Johnson Matthey achieves successful commissioning of largest methanol plant in China

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Johnson Matthey (JM) is pleased to announce that China’s Ningxia Baofeng Energy Group has successfully started up the 6600 mtpd methanol plant at their 600 kta coal to olefins (CTO) complex near Yinchuan in Ningxia Province PRC using JM catalyst and process technology. The new methanol plant, which quickly hit full rates following start-up, has the largest output of any plant in the world.

The commissioning of the methanol plant was a milestone in the two-year collaboration between the two companies. The commissioning was led by specialists on hand from JM’s Beijing team and, due to COVID-19, remote support was provided from their team based in the UK.

This represents JM’s 7th operating license with a plant capacity greater than 5500 mtpd in China, and the first JM methanol project to use Chinese fabricated radial steam raising converters and compressors throughout. The JM designed methanol production plant takes syngas as a feed and combines advanced JM catalysts to produce stabilized methanol as a product, which is used to produce olefins in a downstream unit.

The contract for the new plant was awarded to JM by Ningxia Baofeng Energy Group in 2017 and included a license for the 2200 kta methanol synthesis flowsheet, associated engineering, technical review, commissioning assistance and catalyst. It is the second JM methanol design licensed by Ningxia Baofeng Energy following the Baofeng methanol synthesis unit commissioned in 2014. It demonstrates JM’s continued technical leadership in this key growth market and its dedication to the highest quality and standards.

“This project has incorporated processing technologies from the most advanced international and domestic coal to chemical units”, said Mr. Liu Yuanguan, President of Baofeng Energy, “the unit is the largest methanol plant for a single train with comprehensive advantages of high synthesis and energy efficiency and low OPEX and emissions, benefiting both our society and providing long term value.”

“We congratulate Ningxia Baofeng Energy Group on the successful start-up of this new ground-breaking methanol plant and are honoured to have been a part of this shared effort”, said John Gordon, Managing Director for Johnson Matthey, “commissioning the unit during these unprecedented times speaks to the resilience and dedication of our teams. This a further testament to Johnson Matthey’s commitment and leadership in delivery of efficient large-scale methanol manufacturing.

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Johnson Matthey is a global leader in science that enables a cleaner and healthier world. With over 200 years of sustained commitment to innovation and technological breakthroughs, we improve the performance, function and safety of our customers’ products. Our science has a global impact in areas such as low emission transport, pharmaceuticals, chemical processing and making the most efficient use of the planet’s natural resources. Today more than 14,000 Johnson Matthey professionals collaborate with our network of customers and partners to make a real difference to the world around us. For more information, visit www.matthey.com

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Ningxia Baofeng Energy was founded in 2005, which is the largest coal to olefin private enterprise to date in China. Baofeng Energy’s stock is listed on the Shanghai Stock Exchange under stock code SH.600989. The company’s production base is located in the national energy & chemical base – Ningdong Energy & Chemical Base in the northwest China and relies on China’s energy deployment, which is ‘Rich in coal and poor in oil and gas’. The plants are taking full advantage of local coal resources to build a product chain of ‘coal – coke – methanol – olefins – fine chemicals’ in the Ningdong chemical complex of 14,000 acres. The complex is now producing 1,200 kt/a of poly-olefins, 4,000 kt/a of methanol, 4,000 kt/a coking and 780 kt/a of fine chemicals, which is the leading enterprise of the most integrated, environmentally friendly coal-based material industry. Baofeng will be focusing on poly-olefins and incorporating novel energy with the modern coal chemical industry while pioneering the improvement of modern coal chemical.

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