

Media Release

Clariant's MegaMax[®] 800 catalyst achieved an outstanding performance at CNOOC's Davy methanol plant in Hainan, China

- **MegaMax 800 methanol synthesis catalyst's excellent performance in the first installation has led to a repeat order**
- **CNOOC benefitted from 38,000 MT higher methanol yield, leading to around USD 10 Mio. in additional profit**
- **The catalyst has proven higher activity, higher single-pass CO₂ conversion, lower feed gas consumption, and reduced wax formation**

Munich, July 19, 2021 – Clariant has been awarded another major contract by China National Offshore Oil Corporation (CNOOC) for its high-performance methanol synthesis catalyst, MegaMax 800. The Chinese oil and gas producer first used the catalyst at their Fudao plant in 2018, achieving record accumulative methanol production and plant reliability. The catalyst's excellent performance has now resulted in its reorder which completed refilling and start-up in June 2021.

Thanks to Clariant's catalysts, CNOOC's Fudao plant in Hainan increased its accumulative methanol yield by 38,000 MT, translating to a value larger than USD 10.8 Mio. The use of the catalyst in the plant allowed for a reduction of total natural gas consumption (feedstock and fuel) by 1.5% on average. Furthermore, the wax formation was significantly reduced, leading to 50% less maintenance effort. Moreover, Clariant's desulfurization and pre-reforming catalysts in the plant achieved a lifetime of around two years.

Stefan Heuser, Senior Vice President and General Manager at Clariant Catalysts, stated, "The repeat order is a significant achievement for us and further proof of the quality of our unique methanol synthesis catalyst's performance. It is an honor to support CNOOC, one of China's largest oil and gas producers, in enhancing their production, efficiency, and plant reliability."

The Fudao plant started operations in 2010 and has an annual methanol capacity of 800 kilotons, relying on natural gas feedstock and a Davy production process. Besides the aforementioned catalysts, the plant also utilizes Clariant's ReforMax LDP series steam reforming catalysts, delivering high and stable performance since 2018.

CNOOC also operates the Kingboard methanol plant in Hainan, with an annual capacity of 600 kilotons, which also switched its methanol synthesis catalyst to MegaMax 800. The plant is based on natural gas feedstock with a Lurgi process design. MegaMax 800 meets the needs of both of the different methanol production technologies, Davy of the Fudao plant and Lurgi of the Kingboard plant.

Both plants operate with natural gas that contains a high amount of CO₂ (partially >20%), and MegaMax 800 is perfectly suited to handle these challenging conditions, showing a higher single-pass conversion of CO₂ and a longer lifetime. In other words, the use of MegaMax 800 allowed for a 10% reduced CO₂ footprint of both plants.



Clariant's MegaMax 800 catalysts for methanol synthesis. (Photo: Clariant)

GLOBAL TRADE MEDIA RELATIONS

STEFANIE NEHLSSEN

Phone +41 61 469 63 63
stefanie.nehlsen@clariant.com

CAROLINE SCHMID

Phone +41 61 469 63 63
caroline.schmid@clariant.com

Follow us on [Twitter](#), [Facebook](#), [LinkedIn](#), [Instagram](#).
Read our latest [blog](#) on The Moleculist.

MegaMax[®] IS A TRADEMARK OF CLARIANT REGISTERED IN MANY COUNTRIES.

www.clariant.com

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 based on five pillars: focus on innovation and R&D, add value with sustainability, reposition portfolio, intensify growth, and increase profitability.

www.clariant.com/catalysts

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 16 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.