Abstract
Process Economics Program Report 267
PROPYLENE PRODUCTION
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Propylene has traditionally been recovered as by-products of petroleum and petrochemical operations. On-purpose production of propylene has become more attractive as less costly supplies from traditional sources become inadequate to meet projected demand. This report covers two on-purpose propylene production technologies and economics - UOP licensed Oleflex propane dehydrogenation process and KBR licensed Superflex process - and examines the driving forces behind these on-purpose technologies.

For propylene production from propane, the primary economic incentive increases with increasing price differential between the feed and the product. Catalytic processes such as Superflex that convert low value hydrocarbon streams with a high degree of selectivity to propylene are likely to find a reasonable market in business and economic environments that cannot justify a grass roots steam cracker or where FCC naphtha is in surplus relative to the needs of the refinery’s gasoline pool.

Supply/demand balances for propylene are also included. This report provides chemical producers and refiners an update on propane dehydrogenation and other on-purpose propylene production technologies, economics, and market dynamics to identify future opportunities.
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PROPYLENE PRODUCTION

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