



Technology Fact Sheet

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Ningbo Haiyue New Material using CDA/ky[®] technology

- Owner :** Ningbo Haiyue New Material Co. Limited
- Location:** Ningbo City, Zhejiang Province, China
- Process:** Sulfuric acid alkylation
- Capacity:** 600,000 metric tonnes per annum
- Production:** Alkylate
- Technology:** CDA/ky advanced low temperature sulfuric acid alkylation process
- Description:** High acid consumption has always been a characteristic of conventional sulfuric acid alkylation units, which use mechanical mixing to achieve the required contact between acid and hydrocarbon phases in their contactors. The CDA/ky process, offered by CDTECH, a part of Lummus Technology, utilizes a novel contactor that significantly improves mass transfer relative to conventional contactors, and operates at lower temperatures, which substantially improves alkylate quality and lowers acid consumption. The CDA/ky process yields a bright, clear, high-quality alkylate while consuming significantly less acid, reducing consumption by 50% or more compared to conventional technologies.
- CB&I Advantage:** The patented CDA/ky process is an advanced, low temperature sulfuric acid-catalyzed alkylation process for the production of superior quality gasoline blending stock. Similar to conventional sulfuric acid alkylation, the CDA/ky process reacts light olefin streams with iso-paraffins to produce motor fuel alkylate. The advantage of the CDA/ky process is its use of a novel contactor/reactor design that significantly increases mass transfer without the use of high horsepower mixer, yielding significant benefits.

Benefits:

FEATURES	BENEFITS
Smaller footprint and absence of effluent fresh acid or caustic water wash equipment	Lower capital costs
Lower fresh sulfuric acid requirements and regeneration costs	30 – 50% reduced acid consumption
Non-mechanical reaction system	Lower operating costs
Higher finished alkylate octane of typically 1.0 (R+M)/2	Higher quality gasoline blend stock

About Ningbo Haiyue

Ningbo Haiyue New Material Company Limited is a petrochemical company located in Ningbo, Zhejiang Province, China. Their controlling share is held by Zhejiang Haiyue Co. Ltd. which is listed in Shanghai Stock Exchange (stock code 600387).

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