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Change refinery gasoline economics by breakthrough smart technologies: RHT- alkylation and RHT-iso-octene and iso-octane technology

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With the invention of RHT-Alkylation, sulfuric acid alkylation process configuration and equipment provides multiple paradigm shifts and breakthroughs in the technology but keeping same reaction chemistry. The breakthroughs reduce the Capex and Opex in region of 40 to 50% compared to conventional technology; this is not just improvements but major paradigm shift. The process uses a unique educator-mixing device, which reduce the costs and maintenance requirements on stream factor with simple equipment. The unit uses classical coalescers for separating the acid and hydrocarbon from the contactor/reactor effluent, making it a dry process that simplifies the process by reducing equipment items, corrosion and cost. Additionally major breakthrough is in absorbing the auto refrigeration vapors in reactor effluent. This reduces the requirement for compressor saving 20% Capex and 50% of power requirements and operating costs. These are major benefits to the refining industry and should be embraced by the industry to make the competitiveness of the unit. RHT-Iso-octene/iso-octane process provides major economic advantages with simple and smart configuration which enhances the yield and reduces the equipment sizes and utilities.

Biography

Amarjit Bakshi has a PhD and also Undergraduate degree in Chemical Engineering from University of Surrey, Guildford, UK. He has over 30 years' experience in Engineering/Consulting Management at senior level in Process Engineering, Technology, Business Development, Licensing, Acquisitions, Alliances and Project Management and Engineering, Operations Management and Process Engineering. He has proven leadership and vision with broader perspectives and is able to manage multiple tasks and personnel on mega projects. For last 7 years, he has been consulting in upstream, midstream, transfer of oil/gas by pumping, petrochemicals with NOC's, major oil and petrochemical corporations including management consulting organizations like BCG, Bain Consulting group and so many other organizations. He has been providing consulting in operations, training of facilities engineering, technology, catalysts, acquisitions, alliances, operations and corrosion in most of oil and gas industry areas.

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