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MAN Compressor Technology Set for Louisiana Clean Energy Complex

MAN Energy Solutions to supply compressor trains for Air Products' air-separation unit as part of new plant for production of blue ammonia and hydrogen

Air Products and Chemical, Inc., a global leader in industrial gases and clean-energy solutions, has awarded MAN Energy Solutions an order for six air-compressor trains for use in an air-separation unit in its Clean Energy Complex in Darrow, Louisiana (USA). The complex will produce more than 750 million standard cubic feet of blue hydrogen daily for Air Products' customers, which will be transported along a 700+ miles pipeline on the U.S. Gulf Coast, as well as blue ammonia for global hydrogen markets such as the transportation and mobility sectors. The facility will also capture and permanently store about 95% of its CO₂ emissions – over 5 million tons per year – equivalent to the annual CO₂ emissions from more than 1 million passenger cars.

MAN's air-compressor trains will be deployed at the core of Air Products' air-separation unit where air will be separated into its primary constituents of oxygen and nitrogen. Both gases are needed for the production of hydrogen and ammonia.

Tamer Bayri, Head of Sales & Project Management Industrial Gases at MAN Energy Solutions, said: "We are thrilled to work with Air Products on this forward-looking project. This order reinforces our commitment to support our customers on their journey towards a sustainable energy-future with our expertise and state-of-the-art technology solutions. Our compressor systems are designed to meet the demanding needs of crucial air-separation processes exactly like this one in Darrow."

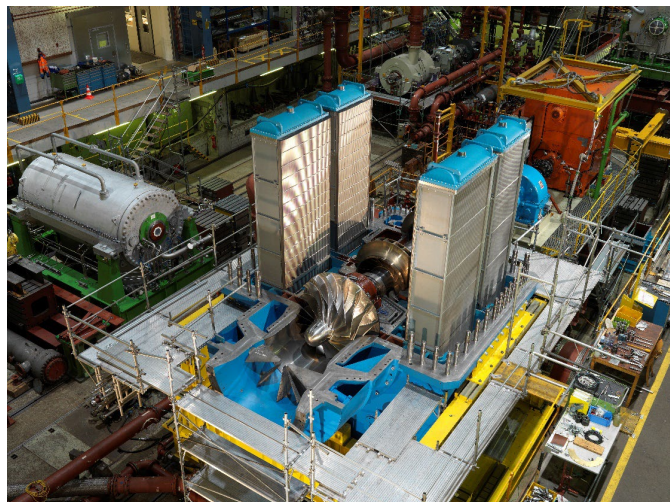
Air Products' Clean Energy Complex is expected to commence commercial operation in 2026. For MAN Energy Solutions, the installation will add to an already extensive list of air-compressor train references with more than 250 air-separation facilities with MAN compressor technology currently in commercial operation globally.

MAN Energy Solutions' scope of work for Air Products' blue hydrogen energy complex comprises two main air-compressor trains – each equipped with a single shaft compressor type, RIKT 160-3. It further includes two booster air-compressor trains – each with an integrally geared compressor type, RG 63-6 – as well as two gaseous nitrogen compressor trains – each with an integrally geared compressor type, RG 45-5. All of the trains will be electrically driven.

The main air-compressor trains – the largest in MAN's RIKT portfolio – have three centrifugal stages and deliver more than 600,000 Nm³/h of air. The booster compressors are integrally geared types and have six (air) and five (nitrogen) stages, all with external intercoolers.

Zoran Paunovic, Head of Sales & Project Management, Air Separation at MAN Energy Solutions, said: “The technical features of MAN air-compressor trains make them ideal for air-separation applications; they help operators achieve maximum performance while reducing energy consumption and minimizing environmental impact.”

He continued: “We are able to provide two different types of compressor to meet the customer’s needs. The RIKT compressors feature an innovative impeller design that increases energy efficiency while reducing wear and tear on the unit. This design improves the compressor’s overall performance and extends its service life, leading to greater reliability and lower maintenance costs, combined with a very compact design and small footprint. In contrast, the RG compressors are ideal for reaching different high-pressure demands by using different shaft speeds in order to run each impeller within the optimum efficiency point. In this way, energy consumption can be reduced while reaching maximum capacity.”



Isothermal RIKT type compressors by MAN Energy Solutions



RG integrally geared type compressors by MAN Energy Solutions

MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow's challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the way in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.