AmoMax 10 Plus was chosen for one of the first commercial green ammonia projects globally, the Duqm project in Oman. The catalyst is designed to maximize green ammonia yield at high efficiency. The ACME green ammonia plant will be powered by solar and wind energy and avoid 270,000 ton/y CO₂ compared to an average traditional ammonia plant.

MUNICH, JANUARY 27, 2022

Clariant, a focused, sustainable, and innovative specialty chemical company, further underlines its commitment to decarbonize the chemical industry and supports the prestigious overall $3.5 billion project to produce green ammonia and green hydrogen in Duqm, Oman. Clariant will supply KBR with its next-generation AmoMax 10 Plus ammonia synthesis catalyst for the upcoming ACME green ammonia plant of the Oman Company for the Development of the Special Economic Zone at Duqm. Once completed, the plant will be a fully integrated, carbon-neutral facility, using solar and wind energy to produce 300 tons of ammonia per day.

Stefan Heuser, Senior Vice President and General Manager of Business Unit Catalysts at Clariant, commented, “We are convinced that green ammonia will play a crucial role in the global energy transition and with our novel ammonia synthesis catalyst AmoMax 10 Plus, we provide a state-of-the-art product to facilitate this change towards a more sustainable future. Together with our partner KBR we look forward to setting a new standard in a more sustainable and profitable green ammonia production.”

Graham Hoar, Vice President Ammonia, Syngas & Fertilizers at KBR added, “Due to our history of successful collaborations with Clariant, we know that they are the right partners to support our outstanding technology with the optimal catalyst to help pioneering companies, like ACME, lead the energy transition with highly efficient green ammonia production.”

The wustite-based AmoMax 10 Plus is particularly well suited to the requirements of green ammonia production. Based on Clariant’s industry-proven ammonia synthesis catalyst AmoMax 10, this new catalyst is designed with an optimized promoter set, greatly increasing its activity and stability while reducing startup times. The superior activity of AmoMax 10 Plus allows operation with a higher per pass conversion and lower loop pressure. Consequently, it can be used to increase ammonia production and/or to reduce energy consumption.
Moreover, the catalyst's improved stability and excellent resistance to poisons like water and oxygen increase its robustness and lifetime.

These combined features ensure that AmoMax 10 Plus can deliver stable and reliable performance despite fluctuating feed conditions caused by the variable supplies of renewable energy. Overall, green ammonia producers can expect maximum yields with minimum operating expenses.
Clariant is a focused, sustainable and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. On 31 December 2020, the company employed a total workforce of 13,235. In the financial year 2020, Clariant recorded sales of CHF 3.860 billion for its continuing businesses. The company reports in three business areas: Care Chemicals, Catalysis and Natural Resources. Clariant’s corporate strategy is led by the overarching purpose of ‘Greater chemistry – between people and planet’ and reflects the importance of connecting customer focus, innovation, sustainability, and people.

Clariant’s Catalysts business unit is a leading global developer and producer of catalysts for industrial processes. It has been part of the Catalysis business area of the Clariant Group since the acquisition of the German Süd-Chemie in 2011. Clariant Catalysts has a total of 14 production sites (incl. Joint Ventures), 7 sales offices, and 10 R&D and technical centers around the world. Approximately 2,044 employees serve customers across all regional markets. Aimed at delivering sustainable value to customers, Clariant’s catalysts and adsorbents are designed to increase production throughput, lower energy consumption, and reduce hazardous emissions from industrial processes. The broad portfolio also includes products that enable the use of alternative feedstock for chemical and fuel production.