



RINA



ACCREDITAMENTO ORGANISMI DI CERTIFICAZIONE E SPEDIZIONE

SGQ N° 002A - SGA N° 002D
PRD N° 002B - PRS N° 066C
SCR N° 003F - SSI N° 001G

Membro degli Accordi di Mutuo Riconoscimento EA e IAF
Signatory of EA and IAF Mutual Recognition Agreements

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

N. 09FI00132PO1/A

Manufacturer STAR DIESEL 2001 S.r.l. - JESI (AN)

WPQR No. 01/SD

Dated 12-01-2010

Manufacturer's welding procedure (WPS) No. 01SD Rev.0

Dated 16-12-2009

RANGE OF APPROVAL

Welding process 135 Type Partly mechanized
 Joint type Plates and Pipes BW ssnb-ssmb-bs/FW
 Single/Multiple pass Multiple
 Parent material group(s) 1-1 (subgroup 1.1 only) ISO/TR 15608
 with specified minimum Rs ≤ 275 Mpa
 Parent material thickness (mm) Butt Joint = 3 to 24 Fillet Joint t₁ = 6 to 14,4 t₂ = 6 to 14,4
 Throat thickness (mm) No restriction
 Weld deposit thickness (mm) 3 to 24
 Outside diameter (mm) Over 150
 Filler metal type Solid rod EN 440: G3Si1
 Shielding gas (ISO 14175) M21 with max. CO₂ % = 20 Backing gas (ISO 14175) N.A.
 Type of welding current DCEP Heat input Kj/cm Max. 23,7
 Welding position All, vertical down excluded
 Preheat min. (°C) None Interpass temp. Max. (°C) 250
 Post weld heat treatment / Ageing None
 Other information ----

Welders name SCARCIGLIA TEODORO Stamp No. ST
 Welding test conducted by STAR DIESEL 2001 S.r.l.
 Mechanical test conducted by TECNOLAB RINA IIS Laboratory test No. TEC05
 At presence of RINA Surveyor D. ERANIO

We certify that statements in this certificate are correct and that the test welds were prepared, welded and tested in accordance with the requirements of UNI EN ISO 15614-1: 2008 Standard

Issued at: GENOVA

on 16 Febbraio 2010

Signature

RINA Services S.p.A.





RINA

SINCERT

ACCREDITAMENTO ORGANISMI DI CERTIFICAZIONE E ESPERTISE

SGQ N° 002A - SGA N° 002D
PRD N° 002B - PRS N° 006C
SCR N° 003F - SSI N° 001G

Membro degli Accordi di Mutuo
Riconoscimento EA e IAF
Signatory of EA and IAF Mutual
Recognition Agreements

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)

N. 09FI00132PO2/A

Manufacturer STAR DIESEL 2001 S.r.l. - JESI (AN)

WPQR No. 02/SD

Dated 12-01-2010

Manufacturer's welding procedure (WPS) No. 02SD Rev.0

Dated 16-12-2009

RANGE OF APPROVAL

Welding process 111 Type Manual

Joint type Plates and Pipes BW ssnb-ssmb-bs/FW

Single/Multiple pass Multiple

Parent material group(s) 1-1 (subgroup 1.1 only) ISO/TR 15608
with specified minimum $R_s \leq 275$ Mpa

Parent material thickness (mm) Butt Joint = 3 to 24 Fillet Joint $t_1 = 6$ to 14,4 $t_2 = 6$ to 14,4

Throat thickness (mm) No restriction

Weld deposit thickness (mm) 3 to 24

Outside diameter (mm) Over 150

Filler metal type Covered electrode AWS A 5.1 E7016-1 *

Shielding gas (ISO 14175) N.A. Backing gas (ISO 14175) N.A.

Type of welding current DCEP Heat input KJ/cm Max. 37,5

Welding position All, vertical down excluded

Preheat min. (°C) 20 Interpass temp. Max. (°C) 250

Post weld heat treatment / Ageing None

Other information *EN classification not available at Manufacturer

Welders name SCARCIGLIA TEODORO

Stamp No. ST

Welding test conducted by STAR DIESEL 2001 S.r.l.

Mechanical test conducted by TECNOLAB RINA IIS

Laboratory test No. TEC06

At presence of RINA Surveyor D. ERANIO

We certify that statements in this certificate are correct and that the test welds were prepared, welded and tested in accordance with the requirements of UNI EN ISO 15614-1: 2008 Standard

Issued at: GENOVA

on 16 Febbraio 2010



Signature

RINA Services S.p.A.