



CYLINDER

CPUP0009

YEAR PRODUCTION

2025

S.No: 4359

Order:

4511268378/100678681





STATEMENT OF ACCORDANCE

With this statement we confirm that listed materials were built in components, manufactured at Palfinger Produktionstechnik Bulgaria EOOD in accordance with design requirements, from Palfinger Marine GmbH. for Hydrocylinder CPUP0009

Customer order: 4511268378/100678681

Master order: 306919474

Cylinder: CPUP0009

S.No.: 4359

List of components:

Component:	Material:	Thickness:	Certificate No.:	CHARGE No.:	Supplier:
CPUP0009					
HY1375A	Ste 460	D 278mm x T14mm	04-25-05940	953835	Tenaris
HD2441	S460NL2	T 50mm	760807-001	530904	Dillinger
HBS2795	StE 460N	D139,7mm x T22,2mm	E17550	R64954	TMK Artrom
CPHS0008	StE 460N	D165,1mm x T17,5mm	E17858	R65253	TMK Artrom
HBS2794A	MW 450 K	D193,7mm x T36mm	88Va21	995925	Vallourec
HK 185	S355J2	D260mm	2023018696	230602561	Beiman
HV 412	EN-GJS-100-15	D283mm x T127mm	74	07HP	Yesilyurt

Viola Filipov
Acceptance Responsible
17. 04. 2019



INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
 (UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **04-25-05940**
 Page / Pagina: **1 / 6**
 Date / Data: **October 30, 2025**

Dalmine S.p.A.
 Costa Volpino plant - Via Pio, 30
 24062 Costa Volpino (BG) - Italy
 +39 035 975 111 tel
 +39 035 971 624 fax

Customer / Cliente: PALFINGER PRODUKTIONSTECHNIK B ULGARIA EOOD	Customer's Order Item / Rifer. Ordine Cliente - Il Customer's Reference / Posizione Cliente: 1402-4511179878	Manufacturer's Works Order N° / Conferma-Posizione: 4262506/001
Manufacture Process / Processo di fabbricazione: STRESS RELIEVED	Product Type / Tipo di prodotto: COLD DRAWN SEAMLESS TUBES FOR HYDRAULIC CYLINDER	Surface / Superficie: OILED WITH PT 7/1
Standard or Specification / Nome o specifica: TRATTAMENTO TERMICO DI DISTENSIONE	TUBI SENZA SALDATURA TRAFILATI A FREDDO PER CILINDRI IDRAULICI	Ends / Estremità: OLEATI CON PT 7/1
Dimensions / Dimensioni: Ø10.945" O.D. x .551" W.T.	Steel Grade / Grado dell'Acciaio: STEEL STE 460 BKS	LISCI ALLE ESTREMITA'
250id, 278.00od, 14.00wt in mm	ACCORDING TO EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	Nominal Weight / Peso nominale: 61.3 lb/ft
	NORMA EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	91.23 Kg/m
	Length / Lunghezza: 29.528 ft ÷ 39.370 ft	
	Schedule / Scheda: 9000 mm + 12000 mm	
	Quantity / Quantità: 9Pcs/Pz	
	342"11" ft	
	21991 lb	
	9975 kg	

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes
 Avvisi di spedizione

Job Number: 0031414864 / 000020
 Shipping note: 0108019028 - 30/10/2025
 Address: BETA COMPLEX

Delivery Notes
 Avvisi di spedizione

Town: 5980 CHERVEN BRJAG
 Country: Bulgaria

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta		Specimen dimensions Dimensioni della provetta		Test temp	Y.S. OffSet 0.2% Min: 620.00 Max: --	U.T.S. Req. Min: 700.00 Max: --	Elongation / Allungamento			
			Sc	Typo	Size mm	Area mm2				Lo	Min.	Min.	Obt.
953835	W5018	1	B	AM	19.88 x 14.45	287.50	+20	MPa	745.00	5D	95.0	15.0%	17.5%

AM: As manufactured / Come fabbricato
 B: Body / Corpo
 L: Longitudinal / Longitudinale
 Lo: Initial length / Lunghezza iniziale

LS: Location of sample / Ubicazione provetta
 Max: Maximum / Massimo
 Min: Minimum / Minimo
 Obt: Obtained / Ottenuto

Ori: Orientation / Orientamento
 Req: Required / Richiesto
 Sc: Specimen condition / Condizioni Provetta
 Ss: Strip specimen / Rettangolare

U.T.S: Ultimate Tensile Strength / Rottura
 Y.S: Yield Strength / Snervamento

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not-allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non autorizzati. Qualunque alterazione, ecc. falsificazione sarà punita a norma di legge.



INSPECTION CERTIFICATE CERTIFICATO DI COLLAUDO (UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **04-25-05940**
Date / Data: **October 30, 2025**

Page / Pagina: **2 / 6**



Dalmine S.p.A.
Costa Volpino plant - Via Pio, 30
24062 Costa Volpino (BG) - Italy
+39 035 975 111 tel
+39 035 971 624 fax

Customer / Cliente: PALFINGER PRODUKTIONSTECHNIK B ULGARIA EOOD	Customer's Order Item / Rifer. Ordine Cliente - Il Customer's Reference / Posizione Cliente: 2/AVRO0668	Manufacturer's Works Order N° / Conferma-Posizione: 4262506/001
Manufacture Process / Processo di fabbricazione: STRESS RELIEVED TRATTAMENTO TERMICO DI DISTENSIONE	Product Type / Tipo di prodotto: COLD DRAWN SEAMLESS TUBES FOR HYDRAULIC CYLINDER TUBI SENZA SALDATURA TRAFILATI A FREDDO PER CILINDRI IDRAULICI	Surface / Superficie: OILED WITH PT 7/1 OLEATI CON PT 7/1
Standard or Specification / Nome o specifica: NORMA EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	Steel Grade / Grado dell'Acciaio: STEEL STE 460 BKS ACCIAIO STE 460 BKS	Ends / Estremità: SQUARE CUT LISCIALLE ESTREMITA'
Dimensions / Dimensioni: Ø10.945" O.D. x .551" W.T. 250id, 278.00od, 14.00wt in mm	Length / Lunghezza: 29.528 ft ÷ 39.370 ft 9000 mm ÷ 12000 mm	Nominal Weight / Peso nominale: 61.3 lb/ft 91.23 Kg/m
	Schedule / Scheda: 29.528 ft ÷ 39.370 ft 9000 mm ÷ 12000 mm	Quantity / Quantità: 9Pcs/Pz 21991 9975 kg

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

	Composition % / Composizione %															
	X .100							X .1000								
	C	Mn	Si	Ni	Cr	Mo	V	Cu	F1	F2	P	S	Al	Ti	Nb	N
H Max	20	170	60	80	30	10	20	70	22	---	25	20	99.000	40	50	200
H Min	---	100	---	---	---	---	---	---	200	---	---	---	20	---	---	---
P Max	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P Min	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Heat N°	18	147	20	13	11	6	13	15	15.3	325	13	2	26	1	22	80
Colata N°	953835															

F1: (Nb+Ti+V)

F2: (Al/N)

H: Heat / Colata

Max: Maximum / Massimo

Min: Minimum / Minimo

P: Product / Prodotto

IMPACT TEST / PROVA DI RESILIENZA

Type/Tip: KV2	Orientation/Direzione: L	Unit / Unità: JOULE
Position/Posizione:	Temp: 0	Unit/Unità: °C
Heat N°	Sample N°	Zone
Lot N°	Lot N°	Lot N°
Colata N°	Prova N°	Zona
953835	W5018	butside
	B	AM
	1	10 x 10.00
	2	171.0
	3	99.0
	Avg.	200.0
		157.0

AM: As manufactured / Come fabbricato

Avg: Average / Media

B: Body / Corpo

Ind. Min. Req: Individual Minimum Required /

Minimo singolo richiesto

L: Longitudinal / Longitudinale

Ls: Location of sample / Ubicazione provetta

Req. Min. Avg: Required minimum average / Minima media richiesta

Sc: Specimen condition / Condizioni Provetta

Temp: Temperature / Temperatura

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark, green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestare a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non autorizzati. Qualunque alterazione, e/o falsificazione sarà punita a norma di legge.



