

煤制烯烃 技术经济研讨会

Coal to Olefins 2009

2009.9.3-4

中国 北京 希尔顿逸林酒店
Doubletree by Hilton Beijing China



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Background

According to China Petroleum & Chemical Industry Association (CPCIA), China produced 179 Mt crude oil and 10.26Mt of ethylene in 2008. On the other hand, based on China Custom statistics, China imported 218Mt of oil products and nearly 10Mt of ethylene equivalence in the same period. In other words, China's dependence on foreign oil and ethylene was over or approaching 50% respectively. As predicted by CPCIA, China's ethylene capacity growth rate will be around 4.9% (2011-2016) and 5.6% (2016-2021). Even then, domestic produced ethylene still can not to meet the downstream demand and the self-sufficiency.

To replace oil by coal in light olefins production is one of the important paths to realize China's "coal instead of oil"- based energy strategy and to ensure the energy security. Huge demand on olefins, price margin of coal, and shortage of oil supply make coal-to-olefins (CTO) projects of great marketing competitiveness. A whole CTO process consists of four key technologies namely coal gasification, syngas cleaning, methanol synthesis and methanol to olefins (MTO), the former three are quite developed and proven by commercial practice, while MTO process is also being well demonstrated and ready for application in industrial projects.

In Feb 2009, Shenhua Baotou 1.8Mt/a coal-based methanol to 600kt/a olefins project was listed in China's Petrochemical Stimulation Package. This project and another two CTO units, by Datang

Duolun and Shenhua Ningxia Coal respectively, are expected to start up in 2009 and 2010 successively.

CTO has also attracted investment from multinational petrochemical companies. For instances, Feasibility Study for a CTO project located in Yulin, Shaanxi and proposed jointly by Dow Chemical and Shenhua will be completed in this year, and Total has announced to be a long-term partner in Chinese coal based polyolefin industry. China CTO industry is emerging on the horizon.

The **COAL-TO-OLEFINS Conference** will be held in Sep. 2009 in Beijing with the topics of: trend of China's policy on CTO industry, future market balance of ethylene & propylene, economic competitiveness of CTO projects, updates of constructing & planning projects, development & application of commercial processes, and advanced technologies of olefin separation and polymerization etc.

Delegates

- Coal Chemical & Petrochemical Companies
- Coal to Olefins Investors
- Methanol & Polyolefin Traders, Distributors & Logistics Providers
- Technologies, Catalysts & Equipments Providers
- Industry Organization and Research Institute
- Government and Local Development Zone

Topics

- Supply And Demand of Light Olefins in Mid-East, China & rest of Asia
- Industrial Policy of Coal to Methanol/Olefins in China
- Technologies & Economics of Oil/Natural Gas/Coal based Olefins
- Coal to Olefins Investment Plan of Multinationals
- Updates of Ongoing Coal-to-Olefins Projects in China
- Projects of Coal based Methanol and Methanol to Olefins
- Methanol to Olefins Technologies & Industrialization
- Technologies of Gasification, Methanol Synthesis and Olefins Separation
- Polyolefin Technology and Plant Operation
- Environmental Impacts & Solutions of Coal to Olefins

Preliminary Agenda

Sep. 2, 2009 12:00~22:00	Wednesday Pre-conference Registration
Sep. 3, 2009 09:00~12:30	Thursday Speech
12:30~14:00	Networking Lunch
14:00~17:30	Speech
18:30~20:00	Banquet
Sep. 4, 2009 09:00~12:30	Friday Speech
12:30~14:00	Networking Lunch
14:00	Close of the Conference

Preliminary Conference Highlights

Please visit www.chinacoalchem.com/events/2009CTO/ for updates
For registration, please contact: [Lex @ chemweekly.com](mailto:Lex@chemweekly.com)

Updates of China State Policy on CoalChemical & CTO Industries

NDRC / MIIT

Under the current economic conditions and domestic market, would China government make adjustments in state industry policy and coal chemical industry?

Long-Term Partnership with Chinese Coal based Polyolefin

Total

TOTAL believes to develop CTO and downstream projects in China is challenging but of bright foreground, and in line with the Great Exploitation of West China. Total/UOP possesses a series of advanced technologies in the field of olefin processing.

Analysis on Economics & Competitiveness of Olefins production

EDRI, Sinopec Group

China imported 11Mt and 5Mt of ethylene and propylene equivalences respectively in 2007. In spite of rapid growth of domestic capacity, the nation still suffers from a great shortage of light olefins supply. Where is the position of coal-based olefin product in future market and in economic and technical competition with olefin products imported from Middle East and produced from petrochemical sector?

Updates in CTO Project Construction

Shenhua Baotou / Shenhua Ningmei / Datang

Shenhua Baotou coal-based 1.8Mt/a methanol to 600kt/a olefins project has been listed in China's petrochemical industry stimulation package. The project, now under construction, is expected to be commissioned by the end of 2010. Construction of other two units, by Shenhua Ningxia Coal in Ningdong Base and by Datang in Duolun, will be completed in near future.

Update of Methanol-to-Olefins in Europe

Total/UOP

The Total & UOP set up the Feluy demonstration plant which combines the Methanol-to-Olefins (MTO) process developed by UOP/Hydro and the Olefin Cracking Process (OCP) developed jointly by Total and UOP. Combined use of

the two processes connected downstream to a polymerization demonstration unit makes the Feluy unit a world first, and of course more competitive.

MTP Process Development & Applications

Lurgi/Anhui Huaihua / Tsinghua University

As a well established supplier of process solutions, Lurgi commands a whole package of processes in CTO field, from methanol synthesis, and methanol-to-propylene (MTP). Anhui Huaihua and Tsinghua University jointly development the SMTP process based on Fluid Bed.

MTO Process & Industrialization

DICP, CAS/CHIA TAI ENERGY / Lummus/Sinopec Luoyang Engineering

DMTO process developed by DICP has been employed in Shenhua Baotou CTO project to be started up in 2010. In addition, Xinxing Corp has reached a cooperation agreement with LUMMUS on the licensing and advancement in international market.

Outlook of Methanol / Olefins Chain

National Petroleum & Chemical Planning Institute

Application of methanol based olefins including PE, EO, ethylene glycol, SM, PP, acrylonitrile, acrylic acid, propylene oxide.

Operation of Ethylene Cracker & Polyolefin Plants

Sinopec

Although so far no commercial plant of MTO process is in operation, polyolefin plants have been operated for decades on the feed of naphtha-based olefins, and well proven in process flow and related technologies. Operation optimization is critical to the productivity & energy efficiency of polyolefin plants.

Coal Gasification Technologies

GE /GSP/ SHELL /E-GAS/Choren/ ECUST / SES

Coal Gasification is Key Technology on Syngas Production, which is the base of Coal-to-Olefins. The major coal gasification technology providers include GE, Shell, GSP, Lurgi, BGL, E-Gas, U-Gas and ECUST.