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06-006
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 SRPS ISO/IEC 17020:2012

WELDING PROCEDURE QUALIFICATION RECORD (WPQR)
KVALIFIKACIJA TEHNOLOGIJE ZAVARIVANJA

Manufacturer's Welding Procedure Specification Prethodna specifikacija tehnologije zavarivanja	ST-WPS1-111	Inspection body: Kontrolno telo:	SGS Beograd
		Reference No/ Broj izveštaja.: 50-2 0800/17	

Manufacturer : Proizvođač:	Synergy Tech d.o.o.
Address: Adresa:	Kondina 11/ 9, 11000 Beograd
Code/Testing Standard : Primenjeni standard :	SRPS EN ISO 15614-1:2008+A2:2012
Date of welding : Datum zavarivanja :	13.11.2017.

Range of Approval / Područje kvalifikacije:

Welding Process/ : Postupak zavarivanja:	111 (E / REL) acc. to EN ISO 4063
Joint Type : Tip spoja:	BW , -sl, -ss , (testing piece/ispitni uzorak); BW , -sl, -ss , FW (range of qualification/opseg kvalifikacije) Cevni priključak sa uglom $\geq 60^\circ$
Parent Metal Group(s): Grupa osnovnog materijala:	1.1 acc.to SRPS CEN ISO/TR 15608
Parent Material Thickness (mm): Debljina osnovnog materijala (mm):	2,6 (testing piece/ispitni uzorak); 1,82 - 3,38 (range of qualification/opseg kvalifikacije)
Pipe Outside Diameter (mm): Debljina osnovnog materijala (mm):	\varnothing 21,3 (testing piece/ispitni uzorak); 10,65 - 42,6 (range of qualification/opseg kvalifikacije),
Filler Material Type/Designation: Dodatni material :	EN ISO 2560-A / E38 3 C 21
Filler Metal size (mm): Prečnik dodatnog materijala (mm):	\varnothing 2,5;
Shielding Gas / Flux: Zaštitni gas/prašak :	-
Type of Welding Current: Struja za zavarivanje :	DC- ;
Heat input(kJ/mm): Unos toplote(kJ/mm):	0,51+0,61;
Welding Position: Položaj zavarivanja :	SRPS EN ISO 6947 - PH
Preheat temperature: Temperatura predgrevanja :	/
Interpass Temperature: Međuprolazna temperatura :	/
Post Weld Heat Treatment: Term.obrada posle zavarivanja	bez/ without
Other Information: Ostali podaci :	N/A

Certified that test welds prepared, welded and tested satisfactorily in accordance with the requirements of the code / testing standard indicated above.
 Potvrđuje se da je ispitani spoj pripremljen, zavaren i ispitao saglasno zahtevima gorenavedenih propisa/standarda

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 signature
 Ime i potpis:

 Date of Issue :
 Datum izdavanja:

24.11.2017

Gordan Mandić B.Sc., SRB/IWI-C /00012.

 Approved by:
 Odobrio:

Marinko Ukropina B.Sc.

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 WELDING PROCEDURE QUALIFICATION RECORD (WPQR)
 KVALIFIKACIJA TEHNOLOGIJE ZAVARIVANJA

Manufacturer's Welding Procedure Specification Prethodna specifikacija tehnologije zavarivanja	ST-WPS2-111	Inspection body: Kontrolno telo:	SGS Beograd
		Reference No/ Broj izveštaja.: 50-2 0800/17	

Manufacturer : Proizvođač:	Synergy Tech d.o.o.
Address: Adresa:	Ul. Kondina 11/9, 11000 Beograd
Code/Testing Standard : Primenjeni standard :	SRPS EN ISO 15614-1:2008+A2:2012
Date of welding : Datum zavarivanja :	13.11.2017.

Range of Approval / Područje kvalifikacije:

Welding Process/ : Postupak zavarivanja:	111(E / REL) acc. to EN ISO 4063
Joint Type : Tip spoja:	BW, -ml, -ss, (testing piece/ispitni uzorak); BW, -ml, -ss, FW (range of qualification/opseg kvalifikacije) Cevni priključak sa uglom $\geq 60^\circ$
Parent Metal Group(s): Grupa osnovnog materijala:	1.1 acc.to SRPS CEN ISO/TR 15608
Parent Material Thickness (mm): Debljina osnovnog materijala (mm):	3,2 (testing piece/ispitni uzorak); 3 - 6,4 (range of qualification/opseg kvalifikacije)
Pipe Outside Diameter (mm): Debljina osnovnog materijala (mm):	$\varnothing 48,3$ (testing piece/ispitni uzorak); ≥ 25 (range of qualification/opseg kvalifikacije),
Filler Material Type/Designation: Dodatni material :	EN ISO 2560-A / E38 3 C 21;
Filler Metal size (mm): Prečnik dodatnog materijala (mm):	$\varnothing 2,5$;
Shielding Gas / Flux: Zaštitni gas/prašak :	-
Type of Welding Current: Struja za zavarivanje :	DC- (koren); DC+(završni);
Heat input(kJ/mm): Unos toplote(kJ/mm):	0,48 \pm 0,567
Welding Position: Položaj zavarivanja :	SRPS EN ISO 6947 - PJ/ PH
Preheat temperature: Temperatura predgrevanja :	/
Interpass Temperature: Međuprolazna temperatura :	/
Post Weld Heat Treatment: Term.obrada posle zavarivanja	bez/ without
Other Information: Ostali podaci :	N/A
Certified that test welds prepared, welded and tested satisfactorily in accordance with the requirements of the code / testing standard indicated above. Potvrđuje se da je ispitani spoj pripremljen, zavaren i ispitan saglasno zahtevima gorenavedenih propisa/standarda	