INSPECTION CERTIFICATE CERTIFICATO DI COLLAUDO (UNI EN 10204 3.1 / ISO 10474 3.1)



Daimine S.p.A.
Costa Volpino plant - Via Piò, 30
24062 Costa Volpino (BG) - Italy
+39 035 975 111 tel
+39 035 971 624 fax

Number / Numero: **04-25-05940**
Date / Data: **October 30, 2025**
Page / Pagina: **3 / 6**

Customer / Cliente: PALFINGER PRODUKTIONSTECHNIK B ULGARIA EOOD	Customer's Order Item / Rifer. Ordine Cliente - Il Customer's Reference / Posizione Cliente: 1402-4511179878	Manufacturer's Works Order N° / Conferma-Posizione: 4262506/001	
Manufacture Process / Processo di fabbricazione: STRESS RELIEVED	Product Type / Tipo di prodotto: COLD DRAWN SEAMLESS TUBES FOR HYDRAULIC CYLINDER	Surface / Superficie: OILED WITH PT 7/1	
TRATTAMENTO TERMICO DI DISTENSIONE	TUBI SENZA SALDATURA TRAFILATI A FREDDO PER CILINDRI IDRAULICI	Ends / Estremità: SQUARE CUT	
Standard or Specification / Norme o specifica: NORMA EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ.20043454 REV. 1.1	Steel Grade / Grado dell'Acciaio: STEEL STE 460 BKS	LISCIALLE ESTREMITA'	
Dimensions / Dimensioni: Ø10.945" O.D. x .551" W.T.	Quantity / Quantità: 9Pcs./Pz	Nominal Weight / Peso nominale: 61.3 lb/ft	
250id, 278.00od, 14.00wt in mm	Length / Lunghezza: 29.528 ft ÷ 39.370 ft	91.23 Kg/m	
	Schedule / Scheda: 9000 mm ÷ 12000 mm		

FLATTENING TEST / PROVA DI SCHIACCIAMENTO

Standard / Norma:		Sample N° / Zona		Test Frequency / Frequenza prova		Result / Esito	
Heat N° / Colata N°	Lot N° / Lotto N°	Sample N° / Prova N°	Zone / Zona	Sc	Test Frequency / Frequenza prova	Result / Esito	
953835	1	W5019	E1	PWHT	3 pipes of the lot	Good / Buono	
953835	1	W5020	E1	PWHT	3 pipes of the lot	Good / Buono	

Standard / Norma:		Sample N° / Zona		Test Frequency / Frequenza prova		Result / Esito	
Heat N° / Colata N°	Lot N° / Lotto N°	Sample N° / Prova N°	Zone / Zona	Sc	Test Frequency / Frequenza prova	Result / Esito	
953835	1	W5021	E1	PWHT	3 pipes of the lot	Good / Buono	

E1 / E2: Ends of Sampling / Estremità della provetta
PWHT: Post weld heat treatment / Trattamento dopo saldatura
Sc: Specimen condition / Condizioni Provetta

NON METALLIC INCLUSIONS LEVEL / LIVELLO DI INCLUSIONI METALLICHE

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Ls	Standard / Norma: 0 EN 10247 MET.K4		Note / Nota
				Oxides / Ossidi Type	Sulfides / Sulfuri Type	
953835	W5018	1	B	Req: -- 0.0	Req: -- 0.0	0 EN 10247 MET.K4
				Total / Total	Req: -- 0.0	

B: Body / Corpo
Ls: Location of sample / Ubicazione provetta
Req: Required / Richiesto

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.
Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestare a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non autorizzati. Qualunque alterazione e/o falsificazione sarà punita a norma di legge.



INSPECTION CERTIFICATE CERTIFICATO DI COLLAUDO (UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **04-25-05940**
Page / Pagina: **4 / 6**

Date / Data: **October 30, 2025**



Dalmine S.p.A.
Costa Volpino plant - Via Pio, 30
24062 Costa Volpino (BG) - Italy
+39 035 975 111 tel
+39 035 971 624 fax

Customer / Cliente: PALFINGER PRODUKTIONSTECHNIK B ULGARIA EOOD	Customer's Order Item / Rifer. Ordine Cliente - I: 1402-451179878	Customer's Reference / Posizione Cliente - II: 2/AVRO0668	Manufacturer's Works Order N° / Conferma-Posizione: 4262506/001
Manufacture Process / Processo di fabbricazione: STRESS RELIEVED	Product Type / Tipo di prodotto: COLD DRAWN SEAMLESS TUBES FOR HYDRAULIC CYLINDER	Surface / Superficie: OILED WITH PT 7/1	
Standard or Specification / Norme o specifica: TRATTAMENTO TERMICO DI DISTENSIONE	TUBI SENZA SALDATURA TRAFILATI A FREDDO PER CILINDRI IDRAULICI	Ends / Estremità: SQUARE CUT	
ACCORDING TO EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	Steel Grade / Grado dell'Acciaio: STEEL STE 460 BKS	LISCI ALLE ESTREMITA'	
NORMA EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	Quantity / Quantità: 9Pcs/Pz	Nominal Weight / Peso nominale: 61.3 lb/ft	
Dimensions / Dimensioni: ø10.945" O.D. x .551" W.T.	Length / Lunghezza: 34.2'11" ft	91.23 Kg/m	
250id, 278.00od, 14.00wt in mm	Schedule / Scheda: 9000 mm ÷ 39.370 ft		

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

Supplementary Information / Informazioni supplementari	
Steel melted, poured and manufactured in ITALY Continuous casting and Fully Killed	Acciaio fuso, colato e prodotto ITALIA Colaggio continuo ed acciaio di tipo calmato
Heat Pz Mt Kg 953835-001 9 104,53 9975	Colata Pz Mt Kg 953835-001 9 104,53 9975

Supplementary Information / Informazioni supplementari	
AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 015 GAUSS EDDY CURRENT HAS BEEN PERFORMED ON FULL LENGTH WITH POSITIVE RESULT ACCORDING TO ISO 10893-2 VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. Manufactured by Tenaris Dalmine - Italy NO WELD REPAIR, MERCURY AND RADIATION FREE WE HEREBY DECLARE THAT ALL PIPES HAVE BEEN SPECTROSCOPICALLY CHECKED, NO DISCREPANCY HAS BEEN FOUND. Tenaris II identification number for MTC: 51:~s0zC~	DOPO LE OPERAZIONI DI CONTROLLO, IL MATERIALE NON PRESENTA UN MAGNETISMO RESIDUO SUPERIORE A 015 GAUSS IL CONTROLLO EDDY CURRENT SU TUTTA LA LUNGHEZZA HA DATO ESITO POSITIVO IN ACCORDO ALLA ISO 10893-2 IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO ELETTRICO IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE. Fabbricato da Tenaris Dalmine - Italia NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIONI SI DICHIARA CHE TUTTI I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO DELL'ACCIAIO MEDIANTE SPETTROANALIZZATORE, DALL'ESAME NON SONO EMERSE MESCOLANZE DI MATERIALE. Numero Identificativo Tenaris II per MTC: 5:~e0zC~

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not-allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non autorizzati. Qualunque alterazione, etc. falsificazione sarà punita a norma di legge.



INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
 (UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **04-25-05940**
 Date / Data: **October 30, 2025**

Page / Pagina: **5 / 6**



Dalmine S.p.A.
 Costa Volpino plant - Via Pio, 30
 24062 Costa Volpino (BG) - Italy
 +39 035 975 111 tel
 +39 035 971 624 fax

Customer / Cliente: PALFINGER PRODUKTIONSTECHNIK B ULGARIA EOOD	Customer's Order Item / Rifer. Ordine Cliente: 1402-451179878	Customer's Reference / Posizione Cliente: 2/AVROO668	Manufacturer's Works Order N° / Conferma-Posizione: 4262506/001
Manufacture Process / Processo di fabbricazione: STRESS RELIEVED	Product Type / Tipo di prodotto: COLD DRAWN SEAMLESS TUBES FOR HYDRAULIC CYLINDER	Surface / Superficie: OILED WITH PT 7/1	
Standard or Specification / Nome o specifica: TRATTAMENTO TERMICO DI DISTENSIONE	Steel Grade / Grado dell'Acciaio: TUBI SENZA SALDATURA TRAFILATI A FREDDO PER CILINDRI IDRAULICI	Ends / Estremità: SQUARE CUT	
Standard or Specification / Nome o specifica: NORMA EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	Length / Lunghezza: 29.528 ft ÷ 39.370 ft	Nominal Weight / Peso nominale: 61.3 lb/ft	
Dimensions / Dimensioni: ø10.945" O.D. x .551" W.T.	Schedule / Schedula: 9000 mm ÷ 12000 mm	Quantity / Quantità: 21991 lb	
Dimensions / Dimensioni: 250id, 278.00od, 14.00wt in mm		9975 kg	

MARKING / MARCATURA

STENCILING	VERNICIATURA
_T PNORM 05.01.02 PART.2 REV.4 SIE 460 BKS +SR HEAT _COLATA 278.00X 250	_T PNORM 05.01.02 PART.2 REV.4 SIE 460 BKS +SR HEAT _COLATA 278.00X 250
_DATAW/SETTIMANA-ANNO DI PRODUZIONE*/	_DATAW/SETTIMANA-ANNO DI PRODUZIONE*/
LEGEND	LEGENDA
_T = TENARIS Logo	_T = Logo TENARIS
_COLATA = Heat Number	_COLATA = Numero di colata

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non autorizzati. Qualunque alterazione e/o falsificazione sarà punita a norma di legge.



INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
 (UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **04-25-05940**
 Page / Pagina: **6 / 6**

Date / Data: **October 30, 2025**



Dalmine S.p.A.
 Costa Volpino plant - Via Pio, 30
 24062 Costa Volpino (BG) - Italy
 +39 035 975 111 tel
 +39 035 971 624 fax

Customer / Cliente: PALFINGER PRODUKTIONSTECHNIK B ULGARIA EOOD	Customer's Order Item / Rifer. Ordine Cliente - If: 1402-4511179878	Customer's Reference / Posizione Cliente: 2/AVRO0668	Manufacturer's Works Order N° / Conferma-Posizione: 4262506/001
Manufacture Process / Processo di fabbricazione: STRESS RELIEVED	Product Type / Tipo di prodotto: COLD DRAWN SEAMLESS TUBES FOR HYDRAULIC CYLINDER	Surface / Superficie: OILED WITH PT 7/1	
Standard or Specification / Nome o specifica: TRATTAMENTO TERMICO DI DISTENSIONE	Steel Grade / Grado dell'Acciaio: TUBI SENZA SALDATURA TRAFILATI A FREDDO PER CILINDRI IDRAULICI	Ends / Estremità: SQUARE CUT	
Dimensions / Dimensioni: Ø10.945" O.D. x .551" W.T.	Length / Lunghezza: 29.528 ft ÷ 39.370 ft	Nominal Weight / Peso nominale: 61.3 lb/ft	
250id, 278.00od, 14.00wt in mm	Schedule / Scheda: ACCORDING TO EN 10305-1 E SPEC. PNORM 05.01.02 PART .2 REV.4 + TQ 20043454 REV. 1.1	Quantity / Quantità: 9Pcs/Pz	91.23 Kg/m

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements.
 This certificate is not a declaration of origin nor may it be used as a declaration of origin.

We, Tenaris, hereby acknowledge the restrictions as per article 3g(1) of Council Regulation (EU) No 833/2014, as amended, and confirm that our company is compliant with this legislation.
 Consequently, we, Tenaris, hereby represent and warrant that the steel products covered by this certificate, as listed in Annex XVII of Council Regulation (EU) No 833/2014 and its subsequent amendments, do not originate from Russia.
 Furthermore, we confirm that the steel products covered by this certificate, as listed in Annex XVII of Council Regulation (EU) No 833/2014 and its subsequent amendments, as required under article 3g(1)(d) (as amended) and related guidelines do not incorporate any steel or iron products as listed in the same Annex XVII originating in Russia when having been processed in a third country.
 We also acknowledge the equivalent restrictions as per Clause 17e of Norway's Russia Regulations of 15 August 2014 No. 1076 (FOR-2014-08-15-1076) and Regulations 461A and 461B of the UK Russia (Sanctions) (EU Exit) Regulations 2019, and confirm that our company is compliant with these laws as well.

CUSTOMER / THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE
INSPECTION COMPANY COMPAGNIA DISPEZIONE	 QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' MOLINARI Emealinda
	 CHIEF OF QUALITY CERTIFICATION DEPT. RESPONSABILE DELL'UFFICIO CERTIFICAZIONE QUALITA' MASTRANDREA Rocco

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.
 Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non autorizzati, alterazioni ecc. I falsificazioni saranno perseguite a norma di legge.

QM-System: Certification as per ISO 9001



Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
 INSPECTION CERTIFICATE 3.1 AS PER ISO 10474:2013
 MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./
Date of dispatch
80005174
823477-29.08.23

A08/ Manufacturer's order/
A03 Certificate No.

Sheet
1 / ...

A05 Established inspecting body
DH A06 Purchaser UNIONOCEL, PRAHA A07.1 No. 023-01463
Final receiver UNIONOCEL, PRAHA A07.2 No.

