

ExxonMobil's state-of-the-art processes for toluene disproportionation

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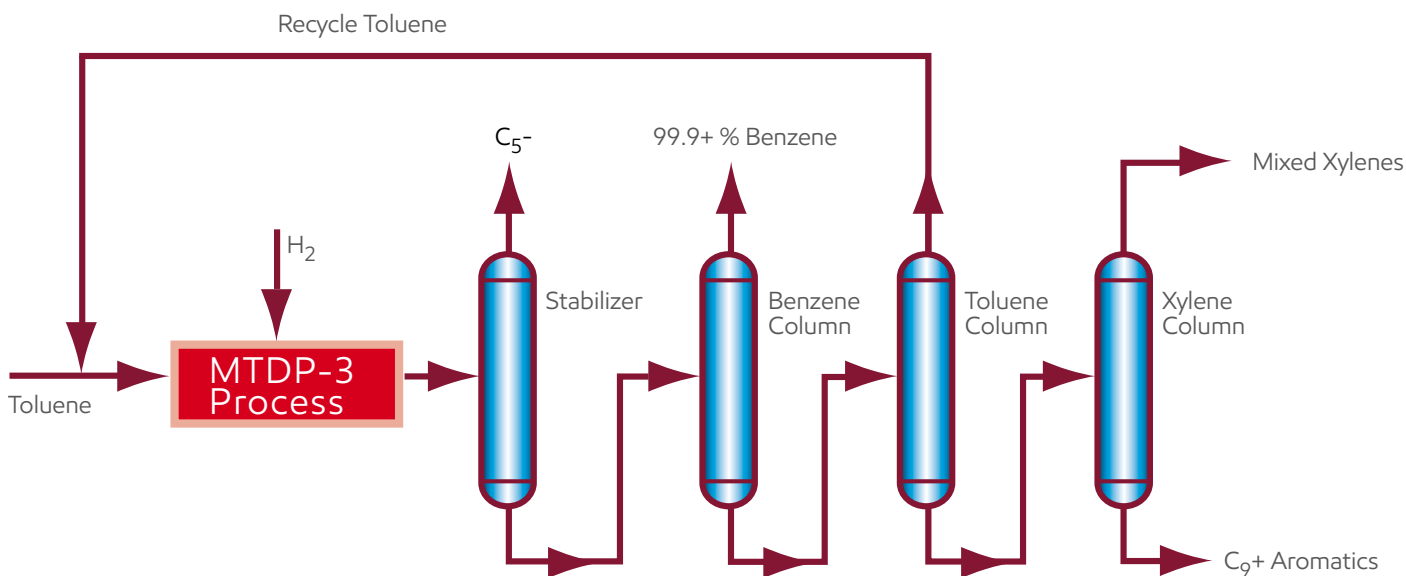


ExxonMobil's MTDP-3 process is the state-of-the-art process for toluene disproportionation to benzene and mixed xylenes. The technology, based on a proprietary zeolite catalyst, offers high product yields at high toluene conversion. MTDP-3 is ideal for toluene upgrade to more valuable chemicals without investing in paraxylene separation facilities. Benzene product exceeds 99.9% purity, thus additional extraction capacity is not required. MTDP-3 has been operated commercially at multiple Licensees sites for more than 20 years.

Advantages:

- Very high toluene conversion per pass
- High benzene product and mixed xylenes product yields
- High weight hourly space velocity
- Superior xylenes/benzene ratio
- Benzene product with greater than 99.9% purity
- Very low H₂ consumption
- Low catalyst cost
- Low operating cost
- Long catalyst cycles with stable product yields across the cycle

Figure 1: Process Flow Diagram



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L0617-036E49

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