

Aspects of Petrochemistry in a fuels refinery

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Even though renewable resources are getting more important, classical value chains for petrochemical products nowadays usually start with intermediates or streams from petroleum refining.

Classical links between refinery and petrochemical downstream operations are light naphtha, C₂-C₄-Olefins and various aromatic compounds. Additionally long chain paraffines from dewaxing or even heavy residues can be interesting starting materials for petrochemistry.

This presentation discusses the potential of these links between refining and petrochemistry as well as their impact on refinery operation.

Depending on the plant complexity, crude or intermediates availability, logistics, and market demands, refinery operation can either be optimized for fuels or petrochemicals production. MiRO is a fully complex refinery with high conversion capacity. Today's process inventory of MiRO is optimized for fuels production which makes MiRO Germany's largest fuels refinery.

Continuous changes in market demand, regulatory framework, and product specifications result in a continuous need for optimization. Starting with an overview of the process inventory the second part of this presentation will discuss the role of petrochemical intermediates for various product pools at MiRO. Exemplified by light olefins past developments as well as some options for future development of petrochemical operations will be presented.