B02/ Steel design. DILLIMAX690T/S690QL

B03 Any suppl. requirements DILLINGER:20/EN-10025-6:19

B01 Product
HEAVY PLATES

A01-A99 Commercial information

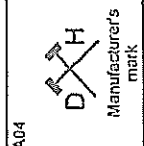
Production order No.	Item no.	Order No.	Item no.
760807	01	11702935	10
760807	02	11702935	20
760807	04	11702935	40

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Roll-plate No./ Test No.	A09 Purchaser article number
01	1	15,00	x 2000	x 12000	2826	Q+A	530905	12017-02	
02	1	18,00	x 2000	x 12000	3391	Q+A	530905	12019-01	
02	1	18,00	x 2000	x 12000	3391	Q+A	530905	12021-01	
02	1	18,00	x 2000	x 12000	3391	Q+A	530905	12021-02	
**	3			10173					
04	1	30,00	x 2000	x 12000	5652	Q+A	530903	11909-02	
04	1	30,00	x 2000	x 12000	5652	Q+A	530904	11929-01	
04	1	30,00	x 2000	x 12000	5652	Q+A	530904	11929-02	
04	1	30,00	x 2000	x 12000	5652	Q+A	530904	11932-01	
04	1	30,00	x 2000	x 12000	5652	Q+A	530904	11932-02	
**	5			28260					
**	9			41259					

B06 Marking of the product

ITEM NO.: 01-02,04
 STEEL DESIGNATION DILLIMAX690T S690QL
 HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP



A04 Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department



B. Baldauf
B. BALDAUF
Test House Manager

Inspector's stamp Date 29.08.23

MM 1

QM-System: Certification as per ISO 9001



Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	INSEPCION CERTIFICATE 3.1 AS PER EN 10204:2004 INSEPCION CERTIFICATE 3.1 AS PER ISO 10474:2013 MATERIAL TEST REPORT (MTR)	A10	Advice of dispatch No./ Date of dispatch 80005174 823477-29.08.23	A08/ Manufacturer's order/ A03 Certificate No. 760807-001	Sheet 2 / ...
-----	---	-----	--	---	------------------

A05	Established inspecting body DH	A06 Purchaser UNIONOCEL, PRAHA	A07.1 No. 023-01463	B01 Product HEAVY PLATES
		Final receiver UNIONOCEL, PRAHA	A07.2 No.	

B02/	Steel design. DILLIMAX690T/S690QL
B03	Any suppl. DILLINGER:20/EN-10025-6:19
	requirements

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01 C01	C02 C02	C03 C03	C10 C10	C11 C11	C12 C12	C13 C13	A % LO=5D	C14-C15 C14-C15
				Temp. GR.C	Temp. GR.C	Temp. GR.C	Temp. GR.C	MPA REH	RM			
01	530905	12014 *		RT	RT	RT	RT	816	855		16	
04	530903	11909		RT	RT	RT	RT	789	842		17	
04	530904	11929		RT	RT	RT	RT	792	843		18	

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01 C01	C02 C02	C03 C03	C40 C40	C41 C41	C44 C44	C45 C45	C42 C42	C43 C43
				Temp. GR.C	Temp. GR.C	Temp. GR.C	Type of test piece	Width of test piece	Testing method	Energy Joule	Individual values AV-J	Mean value
01	530905	12014 *		-40	-40	-40	CHP-V	40	CHP-V	750	171 140 182	164
04	530903	11909		-40	-40	-40	CHP-V	40	CHP-V	750	103 115 99	106
04	530904	11929		-40	-40	-40	CHP-V	40	CHP-V	750	144 149 118	137
				-40	-40	-40	CHP-V	40	CHP-V	750	80 82 88	83
				-40	-40	-40	CHP-V	40	CHP-V	750	150 124 167	147
				-40	-40	-40	CHP-V	40	CHP-V	750	103 104 97	101

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat No.	C70 C70	C C	SI SI	MN MN	P P	S S	N N	AL AL	CU CU	MO MO	NI NI	CR CR	V V	NB NB	TI TI
530903	Y	0,176	0,477	1,563	0,013	0,0005	0,0034	0,034	0,028	0,004	0,035	0,034	0,001	0,021	0,015
530904	Y	0,179	0,490	1,580	0,012	0,0005	0,0032	0,032	0,019	0,005	0,024	0,029	0,001	0,022	0,016
530905	Y	0,175	0,486	1,572	0,007	0,0005	0,0024	0,034	0,021	0,005	0,027	0,025	0,001	0,021	0,015

A04		Manufacturer's mark
A01	201202/203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.	
	B. BALDAUF Test House Manager	Inspector's stamp
	AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department	
		Date 29.08.23
		MM 1

QM-System: Certification as per ISO 9001



Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

<p>A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.1 AS PER ISO 10474:2013 MATERIAL TEST REPORT (MTR)</p>	<p>A10 Advice of dispatch No./ Date of dispatch 80005174 823477-29.08.23</p>	<p>A08/ Manufacturer's order/ A03 Certificate No. 760807-001 4/...</p>
<p>A05 Established inspecting body DH</p>	<p>A06 Purchaser UNIONOCEL, PRAHA</p>	<p>A07.1 No. 023-01463 A07.2 No. UNIONOCEL, PRAHA HEAVY PLATES</p>
<p>B02/ Steel design. DILLIMAX690T/S690QL</p>	<p>B03 Any suppl. requirements DILLINGER:20/EN-10025-6:19</p>	
<p>D02 Non-destructive tests - Ultrasonic testing</p> <p>ITEM NO.: 01-02,04 UT-SPECIFICATION : EN-10160 CLASS S1 AND E1 SCANNING PLAN BODY : LONGITUDINALLY SCAN LINES SPACING 100 MM EDGES : 100 MM PERSONNEL QUALIFICATION : LEVEL 2 ACC.TO ISO 9712 OR SNT-TC-1A THE TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.</p> <p>Z04 Environmental product declaration for structural steel</p> <p>ITEM NO.: 01-02,04 For structural steel plates from Dillinger a validated environmental product declaration according to ISO 14025 and EN 15804 was established: EPD-BFS-20180116-IBG2-EN. Further information can be found under www.dillinger.de/EPD-E/.</p>		
<p>A04</p>		<p>A01 AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department</p> <p><i>B. Baldalf</i> B. BALDAUF Test House Manager</p> <p>Inspector's stamp Date 29.08.23 MM 1</p>

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.



