Certificate N°: 186301/5637/171120-1 IND

Ref: BO 500 1495







## 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 Standar Primenjeni standard :	d:	SRPS EN ISO 15614-1:2008+A2:2012	
Date of welding : Datum zavarivanja :		13.11.2017.	
Range of Approval / P	odručje kvalifikacij	58636483636368 5755636868888888888888888888888888888888	100 C C C C C C C C C C C C C C C C C C
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 kvalifikacij Cevni priključak sa uglom ≥60°	e)
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 qual	ification/opseg kvalifikacije)
Pipe Outside Diameter (mm): Debljina osnovnog materijala (mm):		Ø 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):		ø2,5;	
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:		SOCIAL STATES OF THE STATES OF	
Interpass Temperature: Međuprolazna temperature:		AUSTRALIA SON CONTROL OF THE CONTROL OF T	
Post Weld Heat Treatment: Term.obrada posle zavarivanja		bez/ without	
Other Information: Ostali podaci:		N/A	

SGS Beograd Ltd. Jurija Gagarina 7b

11070 Belgrade

t: (381 11) 71 55 277 f: (381 11) 71 55 279 e: sgs beograd@sgs.com Name and signature Ime i potpis:

Date of Issue:
Datum izdavanja:.
24.11.2017

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

Beograd of Approved by

Marinko Ukropina B.Sc.

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Certificate N°: 186301/5638/171120-2 IND

Ref: BO 500 1495







## 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 Tec	Synergy Tech d.o.o,		
Address: Adresa:	UI. Kondina	ndina 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 kvalifikao	Dije: massas arang 🗸 🛴 🖟 💮 💮 💮		
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 ≥60°		
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):		Ø 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):		ø2,5;		
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 ÷0,567		
Welding Position: Položaj zavarivanja:		SRPS EN ISO 6947 - PJ/ PH		
Preheat temperature: Temperatura predgrevanja:		16. SGS DESIGNS MAN CAST CAST ASSESSED SECTION AND ASSESSED SECTION ASSESSED ASSESSED SECTION ASSESSED ASSES		
Interpass Temperature: Međuprolazna temperature:		SO SECRET		
Post Weld Heat Treatment: Term.obrada posle zavarivanja		bez/ without		
Other Information: Ostali podaci :		N/A		

SGS Beograd Ltd. Jurija Gagarina 7b

11070 Belgrade

t: (381 11) 71 55 277 f: (381 11) 71 55 279 e: sgs\_beograd@sgs.com Name and signature Ime i potpis

Date of Issue : Datum izdavanja:.

24.11.2017

Gordan Mandić B.Sc., SRB/IWI-C/00012.

Beograd of Approved by:

Marinko Ukropina B.Sc.

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Certificate N°: 186301/5639/171120-3 IND

Ref: BO 500 1495







## WELDING PROCEDURE QUALIFICATION RECORD (WPQR) KVALIFIKACIJA TEHNOLOGIJE ZAVARIVANJA

Manufacturer's Welding Procedure Specification Prethodna specifikacija tehnologije zavarivanja

ST-WPS3-111 Inspection body: Kontrolno telo:

SGS Beograd

Reference No/ Broj izveštaja.: 50-2 0800/17

Manufacturer:
Proizvođač:
Address:
Adresa:
UI. Kondina 11/9 , 11000 Beograd

Code/Testing Standard:
Primenjeni standard:
Date of welding:
Datum zavarivanja:

Synergy Tech d.o.o,
Synergy Tech d.o.o,
11000 Beograd

SRPS EN ISO 15614-1:2008+A2:2012

Range of Approval / Područje kvalifikac 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 ≥60°
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):	Ø 114,3 (testing piece/ispitni uzorak); ≥ 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):	ø3,25;
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:	Sec outsisses (see Section 1) and the section 1) are section 1) and the section 1) and the section 1) and the section 1) are section 1) and the section 1) and the section 1) are section 1) and the section 1) and the section 1) are section 1) and the section 1) and the section 1) are section 1) and the section 1) are section 1) and 1) are section 1) are section 1) and 1) are section 1) are section 1) and 1) are section 1) are section 1) are section 1) and 1) are section 1) are sec
Interpass Temperature: Međuprolazna temperature:	5 SQ INSIGNATION OF THE PROPERTY OF THE PROPER
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

SGS Beograd Ltd. Jurija Gagarina 7b

11070 Belgrade

t: (381 11) 71 55 277 f: (381 11) 71 55 279 e: sgs beograd@sgs.com Name and signature Inne i potpis

Date of Issue:
Datum izdavanja:.
24.11.2017

Gordan Mandić B.Sc., SRB/IWI-C/00012

GS Beograd Approved by:

Marinko Ukropina B.Sc.

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Certificate N°: 186301/5746/180510-4 IND

Ref: BO 500 1764







## WELDING PROCEDURE QUALIFICATION RECORD (WPQR) KVALIFIKACIJA TEHNOLOGIJE ZAVARIVANJA

Manufacturer's Welding Procedure Specification Prethodna specifikacija tehnologije zavarivanja

ST-WPS4-BW-111 Inspection body: Kontrolno telo:

**SGS** Beograd

Reference No/ Broj izveštaja.: 50-2 0291/18

Manufacturer : Proizvođač:	Synergy Tech	d.o.o,	
Address: Adresa:	Gostivarska 7	Gostivarska 70 ž/1 , 11000 Beograd	
Code/Testing Standard : Primenieni standard :		SRPS EN ISO 15614-1:2017	
Date of welding : Datum zavarivanja :		27.04.2018.	
Range of Approval /	Područje kvalifikac	ije: casasasas 12 km / Lucia Albania A	
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:		Lossossissississississississississississi	
Interpass Temperature: Međuprolazna temperature :			
Post Weld Heat Treatment: Term.obrada posle zavarivanja		bez/ without	
Other Information: Ostali podaci : Certified that test welds prepared, welded and		N/A	

SGS Beograd Ltd. Jurija Gagarina 7b

11070 Belgrade

t: (381 11) 71 55 277 f: (381 11) 71 55 279

e: sgs\_beograd@sgs.com

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Name and signature Ime i potpis

Date of Issue : Datum izdavanja:.

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Approved by Odobrio:

Marinko Ukropina B.Sc.



