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Session III: Process Intensification

Sulphonation of aromatics with sulphur trioxide

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Mr. De holds an M. Tech. in Chemical Engineering from IIT Bombay and is currently General Manager (Technology and Operations) of Atul Aromatics at Ankleshwar. During his 23 year professional career he has been actively involved in implementation of various projects, technology transfer and process intensification work. He has played a key role in improvement of atom efficiency of various manufacturing processes of Atul Aromatics that has made the Aromatics Business a truly global leader in p-cresol, p-anisaldehyde and p-anisyl alcohol. He has worked with NCL, IITs, ICT, IIP, IISc and other reputed research institutes and travelled abroad for developing technologies and exploring greener manufacturing operations. He was largely instrumental in achieving Zero Liquid Discharge (ZLD) at the Ankleshwar site.



Abstract:

Conventional techniques of sulphonation of aromatics compounds by using sulphuric acid or oleum often lead to poor yield, formation of undesired products and generation of excess sulphuric acid. Neutralization of excess acid leads to generation of waste and make the overall process inefficient and energy intensive. Sulphonation by using sulphur trioxide as the sulphonating agent gives high selectivities and yields and restricts the formation of undesired impurities. Moreover, excess free acid can be significantly reduced thereby eliminating generation of solid waste. The presentation will give an overview of this greener and more eco-friendly technology.