



Welding Standardization Procedure WSP005

Checklist for external welding work

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Revision History

Rev.	ECO	Amendment Detail	Reviewer	Approver	Effective Date
Current Revision					
L	180611-03	New Document Format and Update	J.-P. Gruening	M. Herrmann	2018-06-18
Three Previous Revisions					
H	130828-01	Update	J.-P. Gruening	J.-P. Gruening	04.09.2013
J	170104-02	Document Update	J.-P. Gruening	J.-P. Gruening	04.01.2017
K	170509-09	Added PQR documentation details	J.-P. Gruening	U. Jorek	11.05.2017

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1 Scope

This procedure is valid for Baker Hughes a GE company Drilling Services.

2 References

WSP 001	Baker Hughes welding standardization system
WSP 002	Implementation of welder performance qualifications
WSP 004	Procedure Qualification Work Flow
SRS-QA18	Welder Filler Material
SRS-QA28	Welding, Brazing and Overlay
SRS-QA31	Heat Treatment
WSP 010	Stubweld Strength
QP	ProceduresZweck

3 General

The ASME, Sect. IX, DIN EN ISO 3834-2 or DIN EN ISO 14922-2 are welding codes which are the basic guidelines for Baker Hughes welding work.

This welding standardization procedure (WSP005) document is a form to validate and approve an external welding shop with respect to welding capabilities, procedures and qualifications. This procedure must be worked through and filled out by a Baker Hughes representative in collaboration with the vendor.

The checklist in the appendix has to be filled out for each welding process/ procedure. A copy of the affected procedures must be sent to the welding engineer for filing and final approval.

The vendor procedure(s) will be published in the Baker Hughes Intranet.

The Procedure Qualification Records (PQR) results from the vendor process / procedure qualification must be equal or better than the former Baker Hughes procedure qualification results. Deviations from these instructions must be approved by the Baker Hughes welding engineer.

4 Company address:

Company Name:	<u>Nubile s.r.l.</u>
SAP Vendor #:	<u>10107477</u>
Adress:	<u>via G. D'annunzio 57</u> <u>65029 Torre dei Passeri (PE), ITALY</u>
Telephone:	<u>+39 0862 954337</u>
Contact:	<u>Emanuele Nubile</u>
e-mail:	<u>info@nubilesrl.it</u>

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5 Changes of Vendor Documents

REV	AMENDMENT DETAIL	APPROVER	DATE
1	Initial Release of MPW210-A & MPW011	J.-P. Grüning	21.11.18

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6 Committed Documentation

Following Baker Hughes (BH) manufacturing welding and hardfacing procedures have been hand over to the vendor:

Appendix	BH Document	Rev.	Name	Vendor Document	PQR Document	Date
1	MPW210	A	MPW,LASER-POWDER,ID-WELDING,F/REPAIR	WPS 02-19 ID	PQR 02-19 ID	21.11.19

Documentation filing:

Date and signature of participants

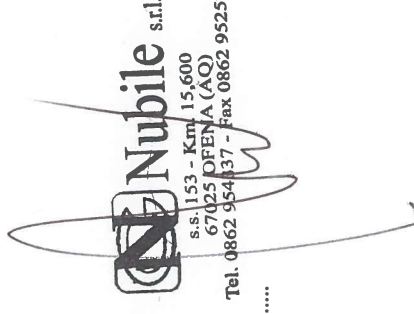
21.11.19

[Handwritten Signature]

Date / Baker Hughes a GE company

13/11/2019

Date / Vendor




Welding Standardization Procedure WSP005

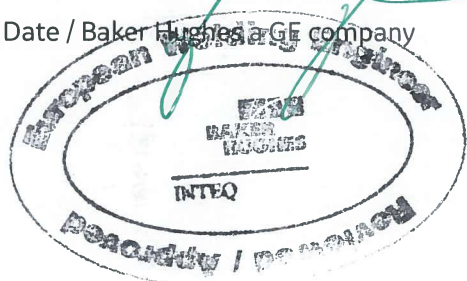
7 General instructions/ arrangements:


The qualification MPW210-A is only valid for SS03, SS07 and SS02 base materials.

Date and signature of participants

21.11.19 

Date / Baker Hughes a GE company



 **Nubile** s.r.l.
s.s. 153 - Km. 14,600
67025 OFENA (AQ)
Tel. 0862 954037 Fax 0862 95257

13/11/2018

Date / Vendor

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8 Checklist for Stubwelding / Cladding

Vendor procedure number: 02-19 ID Appendix No.: 1
Equivalent Baker Hughes procedure number: MPW210-A
Procedure Qualification Record (PQR): PQR 02-19 ID

Following points are necessary for the approval of the process:

Vendor procedure

- Exact description of the process (GTAW, GMAW, SMAW,) is available.
- Description of necessary inspection (information about min., max. values)

Vendor procedure qualification record

Certificate with following mechanical values is available:

- Tensile strength,
- Yield strength,
- Elongation,
- Impact test,
- Bend test 60° without cracks (exception cracks in the edge)
- Macro graphic examination
- ASTM A 262 Practice A test

NDT inspection certificate/s is/are available

- X- Ray for non-mag material
- Ultrasonic inspection for ferromagnetic material
- Magnetic particle testing (MT) for ferromagnetic material
- Liquid penetrant testing (PT) for non-mag material
- Hardness measurement (base material- HAZ- filler material)
- Difference probe measurement (Hot spot) and Permeability for non-mag material

Certificates are available

- Filler material
- Base material

General

- Shot peening/ hammer peening resources are available (necessary after welding on non- mag material).
- Tensile strength calculation has been done by Baker Hughes Engineering (minimum requirements).

Date and signature of participants

21.11.19 [Signature]
.....

Date / Baker Hughes Engineering

13/11/2019 [Signature]
.....
Nubile s.r.l.
s.s. 153 - Km. 15,600
67025 OFENA (AQ)
Tel. 0862 954337 - Fax 0862 95257

Date / Vendor

