PQR Certificate no:

RKA 2100091/1

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Welding Procedure Qualification Record (PQR)

Rules for Manufacture, Testing and certification of Materials; Lloyd's Register, July 2021

28 December 2021

Office Riieka

p WPS* number and revision

Date of welding

Test place/location shop/site

2/21 Revision 4

10 December 2021

Manufacturer's shop on address below

Manufacturer's name

PRO NASA d.o.o.

Manufacturer's address Industrijska cesta 1,

1290 Grosuplie,

Slovenia.

Base Material, Consumable and Welding Details:

Welding position

Welding process

Grade AH 36 to Grade AH 36 see Note 1)

Verticul up -Vu (PF)

See Note 2)

Plate/Pipe Thickness (mm):

Pipe outside diameter (mm):

12/--

N/A

Joint type

Shielding gas/flux flow rate

Gas composition

BW single sides without backing

18% CO2, 82% Ar

M21 (EN14175:08)/14 (root, fill and cap)l/min.

Filler material

Make/type/diameter

Composition

Solid Wire

ESAB AB/OK Aristorod 12.50 /1,2mm

See Note 3)

Flux type

N/A

Preheat and interpass temperature (method) and control

None. BM at 11,8 °C, Max. interpass 255 °C, measured by IR thermometer

Postweld heat treatment temperature (method) and control

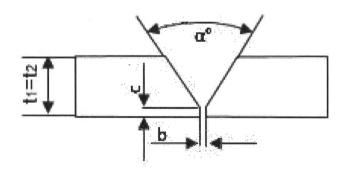
Note 3) EN ISO 14341-A (2011): weld metal: G 38 3C1 3Si1; wire electrode; G 3Si1 is LR approved consumable: DXVuO BF 3YS H15

Note 1) Base material certified to be in accordance with LR Rules for Manufacture, Testing and certification of Materials; Issue 2016

Note 2) Semi-automatic-Solid Wire/Gas shielded welding process (135 - D acc. EN4063:10), Short circuit transfer mode applied.

Test joint details (sketch with dimensions) of weld preparation

 $t_1 = t_2 = 12mm$ c=0 mmb=3-4 mm $\alpha = 60^{\circ}$



^{*}Manufacturer's Preliminary Welding Procedure Specification: 2/21 Revision 4

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Form 5209 (2021.02)