Expro Excellence

Mercury removal at gas processing facility

Production solutions

Customer challenges

- Expro was approached by our customer to engineer, design, and deliver our Mercury Removal Unit (ExHg) on a Lease, Operate and Maintain (LOM) basis in a remote area of North Africa to remove the mercury contaminant from the flowing gas stream
- Expro was to provide a high pressure (90 barg design) Mercury Removal Unit to be installed within the existing onshore gas facility to allow the client to maximise the facility's capacity and to bring more than twenty-seven mercury containing wells online
- Mercury is hazardous to people and highly corrosive to equipment containing aluminium. In this case, the Customers Central Production Facility (CPF) has a Turbo Expander that was required to be offline to mitigate damage from the well(s) stream contaminant
- Removal of mercury at the source, reduces risk of leakage into the environment, buildup in condensate streams and the associated gas pipelines and the potential of catalyst damage within the receiving refineries

Expro Excellence

- Expro's modularised Mercury Removal System (ExHg) would be integrated into the existing facilities with the minimum disruption to the CPF's production. The client was looking for a hands-off approach for the design, installation, operation, and maintenance
- Expro was selected as a trusted partner to deliver a fit for purpose system with limited oversight from them. Expro mobilised technical experts from their Production Systems Middle East North Africa offices prior to award to conduct a detailed review of the challenge and undertook an integration study to ensure the package could be self contained to mitigate downtime during installation and commissioning and to utilise and easily connect to the existing CPF utilities and controls
- Expro reviewed the most suitable scavenging media and systems available and then engaged a market leader in mercury removal absorbent and integrated the media design into Expro's modularised package
- Expro also performed both the civil and mechanical design to allow the installation to be incorporated into the existing facilities

Value to the client

- By allowing mercury producing wells to be safely produced and the contaminant removed at surface, the gas production increased by more than 20%
- The percentage increase is a significant increase in millions of standard cubic feet per day terms
- The Central Production Facilities were able to operate as originally designed including the utilisation of the Turbo Expander. The client selected a Lease, Operate and Maintain option, with the intent to produce from the high mercury wells for up to five years without replacing the mercury removal media
- Following the success of one ExHg package, Expro have now installed a second ExHg package for the same client
- Expro received a number of new enquiries from customers based on the success of this project

"This was a remarkable achievement, with significant trust shown by our client in allowing Expro to turnkey the design, build and installation of the ExHg system on a fast track basis while achieving an environmental and facility integrity solution."

Guillaume Larnicol
Vice President - Production

Environment

Contact

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