QM-System: Certification as per ISO 9001



Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

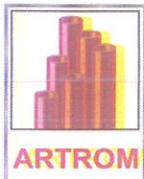
<p>A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.1 AS PER ISO 10474:2013 MATERIAL TEST REPORT (MTR)</p>	<p>A10 Advice of dispatch No./ Date of dispatch 80005174 823477-29.08.23</p>	<p>A08/ Manufacturer's order/ A03 Certificate No. 760807-001</p>
<p>A05 Established inspecting body DH</p>	<p>A06 Purchaser UNIONOCEL, PRAHA</p>	<p>B01 Product HEAVY PLATES</p>
<p>B02/ Steel design. DILLIMAX690T/S690QL</p>	<p>A07.1 No. 023-01463</p>	<p>A07.2 No.</p>
<p>B03 Any suppl. requirements</p>	<p>DILLINGER:20/EN-10025-6:19</p>	<p></p>

Z04 Conformity marking

ITEM NO.: 01-02,04

<p>CE</p>	<p>UKA</p>	<p>EN 10025-1:2004 Plate S690QL / 1.8928</p>
<p>DILLINGER</p> <p>AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar</p> <p>23</p> <p>S690QL_EN10025-6-19_B_230101E1</p>	<p>0769</p> <p>0836</p>	<p>to be used in welded, bolted and riveted structures</p> <p>Tolerance on dimensions and shape: Elongation Tensile strength Yield strength Impact strength Weldability Durability (chemical composition)</p> <p>expressed as declared in the DoP S690QL_EN10025-6-19_B_230101E1</p>

<p>A04</p>	<p>The declaration of performance can be downloaded from www.dillinger.de/dop/S690QL_EN10025-6-19_B_230101E1.pdf</p>	<p>AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department</p>
<p>D/H Manufacturers' mark</p>	<p><i>B. Baldauf</i> B. BALDAUF Test House Manager</p>	<p>Inspector's stamp Date 29.08.23</p>
<p>Sheet</p>	<p>5</p>	<p>NM 1</p>



ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
 Tel: +40 (249) 434640, 434641 Fax: +40 (249) 437288, 430055
 E-mail: office@artrom.com www.artrom.com
 EUID: ROONRC.J1991000009283; J1991000009283; VAT No. RO 1510
 Subscribed and Paid Share Capital: 291.587.538,34 lei



Digitally signed by ARTROM STEEL TUBES SA
 This document is certified to be electronically
 controlled and approved.
 Signature requested by Elena Voicu
 on 2025-09-24 14:21:10.357+0300
 The original electronic document can be retrieved
 by scanning the QR code in the left.

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No/Nr: E17550 Date/Datum: 23.09.2025	Manufacturer's mark: Herstellerzeichen:	Customer order no. / Vertrags Nr.: 1402-4511162438	PL: 15369
---	--	---	-----------

CUSTOMER - KUNDE: Palfinger Produktionstechnik Bulgaria EOOD

Specification / Spezifikation: DIN 17179:86 / DIN 1629:84 / DIN 2448:81 / EN 10216-3:13 / Spec. Palfinger	Dimensions-Abmessungen: 139.7 x 22.2 x 6000 to 6150mm Steel-Stahlsorte: StE 460 N / P460N TC1
--	--

Description: Hot rolled seamless steel pipes; unprotected; marking: manufacturer's mark, dimensions, standard, steel grade, S, heat no., LOT, mill inspector no. 2, technical control sign, date.

Beschreibung: Warmgewalzte Nahtlose Stahlrohre; Ungeschützt; Markierung: Herstellerzeichen, Abmessungen, Norm, Stahl Qualität, S, Chargen nr., LOT, Werkssachverständiger nr. 2, tehnisches – Kontrollzeichen, data.

Heat no. - Schmelze Nr.: R64954	Lot no.: 601868	Country of manufacture: Romania Country of melt and pour: Romania	
Quantity delivered – Gesamtgewicht	Pcs. – Stückzahl	Length – Gesamtlänge – m	Weight – Gesamtgewicht – Kg
	15	91.95	5980

Ladle Chemical Analysis-Schmelzenanalyse (%)

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V
R64954	0.18	1.61	0.004	0.014	0.18	0.06	0.19	0.02	0.16	0.021	0.001	0.001	0.007	0.125

CEQ: 0.530

Mechanical Properties-Mechanische Eigenschaften

TENSILE TEST-ZUGVERSUCH (EN ISO 6892-1) - at room temperature - Test Specimen / Strip-longitudinal		Rp0,2 N/mm ²	Rm N/mm ²	A %
Dimension – Proben-Abmessungen (mm): 6.40 x 22.0		464	631	23
Section – Proben-Durchschnitt (mm ²): 140.87				
Length – Proben-Länge (Lo) (mm): 65				
Ring expanding test Ringaufdornversuch (EN ISO 8495)	Flattening test Ring fältversuch (EN ISO 8492)	Charpy V – Notch / Kerbschlagbiegeversuch (EN ISO 148-1)		Ring tensile test Ring zugversuch (EN ISO 8496)
-	OK	Longitudinal 10 x 10 [mm] 66 (68; 64; 66) J (-20 ⁰ C)		Transversal 10 x 10 [mm] 58 (58; 60; 56) J (-20 ⁰ C)

Heat treatment – Thermische Behandlung: normalized - Normalisierung	Oxyd. Purity grade DIN 50602; K 4= 0
Hydraulic test pressure - Wasserinnendruckversuch 80 bar for 5 sec: OK	Mixed-up test: OK
Test MPI acc. to ASTM E709:2021 & ISO 10893-5:2011: OK	Straightness – Geradheit – max. 1: 1000 / 0.2 % over total length: OK

Visual inspection and dimensional check: OK / Besichtigung und Ausmessung: OK

NO WELD REPAIR ON HEREBY CERTIFIED TUBES

The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018

Our tubes are rolled from steel with low carbon footprint, carefully melted in our own Romanian facilities only by recycling the ferrous scrap using 100% certified green electricity.

Our products do not incorporate steel products originating in Russia and Belarus, fully complying with the Regulations (EU) No 833/2014 and 765/2006. Steel melt by ARTROM STEEL TUBES Resita, ROMANIA.

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS

LEITER DER QC & PRÜFUNG DER PRODUKTE VON METALLURGISCHEN ROHREN

Dipl. Eng. Silviu Barbulescu



MILL INSPECTOR

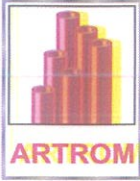
UNTERSCHRIFT DES WERKSSACHVERSTÄNDIGEN

Eng. Iulian Andrei



This IC is digitally signed and sealed by ARTROM STEEL TUBES S.A. IT system. To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by ARTROM STEEL TUBES S.A. Falsification of this document is punishable under the legal provisions and entitles us to claim damages.

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.



ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
 Tel: +40 (249) 434640, 434641 Fax: +40 (249) 437288, 430055
 E-mail: office@artrom.com www.artrom.com
 EUID: ROONRC.J199100009283; J199100009283; VAT No. RO 1510211
 Subscribed and Paid Share Capital: 291.587.538,34 lei



Digitally signed by ARTROM STEEL TUBES SA
 This document is certified to be electronically
 controlled and approved.
 Signature requested by Elena Voicu
 on 2025-10-01 16:02:04 +03:00
 The original electronic document can be retrieved
 by scanning the QR code in the left.

