali cathodic reaction eliminating the production of hydrogen and lowering the energy required to produce sodium hydroxide.

About Technip
Technip is a world leader in project management, engineering and construction for the energy industry. From the deepest Subsea oil & gas developments to the largest and most complex Offshore and Onshore infrastructures, our close to 31,000 people are constantly offering the best solutions and most innovative technologies to meet the world's energy challenges. Present in 45 countries, Technip has state-of-the-art industrial assets on all continents and operates a fleet of specialized vessels for pipeline installation and subsea construction. Technip shares are listed on the Euronext Paris exchange, and its ADR is traded in the US on the OTCQX marketplace as an American Depositary Receipt (OTCQX: TKPPY).

TEC LISTED EURONEXT ISIN: FR0000131708

OTCQX OTC ADR ISIN: US8785462099 OTCQX: TKPPY

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About Chemetry

Leveraging its world class laboratories and piloting facilities, Chemetry is focused on developing lower energy technologies in the chemical space. Supported by a diverse team of engineering, scientists and plant operators, the company maintains an active research and development program and holds over 100 patents in the chemical and building material space. Chemetry is part of Calera Corporation, a clean technology company based in Moss Landing, California. For more information, visit http://chemetrycorp.com/