



TNCHE Asia 2024 Conference
" Decarbonization, AI and Digital Transformation
for Sustainability in Process Industries "
Presenter's Biodata & Abstract



Full Name : Banthapatra Dhimakorn / Dilok Kumyoo
Company/ Organization : Dorf Ketal Chemicals PTE Ltd.
Current Position : Area Manager- Thailand / Technical Specialist
Title of Presentation : Enhancing Hydrocarbon Value Chains: Maximizing Margins and Energy Efficiency with Cutting-Edge Innovation



Presentation Abstract:

The Refining and Petrochemical industries are undergoing structural transformations driven by geopolitical uncertainties, evolving energy policies, and shifting demand patterns. As Southeast Asia remains a net importer of crude oil and refined products, the region faces increasing challenges from supply volatility, price fluctuations, and the pressures of energy transition. To enhance energy security and maintain competitive margins, strategic investments in capacity expansion, supply diversification, and feedstock flexibility have become critical. **Advancements in processing efficiency, the integration of alternative feedstocks, and the adoption of emerging technologies will play a pivotal role in strengthening operational resilience and sustainability.**

Dorf Ketal's cutting-edge chemical treatment solutions empower refiners to maximize profitability through Opportunity Crude processing while maintaining equipment and production reliability. At the core of its Refinery Solutions is the **Crude Management Program (CMP®)**, a cutting-edge system designed to enhance refinery desalters, crude preheat units, CDU columns, and overhead systems. Through proprietary chemical technologies and precision monitoring tools, **Dorf Ketal's CMP®** improves oil/water and filterable solid separation (<20 µm), mitigates fouling, and enhances crude compatibility modeling. By optimizing preheat train exchanger efficiency, refiners can process discounted crudes with confidence, maximizing margins without compromising performance. Supporting 5 out of 6 refinery sites in Thailand and a significant share of global refining capacity, Dorf Ketal has established itself as a leader in discounted crude processing treatment optimization.

In Petrochemical Olefin's Plant operations, Dorf Ketal's innovative solutions drive energy efficiency and sustainable performance, extending Olefin Plant reliability beyond 6 years. Its advanced treatment programs enhance quench tower, ethane saturator, and DSG performance while improving oil/water separation and heat recovery. Multifunctional antifoulants and polymer inhibitors reduce fouling and maintenance costs in compressor and light-end units, while ACTIFY® technology ensures superior stability in butadiene monomer purification.



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Additionally for energy efficiency project, the company's Drag Reducer Agent (DRA) technology optimizes energy use by increasing pipeline capacity and reducing system pressure.

With a strong focus on sustainability, Dorf Ketal develops innovative, low-carbon-intensity chemical solutions, reducing dependency on traditional stabilizers such as DNBP/TBC while optimizing chemical dosage for operational excellence. Through a robust return-on-investment model, refiners and petrochemical producers can quantify energy savings and operational benefits, positioning themselves for long-term success in an increasingly complex and competitive landscape.