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No/Nr: E17858 Date/Datum: 26.09.2025	Manufacturer's mark: Herstellerzeichen:	Customer order no. / Vertrags Nr.: 1402-4511180064	PL: 15445
CUSTOMER - KUNDE: Palfinger Produktionstechnik Bulgaria EOOD			
Specification / Spezifikation: DIN 17179:86 / DIN 1629:84 / DIN 2448:81 / EN 10216-3:13 / Spec. Palfinger		Dimensions-Abmessungen: 165.1 x 17.5 x 6000 to 6150mm Steel-Stahlsorte: StE 460 N / P460N TC1	
Description: Hot rolled seamless steel pipes; unprotected; marking: manufacturer's mark, dimensions, standard, steel grade, S, heat no., LOT, mill inspector no. 2, technical control sign, date. Beschreibung: Warmgewalzte Nahtlose Stahlrohre; Ungeschützt; Markierung: Herstellerzeichen, Abmessungen, Norm, Stahl Qualität, S, Chargen nr., LOT, Werkssachverständiger nr. 2, technisches – Kontrollzeichen, data.			
Heat no. - Schmelze Nr.: R65253	Lot no.: 599760	Country of manufacture: Romania Country of melt and pour: Romania	
Quantity delivered – Gesamtgewicht	Pcs. – Stückzahl	Length – Gesamtlänge – m	Weight – Gesamtgewicht – Kg
	11	67.37	4318

Ladle Chemical Analysis-Schmelzenanalyse (%)

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V
R65253	0.19	1.62	0.003	0.015	0.21	0.06	0.18	0.01	0.20	0.028	0.002	0.001	0.007	0.135
CEQ: 0.542														

Mechanical Properties-Mechanische Eigenschaften

TENSILE TEST-ZUGVERSUCH (EN ISO 6892-1) - at room temperature - Test Specimen / Strip-longitudinal		Rp0,2 N/mm ²	Rm N/mm ²	A %
Dimension – Proben-Abmessungen (mm): 6.60 x 17.4		481	641	25
Section – Proben-Durchschnitt (mm ²): 114.88				
Length – Proben-Länge (Lo) (mm): 60				
Ring expanding test Ringaufdomversuch (EN ISO 8495)	Flattening test Ring faltversuch (EN ISO 8492)	Charpy V – Notch / Kerbschlagbiegeversuch (EN ISO 148-1)		Ring tensile test Ring zugversuch (EN ISO 8496)
-	-	Longitudinal 10 x 10 [mm] Transversal 10 x 10 [mm]		OK
		73 (74; 69; 76) J (-20 ⁰ C)		63 (66; 64; 59) J (-20 ⁰ C)

Heat treatment – Thermische Behandlung: normalized - Normalisierung Hydraulic test pressure - Wasserinnendruckversuch 80 bar for 5 sec: OK Test MPI acc. to ASTM E709:2021 & ISO 10893-5:2011: OK	Oxyd. Purity grade DIN 50602; K 4= 2 Mixed-up test: OK Straightness – Geradheit – max. 1: 1000 / 0.2 % over total length: OK
---	--

Visual inspection and dimensional check: OK / Besichtigung und Ausmessung: OK

NO WELD REPAIR ON HEREBY CERTIFIED TUBES

The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018

Our tubes are rolled from steel with low carbon footprint, carefully melted in our own Romanian facilities only by recycling the ferrous scrap using 100% certified green electricity.

Our products do not incorporate steel products originating in Russia and Belarus, fully complying with the Regulations (EU) No 833/2014 and 765/2006. Steel melt by ARTROM STEEL TUBES Resita, ROMANIA.

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
 LEITER DER QC & PRÜFUNG DER PRODUKTE VON METALLURGISCHEN ROHREN

Dipl. Eng. Silviu Barbuлесcu



MILL INSPECTOR

UNTERSCHRIFT DES WERKSSACHVERSTÄNDIGEN

Eng. Iulian Andrei



This IC is digitally signed and sealed by ARTROM STEEL TUBES S.A. IT system. To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by ARTROM STEEL TUBES S.A. Falsification of this document is punishable under the legal provisions and entitles us to claim damages.

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

Vallourec Tubes France (A01) TUBERIE MONTBARD ROUTE DE SEMUR 21502 MONTBARD FRANCE	 	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr. : 88Va21 (A03) Page/Seite: 1 / 5 Date/Datum: 09.02.2021
---	--	---

Please scan this QR Code with your device to access the Vallourec inspection certificate check site or send an email to valguard@vallourec.com

(A01) Vallourec Tubes France	(A06 1) Vallourec-Order-No. / Vallourec-Auftrags-Nr. / 264817 (A08 2) Suborder / Unterauftrag
(A06 1) Consignee / Empfänger HOBERG & DRIESCH GMBH & CO. KG ROEHRENGROSSHANDEL THEODORSTRASSE 101 D-40472 DUESSELDORF	(A07 1) Orderer Order-No. / Senderbestellnummer 4500037393 01.12.2020 Project name / Projektname Project ref. / Projektref.
(A06 3) End User / Endkunde PALFINGER PROD. TECHNIK GMBH	
(B01, B02, B04) Description of the product Erzeugnisbeschreibung	Hot finished seamless Steel pipes EN 10210-1, 2006 EN 10210-2, 2019 Forterior® 450 ImpactFIT 30, Mat.sheet FOR-01, Rev. 1, March 23-2018 Ends plain, square to tube axis, deburred Without outside rust protection Without inside rust protection Nahtlos warmgefertigt Stahlrohre EN 10210-1, 2006 EN 10210-2, 2019 Forterior® 450 ImpactFIT 30, WBL FOR-01, Rev. 1, March 23-2018 Enden glatt, senkrecht zur Rohrachse abgeschnitten, gratfrei Ohne Rostschutz außen Ohne Rostschutz innen
NO MERCURY, MERCURY COMPOUNDS OR MERCURY CONTAINING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED IN ANY MANNER WHICH MIGHT CAUSE A CONTAMINATION IN MANUFACTURE, ASSEMBLY, OR TEST OF MATERIAL. NO WELD REPAIR WAS PERFORMED NO RADIATION CONTAMINATION KEIN QUECKSILBER, QUECKSILBER ZUSATZE ODER QUECKSILBER ENTHALTENDE WERKZEUGE UND ODER EINRICHTUNGEN WURDEN BENUTZT, WELCHE IN IRGEND EINER ART UND WEISE EINE VERUNREINIGUNG IN DER HERSTELLUNG, VERARBEITUNG ODER PRUEFUNG DES MATERIALS VERURSACHEN. ES WURDE KEINE REPARATURSCHWEISSUNG DURCHGEFUEHRT	

(A13) Vallourec Item Position	(A09) Orderer Item Position	(B14) Item text Positionstext	(B09) Dimensions Abmessung	(B10) Single length Einzellänge
1	10	ARTICLE NUMBER 117130 ARTIKELNUMMER 117130	OD 193.7 x WT 36 mm OD Tol ± 1 % WT Tol : -10 %, localised -12.5 % allowed; the maximum is limited by	Limited length from 6000 to 7300 mm Short length on request Längen von 6000 bis 7300 mm Unterlängen auf Anfrage

Vallourec Tubes France TUBERIE MONTBARD ROUTE DE SEMUR 21502 MONTBARD FRANCE	 	INSPECTION CERTIFICATE ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004
		No. / Nr. : 88Va21 Page/Seite: 2 / 5 Date/Datum: 09.02.2021

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(A13) Vallourec Item Position	(A09) Orderer Item Position	(E14) Item text Positionstext	(E09) Dimensions Abmessung	(B10) Single length Einzellänge
			weight tolerance AD 193.7 x WD 36 mm AD Toleranz ± 1 % Wanddickentoleranz : -10 %, örtlich -12.5 % zulässig; in der Plusseite durch die Gewichtstoleranz begrenzt	