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WELDING PROCEDURE QUALIFICATION RECORD (WPQR)
KVALIFIKACIJA TEHNOLOGIJE ZAVARIVANJA

Manufacturer's Welding Procedure Specification Prethodna specifikacija tehnologije zavarivanja	ST-WPS3-111	Inspection body: Kontrolno telo: Reference No/ Broj izveštaja.: 50-2 0800/17	SGS Beograd
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Manufacturer : Proizvođač:	Synergy Tech d.o.o.
Address: Adresa:	Ul. Kondina 11/9, 11000 Beograd
Code/Testing Standard : Primenjeni standard :	SRPS EN ISO 15614-1:2008+A2:2012
Date of welding : Datum zavarivanja :	13.11.2017.

Range of Approval / Područje kvalifikacije:

Welding Process/ : Postupak zavarivanja:	111(E / REL) acc. to EN ISO 4063
Joint Type : Tip spoja:	BW, - ml, -ss, (testing piece/ispitni uzorak); BW, -ml, -ss, FW (range of qualification/opseg kvalifikacije) Cevni priključak sa uglom $\geq 60^\circ$
Parent Metal Group(s): Grupa osnovnog materijala:	1.1 acc.to SRPS CEN ISO/TR 15608
Parent Material Thickness (mm): Debljina osnovnog materijala (mm):	8 (testing piece/ispitni uzorak); 3 - 16 (range of qualification/opseg kvalifikacije)
Pipe Outside Diameter (mm): Debljina osnovnog materijala (mm):	$\varnothing 114,3$ (testing piece/ispitni uzorak); $\geq 57,15$ (range of qualification/opseg kvalifikacije),
Filler Material Type/Designation: Dodatni material :	EN ISO 2560-A / E38 3 C 21;
Filler Metal size (mm): Prečnik dodatnog materijala (mm):	$\varnothing 3,25$;
Shielding Gas / Flux: Zaštitni gas/prašak :	-
Type of Welding Current: Struja za zavarivanje :	DC- (koren); DC+(završni);
Heat input(kJ/mm): Unos toplote(kJ/mm):	0,775 +0,967
Welding Position: Položaj zavarivanja :	SRPS EN ISO 6947 - PJ/ PH
Preheat temperature: Temperatura predgrevanja :	/
Interpass Temperature: Međuprolazna temperatura :	/
Post Weld Heat Treatment: Term.obrada posle zavarivanja	bez/ without
Other Information: Ostali podaci :	N/A
Certified that test welds prepared, welded and tested satisfactorily in accordance with the requirements of the code / testing standard indicated above. Potvrđuje se da je ispitani spoj pripremljen, zavaren i ispitat saglasno zahtevima gorenavedenih propisa/standarda	

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Odobrio

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SRPS ISO/IEC 17020:2012WELDING PROCEDURE QUALIFICATION RECORD (WPQR)
KVALIFIKACIJA TEHNOLOGIJE ZAVARIVANJA

Manufacturer's Welding Procedure Specification Prethodna specifikacija tehnologije zavarivanja	ST-WPS4- BW-111	Inspection body: Kontrolno telo: Reference No/ Broj izveštaja.: 50-2 0291/18	SGS Beograd
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Manufacturer : Proizvođač:	Synergy Tech d.o.o.
Address: Adresa:	Gostivarska 70 ž/1, 11000 Beograd
Code/Testing Standard : Primenjeni standard :	SRPS EN ISO 15614-1:2017
Date of welding : Datum zavarivanja :	27.04.2018.

Range of Approval / Područje kvalifikacije:

Welding Process/ : Postupak zavarivanja:	111 (E, manual welding) acc. to EN ISO 4063
Joint Type : Tip spoja:	BW, -ml, -ss -nb, (testing piece/ispitni uzorak); BW, -ml, -ss -mb, -bs, FW (range of qualification/opseg)
Parent Metal Group(s): Grupa osnovnog materijala:	1.2 acc.to SRPS CEN ISO/TR 15608 with yield point ReH ≤355MPa, S355J2+N
Parent Material Thickness (mm): Debljina osnovnog materijala (mm):	12 (testing piece/ispitni uzorak); 3 - 24 (range of qualification/opseg kvalifikacije)
Pipe Outside Diameter (mm): Spoljašnji prečnik cevi (mm):	> 500mm, for PA or PC rot. > 150mm
Filler Material Type/Designation: Dodatni material :	E42 4 B 32 H5 (EN ISO 2560);
Throat thickness (mm): Debljina zavarenog spoja (mm):	-
Filler Metal size (mm): Prečnik dodatnog materijala (mm):	Ø2,5; Ø3,25;
Shielding Gas / Flux: Zaštitni gas/prašak :	-
Type of Welding Current: Struja za zavarivanje :	DC+;
Heat input(kJ/mm): Unos toplote(kJ/mm):	0,89 + 1,54;
Welding Position: Položaj zavarivanja :	SRPS EN ISO 6947 - PA;
Preheat temperature: Temperatura predgrevanja :	/
Interpass Temperature: Međuprolazna temperatura :	/
Post Weld Heat Treatment: Term.obrada posle zavarivanja	bez/ without
Other Information: Ostali podaci :	N/A
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18.05.2018

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