PROBE OIL TOOLS

CHOKE MANIFOLD REFURBISHMENT & RECERTIFICATION

The problem

When a client contacted Probe requesting a complete full visual and dimensional check on a choke manifold system they owned, from experience the Probe team knew this system would require a complete strip down of all component parts, followed by an inspection, and repair/replacement of those parts as required.

During the inspection process, it was confirmed that a vast amount of the sealing areas had corrosion/surface pitting and the actual valve seats also showed signs of pitting and corrosion. This was causing leak paths past the valves when closed.

The solution

Prior to starting the refurbishment of the choke manifold, a detailed inspection report was formulated and submitted to the client for review. Even though recommendations on how to get the equipment back into service included manufacturing new component parts, we agreed with our client that we would refurbish most of the damaged components of the choke manifold as we felt it was both achievable and the most cost-effective way to resolve the leakage paths. This also aided the customers operational deadlines without compromising on the quality.

Once the choke manifold and refurbished component parts had been re-assembled, a final pressure test to the system was completed. This included bidirectional pressure testing on each valve to ensure its integrity. Recertification was subsequently completed by a third party vendor.

Steven Blake, Operations Manager, Probe, said, "All the sealing surfaces were rough machined to oversize allowing an Inconel inlay to be installed over the sealing area. Once this operation was completed, the welded inlay was machined back to the specification required for the sealing face ensuring that they still met with the required manufacturing tolerances. The internal areas were then inlaid with Inconel to help prevent further corrosion.

"There was a requirement for Probe to remanufacture the choke manifold valve seats and sealing rods as we needed to ensure that the valve integrity could be achieved during operations. Having to manufacture these items separately did not compromise the project timetable. Once all refurbished and new components were made, the manifold was revalidated with third party certification and pressure tested to the required test pressure. The specification was in accordance with API 6A (20th Edition, NACE MR-01-75) and the customers' requirements."

The result

Probe provided a full in-house inspection, recommendations, refurbishment, machining and testing service for our client's choke manifold. All components were fully recertified to the specified requirements and the final product was supplied painted to the client's design expectations and requirements.

"Probe's vast experience of this type of work proved invaluable in revitalising our system with a solution that was both of high quality and will optimise the choke manifold's productivity and performance. Their team provided a seamless service and responsive approach and we are very happy with the result."