(A13) Vallourec Item Position	(A09) Orderer Item Position	(E07 1) Heat Schmelze	(E07 2) HT lot Wärmeb.-Los	(E06) Quantity Stück	(B11) Total length Gesamtlänge M	(B13) Weight Gewicht kg
1	10	995925	35XT0600	9	59.405	8.331

(C71)

HEAT CHEMICAL ANALYSIS / SCHMELZANALYSE

(E07 1) Heat Schmelze	(B15) Process Erschmelz.	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Al %
min	-	0.16	0.10	1.30	-	-	-	-	-	-	0.010
max	-	0.22	0.50	1.70	0.030	0.020	0.30	0.08	0.40	0.25	0.060
995925	Electric (EAF)	0.21	0.27	1.60	0.008	0.003	0.14	0.03	0.08	0.06	0.020

(E07 1) Heat Schmelze	Ti %	Nb(Cb) %	V %	N %	0002 %	0001 %						
min	-	-	0.08	-	-	-						
max	0.03	0.05	0.15	0.020	0.22	0.20						
995925	0.002	0.000	0.12	0.006	0.13	0.12						

0002	V + Nb + Ti
0001	Nb + V

Heats fully killed
Beruhigter Stahl

(B04)

HEAT TREATMENT / WAERMEBEHANDLUNG

Vallourec Tubes France TUBERIE MONTBARD ROUTE DE SEMUR 21502 MONTBARD FRANCE	 	INSPECTION CERTIFICATE ABNAHMEPRUEFZEUGNIS 3 1 EN 10204:2004 No. / Nr. : 88Va21 Page/Seite: 3 / 5 Date/Datum: 09.02.2021
---	--	--

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguara@vallourec.com

(B04)

HEAT TREATMENT / WAERMEBEHANDLUNG

Heat treatment type Art der Wärmebehandlung	Temperature Temperatur	Soaking time Haltezeit	Cooling Abkühlung
	900 °C	15 min	Air

TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

Type / Form (C10 1)	Round / Rund
Test temperature / Prüftemperatur (C03)	Room temperature / Raumtemperatur
Direction / Richtung (C02)	longitudinal / längs

(E07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C10.2) Dimension Abmessung	(C11) YS Streckgr.	(C12) TS Zugfest.	(C13.1) Elong. Dehnung						
		mm / mm2	R _{p0.2} MPa	R _m MPa	5,65√S _o %						
		-	420	560	19.0						
min		-	-	730	-						
max		-									
995925	24RN 35XT0600	10.00 78.54	462	632	31.4						

(C00.1) Test Piece / Prüfstück	Sample / Probe HT lot / Inspection Lot / Wärmeb.-Los / Prueflos
(C10.2) Dimension / Abmessung	Test piece dimensions / Prüfstückabmessung Test piece area / Prüfstückquerschnitt

IMPACT TEST RESULTS / ERGEBNISSE DES KERBSCHLAGBIEGEVERSUCHS

Type / Form (C40)	Charpy V
Test temperature / Prüftemperatur (C03)	-30 °C
Direction / Richtung (C02)	longitudinal / längs

Vallourec Tubes France TUBERIE MONTBARD ROUTE DE SEMUR 21502 MONTBARD FRANCE	(A01)	 	INSPECTION CERTIFICATE ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004	(A02)
			No. / Nr. : 88Va21 Page/Seite: 4 / 5 Date/Datum: 09.02.2021	(A03)

Please scan this QR Code with your device to access the Vallourec inspection certificate check site or send an email to valguard@vallourec.com

IMPACT TEST RESULTS / ERGEBNISSE DES KERBSCHLAGBIEGEVERSUCHS

(B07 1)	(C00 1)	(C41)	(C42 1)	(C42 1)	(C42 1)	(C43 1)				
Heat Schmelze	Test Piece Prüfstück	Dimension Abmessung	Impact1 Arbeit1	Impact2 Arbeit2	Impact3 Arbeit3	Mean Mittelw.				
		mm / cm2	J	J	J	J				
min		-	19.0	19.0	19.0	27				
max		-	-	-	-	-				
995925	24RN 35XT0600	10.00x10.00 0.80	74.0	93.8	95.4	88				

(C00 1)	Test Piece / Prüfstück Sample / Probe HT lot / Inspection Lot / Wärmeb.-Los / Prueflot
(C41)	Dimension / Abmessung Test piece dimensions / Prüfstückabmessung Test piece area / Prüfstückquerschnitt

(C50)

MICROGRAPHY - OTHER TESTS

Test Prüfung	Conditions Prüfbedingungen	Test rate Prüfumfang	Result Ergebnis
Inclusion count Anzahl der Einschlüsse	DIN 50602 : K4 <= 30 MAX	1 per heat	Satisfactory Bestanden


(D55)

OTHER TESTS ON PIPE / SONSTIGE PRUEFUNGEN

Test Prüfung	Conditions Prüfbedingungen	Test rate Prüfumfang	Result Ergebnis
Appearance & Dimensions Aussehen-Abmessung	Aspect & Dimensions (spécifique)	Without Frequency	Satisfactory Bestanden

(A04, B06)

MARKING, IDENTIFICATION / KENNZEICHNUNG, IDENTIFIKATION

1	Marking stamped at two ends  VALLOUREC	VALLOUREC - VBT - FORTERIOR450IF30 - S - %%HT N° COULEE - ZFI
---	--	---

(Z01)


The supplied products are in compliance with the requirements of the order
 Die gelieferten Erzeugnisse stimmen mit den Anforderungen des Auftrages überein

(A05, Z02, Z03)

Date	Validated by	Signature	Contact details	Stamp
------	--------------	-----------	-----------------	-------

Vallourec Tubes France TUBERIE MONTBARD ROUTE DE SEMUR 21502 MONTBARD FRANCE	 	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr. : 88Va21 (A03) Page/Seite: 5 / 5 Date/Datum: 09.02.2021
---	--	---

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

Datum	Bestätigt durch	Unterschrift	Kontaktdaten	Stempel
09.02.2021	Inspection Representative Abnahmebeauftragter	Jonathan SPINELLI 	☎ +33 3 80 89 54 40 @ jonathan.spinelli@vallourec.com	

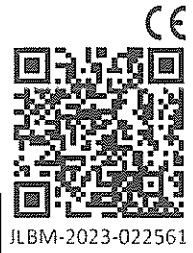
Indication in parentheses correspond to attributes according to EN 10168

Die Bezeichnungen in Klammern entsprechen den Kennnummern gemäss EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution
Dieses Zeugnis bzw. diese Bescheinigung darf weder verändert noch für andere Erzeugnisse verwendet werden. Zuwiderhandlungen werden als Urkundenfälschung und Betrug strafrechtlich verfolgt.

