Expro Excellence

Expro's rapid deployment of mercury analytical package prevents production shut down

Fluids

Objectives and background

- Expro's customer had noticed a sudden increase in the mercury concentration in the gas downstream of their mercury removal system, which raised significant concerns over the effect on the aluminium heat exchangers in their liquefaction process, which are particularly susceptible to mercury corrosion and liquid metal embrittlement
- In order to avoid cutting back or shutting in production, the operator requested urgent external analysis to confirm the levels they had measured in house, and to carry out an in-depth investigation to pinpoint the source of the elevated mercury levels

Expro Excellence

- Expro's technical centre in Haugesund were able to mobilise the analytical package within a few hours' notice and our specialist chemists flew out on the same day
- Expro provides an onsite survey, sampling and mercury content analysis of gas, condensate and LPG from various points across the plant
- Expro's specialists collected and analysed over 800 samples from 50 different sample points, far exceeding the capacity of the clients own capabilities
- Expro have a large number of mercury analytical packages based in Expro and client facilities around the world, which can be deployed in any location, operated by our team of expert chemists at short notice
- Each of our packages is self-sufficient and they can be run from very basic facilities

Value to the client

- Despite this occurring during the April 2020 global COVID-19 lockdown, Expro was able to mobilise two chemists with portable analytical equipment to arrive at their site, over 1500km away, within 24 hours of the initial enquiry
- The first samples were collected and data was reported within 36 hours of the initial request being made. Two additional specialists were subsequently mobilised to the site to provide 24 hour sampling and data generation
- The rapid availability of data allowed the customer to make informed decisions about their process, and defer shut down of production, which is estimated to be nearly 16 million cubic meters of LNG per day
- After the initial survey around the mercury removal unit, Expro's specialists carried out an in depth investigative sampling and analysis programme, which established the distribution pattern of mercury in the various hydrocarbon and process streams
- This enabled the customer to carry out modelling work to identify significant contributors to the increased mercury concentration and assess different scenarios for reducing the mercury reaching their liquefaction system, whilst maintaining production

Fast track

Insightful

Contact

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