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Gasoline Production Enhancement: Bench blend analysis using tertiary amyl methyl ether (TAME) – Case Study

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Operating local Kingdom refineries to yield maximum gasoline production has always been a strategic approach to efficiently supply the gasoline network at minimum possible cost. Thus, with the rapid increase of automobile users the gasoline demand has increased significantly, therefore it is vital to sustain maximum gasoline production supply especially during Berth limitations, MTBE supply shortages, importation interruptions, etc.

This paper highlights a new gasoline blending strategy which considers an alternative octane booster supply for gasoline blending namely Tertiary Amyl Methyl Ether (TAME). A bench blend study was conducted at Ras Tanura Refinery Lab and the preliminary results indicated the feasibility of the blend and an opportunity to upgrade the light component streams to minimize Gasoline Reid Vapor Pressure (RVP) giveaway.

The benefits associated with adequate TAME blending results in upgrading the light components in the gasoline pool, minimizing export Naphtha and avoid 3MBD of gasoline production loss for every 1MBD of MTBE deficit which translates into an estimated cost saving of \$2.5MM/year.

Biography

Mohammed S Alduhaimi is a chemical engineer graduated from University of Surrey in the United Kingdom. He joined Saudi Aramco in November 2015 and worked as a process engineer at Ras Tanura Refinery and then joined Refinery's Manufacturing Planning & Economics Unit. Mohammed is currently working in SA Oil Supply Planning & Scheduling Department and his main function is to engineer and optimize the Kingdom's East & Central refined products supply network by planning, operating and monitoring daily the integrated hydrocarbon system.

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