

Fearnley Procter



PRODUCT APPROVAL

Shanghai BoTeng Welding Consumables Co. Ltd.

No. 1825 Luodong Road, Baoshan Industrial Zone, Shanghai, 200949, P.R.C.

This is to certify that the above company's following product has been reviewed & approved by a NS-1™ Technical Review Committee.

Fearnley Procter NS-1™ Quality and Inspection Requirements for New and Refurbished Drilling and Well Completion Equipment.

Specification	Product
NS.03.30.00.1110	BoTn 5000™ Hardbanding

SCOPE:

The procedure followed has been to compare the specific requirements of the relevant NS-1™ documentation with the submitted information, and to comment on the conformance or otherwise of the submitted information.

The evaluation of the application procedures for BoTn 5000™ Hardband on Drill Pipe has been performed in compliance with the general requirements and recommendations as stipulated in NS-1™ Supplementary Requirements, NS.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 Shanghai BoTeng for Fearnley Procter, for this approval.

1. Casing Wear Tests
2. Hardband Adhesion Tests
3. Welding Procedure/Guidelines
4. Inspection Guidelines
5. Acceptance/Rejection Criteria
6. Hardness Test Results.

REFERENCE DOCUMENTS:

Specification for New Application of BoTn 5000 Rev 1.2 April 2012.

As a result of the review the BoTn 5000 Hardband has been granted approval and is listed as an NS-1™ Level 3 approved product and deemed suitable for service when applied as per the processes and procedures reviewed and the requirements of NS-1™.

Issued By

Kevin Fearnley

Chairman NS-1™ Technical Review Committee

Review No : FP FZE 770

Certificate No : 0077/12-3

Approval Date : 1st December, 2012

Valid Till : 30th November, 2014

Registered Since : 1st December, 2011

To maintain validity during the said period the above named Company must fully comply with Fearnley Procter NS-1™ Quality and Inspection Requirements for New and Refurbished Drilling and Well Completion Equipment latest revisions. Certificates can be verified at Fearnley Procter Website www.fearnleyproctergroup.com