



CASE STUDY

CRA FLANGE WELDS

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1. INTRODUCTION

A client required an ROV deployed inspection of 10" pipe to flange CRA (corrosion resistant alloy) welds for possible corrosion and cracking from the bore.



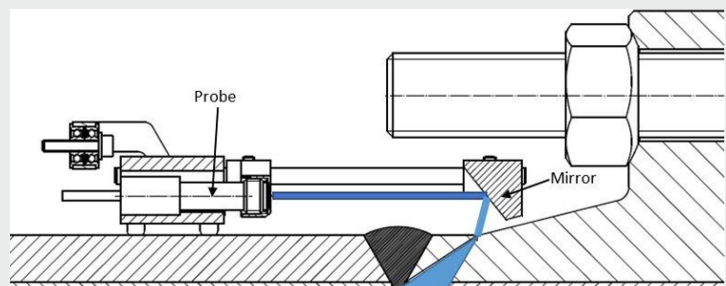
2. CHALLENGES

The pipe systems for inspection were at 500m water depth and the access to the welds was restricted by the close proximity of the flange bolts. Additionally, CRA welds often are challenging to inspect due to their scattering/attenuative grain structures.



3. INNOVATION

A multiple probe array of selected shear wave angles and TOFD was developed using novel beam emission solutions and fully validated on representative samples. A ROV-iT12 was modified to allow the inspection head to be driven outboard of the main scanner frame and gain access to both sides of the welds without any risk of fouling on the bolts.



4. OUTCOME

The complete system was validated on representative samples and successfully deployed in the field. This data provided critical information to the client and ensured continued, safe operation of the lines.

