# LNG2023 Abstract

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**PAPER TITLE: First Installation of Durasorb™ Cryo-HRU to Address Heavy Hydrocarbon Freezing at Elba Island LNG Facility.**

**Abstract (250 words): Coldbox freezing by heavy hydrocarbons (HHCs) causing reduced LNG throughput is a known problem in the industry. This challenge is particularly acute in the US, where LNG facilities are fed by lean pipeline gas. To address this problem, and restore maximum throughput to LNG facilities, BASF has proposed an adsorbent solution for the removal of HHCs from lean gas.**

**BASF, working with the Kinder Morgan on the Elba Island LNG facility, has successfully eliminated deriming events without increasing operational complexity in the plant. In this mid-scale US LNG facility, molecular sieves were removed from the dehydration unit and replaced with Durasorb products. After simple change out of adsorbent materials and minor modifications to cycle times, the two trains running Durasorb are removing water to LNG specifications and heavy hydrocarbons (C8+, BTX) to levels that do not cause freezing. The removal of HHCs in the adsorption section has resulted in steady pressure drop (dp) readings in the cold section. The performance of these trains contrasts with the other trains running at the facility with standard molecular sieve materials, where pressure drop in the cold section increases over time, until a deriming event is required, which reduces LNG throughput.**

**This paper will describe plant operations before and after the implementation of Durasorb Cryo-HRU technology. Plant data showing dp trends, GC analysis of treated gas, and cycle time effects on breakthrough will be presented.**