

CASE STUDY

INPEX AGRU ABSORBER HYDROCARBON ENRICHED ATMOSPHERE RDVI INSPECTION

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INTRODUCTION

The Acid Gas Removal Unit (AGRU) Absorber on a client site was suspected to have sustained mechanical damage on the Solvent Inlet manifold, potentially affecting performance. A video inspection was required to confirm the condition, prompting a full shutdown of Train 2. The main challenge was conducting the inspection in a vessel that was not hydrocarbon-free using non-intrinsically safe equipment, as no suitable IS/EX-rated devices were available. Compounding the complexity, Vertech had only two days to mobilise.

PROCESS

Vertech collaborated with the client's process engineers to define scope and access points. Rather than using a large 700NB flange as initially proposed, Vertech recommended safer access through two DN150 nozzles to reduce hydrocarbon exposure. A bespoke inspection flange was designed and fabricated, incorporating nitrogen purge capability and a gas-tight gland for inserting an 8mm videoscope. After successfully depressurising the vessel and setting up the manifold, controlled internal video inspection was conducted at three critical locations in line with a robust inspection procedure developed and approved by the client.

OUTCOME

The inspection was successfully executed under challenging conditions without compromising safety. The custom flange system allowed for secure access while maintaining positive pressure, eliminating the risk of hydrocarbon release or oxygen ingress. Vertech's swift mobilisation, engineering capability, and collaboration with the client ensured that the urgent inspection was completed efficiently, enabling informed decisions on the AGRU absorber's condition.

