

This abstract will be presented during LNG2023 conference on 10-13 July in Vancouver, Canada among many other innovative projects, ideas and outlooks. LNG2023 will provide a unique platform for the global LNG industry and key stakeholders to discuss, debate, and showcase the latest industry developments and opportunities.



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ASSET RISK REDUCTION THROUGH COMPREHENSIVE APPROACH FOR BRAZED ALUMINIUM HEAT EXCHANGERS (BAHXs) COVERING CORE AND TRANSITION-JOINTS INTEGRITY CONCERNS.

In gas processing industry, Brazed Aluminium Heat Exchangers (BAHXs) are preferred heat transfer equipments out of their footprint advantage and ability to handle multiple process streams. These equipments also demand high degree of attention during their fabrication, storage, and operation. Over the years, Qatargas has experienced failures of certain BAHX cores and transition joints. Qatargas has gained experience to monitor plant behaviour that often leads to thermal fatigues of BAHX cores. Qatargas has also established detailed mechanism of certain transition joint failures due to Aluminium sensitization and subsequent stress corrosion cracking. Qatargas has leveraged on a comprehensive approach to address such challenges while embarking on a risk-based approach. Efforts have been made to delve deeper into failure modes of BAHXs (core and transition joints) and implement mitigations to effectively manage lifecycle of these equipment's avoiding process safety concerns. This comprehensive action plan involved range of activities viz. root cause identification, detailed metallurgical analyses of transition joints, standardisation of process monitoring, prioritization of maintenance campaigns for BAHX fleet, and implement multi-disciplinary recommendations. Failure mode established against BAHX transition joint failure has further enriched metallurgical knowledge available with Qatargas & BAHX OEMs. Company has further bolstered response and recovery plans against certain BAHX core failures by implementing precisely targeted equipment bypasses. Qatargas has also adopted a further advanced approach to classify operational impacts on BAHXs through steady state and transient state operating scenarios. With ongoing actions, Qatargas looks forward for better resilience against concerns related to process safety and unplanned production downtime.

To view the full conference agenda, visit <https://www.lng2023.org/lng-programme-overview>