



## CERTIFICATE OF APPROVAL

This is to certify that the following procedure has been reviewed and approved by Fearnley Procter Inc. and an NS-1™ Technical Review Committee.

**Date of Approval:** 01/7/2011

**Cert/NS-1™ Approval Number:** 0075/11-2

**Valid Until:** 30/6/2012

**Reviewed Against:** AA.03.30.00.1110 Rev. 09

**Review Number:** FPI 389

NS-1™ Quality and Inspection Requirements for New and Refurbished Drilling and Well Completion Equipment, Edition 2 – January 2006

**Product Description:** XL 66 Hardbanding

**Candidate:** XL Hardbanding & Fabrication Inc. 1478 North Derrick Road, Casper WY 82604

### FEARNLEY PROCTER NS-1™ LEVEL 2 PROCEDURE APPROVAL RE-APPLICATION OF XL 66 ONTO XL 66

**Scope:**

The procedure followed has been to compare the specific requirements of the relevant Fearnley Procter NS-1™ documentation with the submitted information, and to perform certain testing on the product.

The evaluation of the application procedures for XL 66 Hardbanding on drill pipe for re-application on itself has been performed in compliance with the general requirements and recommendations as stipulated in NS-1™ Supplementary Requirements, AA.03.30.00.1110 (Rev. 09) Section 5.0, and Sub-Specification 90.1, 90.3 and 160.

The following data was supplied and tests performed by XL Hardbanding & Fabrication Inc. to Fearnley Procter Inc. for this approval.

1) Micro Hardness test (across weld metal, HAZ plus base metal) 3) Hard Banding Adhesion Test Results 4) Welding Procedures/Guidelines 5) Inspection Guidelines 6) Acceptance/Rejection Criteria

Reference Documents: XL Hardbanding & Fabrication Inc. Hardbanding Manual: Version 2.0 Dated November 2011

As a result of the review XL 66 Hardbanding has been granted approval for re-application on itself and is listed as an NS-1™ Level 2 approved procedure and deemed suitable for service when applied as per the processes and procedures reviewed and the requirements of NS-1™.

**Approved By:**

A handwritten signature in black ink, appearing to read "Kevin Fearnley", is written over a dotted line.

**Kevin Fearnley**  
(Chairman NS-1™ Technical Review Committee)

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