北满特钢质量证明书
BEIMAN CERTIFICATE OF QUALITY

建龙北满特钢有限公司 BM10-354-0
Jianlong Beiman Special Steel Co., LTD.
地址: 中国 齐齐哈尔 富拉尔基 红岗大街 7#
Add: 7# Hong'an Street Fulaerji District, Qiqihaer, China
邮编 Post Code: 161041 传真 Fax: 0452-6801761



捆数 Bundles	15	支数 Pieces	15	重量 Weight	36177 kg	JLBM-2023-022561
订货单位 Purchaser	德国TS公司					
合同号/订单号 Contract No./Order No.	23BMETS08/190070/TS					
牌号 Steel Grade	S355J2 Acc.to EN 10025					
规格 Size	Φ260mm(±4.00mm)*4000*5800mm Acc.to EN 10060					
交货状态 Delivery Condition	热轧 Hot Rolled					
炉号 Heat No.	230602561					
批次号 Batch No./Heat Treatment No.	23G030493					
订单项次号 Item No.	QW12302008B15					
1. 化学成分 Chemical Composition						
C: 0.19[0.13-0.20] Si: 0.21[0.15-0.25] Mn: 1.35[1.00-1.60] P: 0.014[≤0.025] S: 0.027[0.020-0.030]						
Cr: 0.09[≤0.29] Ni: 0.01[≤0.30] Mo: 0.01[≤0.07] Cu: 0.02[≤0.30] Al: 0.025[0.020-0.050]						
Ti: 0.01[≤0.05] V: 0.01[≤0.03] CEV: 0.439[≤0.490] Nb: 0.002 B: 0.0005						
2. 低倍组织 Macrostructure						
S: 1/1[≤2.0] R: 2/2[≤2.0]						
C: 2/2[≤2.0]						
3. 晶粒度 Grain Size						
奥氏体晶粒度 Grain Size: 7[±5.0]						
4. 非金属夹杂 Non-Metallic Inclusions						
K4(O): 0[≤30.0]						
5. 硬度 Hardness						
心部硬度: 142/142/142HBW[≤210]						
6. 机械性能 Mechanical Properties						
KV ₂ -40℃: 162/165/164J A: 33.0%						
ReH: 366N/mm ² Z: 64%						
Rm: 547MPa KV ₂ -20℃: 185/188/187J[≥27]						
7. 交货硬度 Delivery Hardness						
表面硬度 Surface Hardness: 145/146/147[≤210]						
8. 超声探伤 Ultrasonic Inspection Acc.to EN 10308 CLASS 2 合格 Qualified						
9. 放射性 Radioactivity 合格 Qualified [≤100.0]						
10. 其它						
加工比 Reduction ratio: 6.25 残磁 Residual Magnetic: 合格 Qualified [≤10.0]						
防混钢 mismatch checked: 合格 Qualified						
备注 Note						JIANLONG BEIMAN SPECIAL STEEL CO. LTD. 判定部门盖章 Judge Department Stamp
1. Free from mercury, cadmium and radioactivity 2. Inspection Certificate acc to EN 10204/3 1 3. Origin: China 4. mismatch checked						
判定 Judge	黄泽维		判定日期 Judge Date	2023-04-28		
声明: 经检验和试验, 本产品符合合同及相应技术条件的要求。 STATEMENT: THROUGH INSPECTION AND TESTING, THE QUALITY OF PRODUCT CONFORMS TO THE STIPULATIONS OF THE RELATED CONTRACT AND SPECIFICATION.						

FORMLAR

MATERIAL QUALITY CONTROL REPORT

DIN 50049.3.1 B - EN 10204 3.1 B

COMPANY: PALFINGER **DATE: 18.07.2025** **FORM NO: 74** **WAYBILL NO: YSL20250000000048** **ORDER NO: 1402-4511158040, 1402-4511163891**

NO	PRODUCT NAME	MATERIAL	CHARGE NO	CASTING DATE	UNIT	FURN. NO	C	Si	Mn	P	S	Cr	Ni	Al	Cu	Mg	Ceq	Sc	TENSILE N/mm ²	HARD. (HB)	F - P (%)	NODUL ARTY (%)	ELONG. (%)	YIELD N/mm ²
1	RGG 262	EN-GJS-400-15	07HP	14.07.2025	232	4	3,84	2,41	0,06	0,04	0,01	0,02	0,02	0,00	0,00	0,0	4,74	1,102	424	167	94,78	98,2	19,68	288
	RGG 262	EN-GJS-400-15	07HP	14.07.2025	184	5	3,90	2,40	0,05	0,04	0,01	0,02	0,01	0,00	0,00	0,0	4,81	1,119	436	166	95,21	96,4	22,06	296
	RGG 262	EN-GJS-400-15	07HP	16.07.2025	48	3	3,91	2,42	0,05	0,04	0,01	0,02	0,01	0,00	0,00	0,0	4,83	1,124	441	165	95,62	97,3	21,18	294
	RGG 262	EN-GJS-400-15	07HP	16.07.2025	296	4	3,85	2,41	0,05	0,04	0,01	0,03	0,01	0,00	0,00	0,0	4,75	1,105	429	165	95,02	98,2	22,08	292
	RGG 262	EN-GJS-400-15	07HP	16.07.2025	296	5	3,91	2,41	0,07	0,04	0,01	0,03	0,01	0,00	0,00	0,0	4,83	1,122	443	166	94,89	98,2	21,34	294
	RGG 262	EN-GJS-400-15	07HP	17.07.2025	132	2	3,85	2,43	0,06	0,04	0,01	0,03	0,02	0,00	0,00	0,0	4,76	1,107	439	168	95,61	96,4	20,68	290
1188																								
2	RGG 270	EN-GJS-400-15	07HP	14.07.2025	22	1	3,90	2,42	0,06	0,04	0,01	0,04	0,02	0,00	0,00	0,0	4,82	1,121	433	156	95,63	97,3	22,06	288
	RGG 270	EN-GJS-400-15	07HP	14.07.2025	24	2	3,92	2,41	0,05	0,04	0,01	0,02	0,01	0,00	0,00	0,0	4,84	1,125	445	155	94,29	96,4	21,14	286
	RGG 270	EN-GJS-400-15	07HP	14.07.2025	24	3	3,90	2,43	0,05	0,04	0,01	0,02	0,01	0,00	0,00	0,0	4,82	1,122	438	155	95,41	96,4	19,82	290
	RGG 270	EN-GJS-400-15	07HP	14.07.2025	10	5	3,90	2,40	0,05	0,04	0,01	0,02	0,01	0,00	0,00	0,0	4,81	1,119	422	154	95,63	97,3	21,62	284
	RGG 270	EN-GJS-400-15	07HP	16.07.2025	24	1	3,90	2,40	0,05	0,04	0,01	0,03	0,01	0,00	0,00	0,0	4,81	1,119	435	155	96,18	95,5	20,56	288
	RGG 270	EN-GJS-400-15	07HP	16.07.2025	14	2	3,92	2,41	0,05	0,04	0,01	0,04	0,01	0,00	0,00	0,0	4,84	1,125	426	157	95,29	98,2	21,48	290
118																								
3	HV391-A	EN-GJS-400-15	07GP	27.06.2025	28	6	3,90	2,41	0,06	0,04	0,01	0,03	0,01	0,00	0,00	0,0	4,81	1,120	429	162	95,42	96,4	21,14	290
	HV391-A	EN-GJS-400-15	07GP	27.06.2025	40	7	3,90	2,42	0,08	0,03	0,01	0,03	0,01	0,00	0,00	0,0	4,81	1,120	433	160	95,24	97,3	20,86	282
	HV391-A	EN-GJS-400-15	07GP	30.06.2025	40	1	3,93	2,39	0,06	0,04	0,01	0,02	0,01	0,00	0,00	0,0	4,84	1,126	445	159	94,63	97,3	19,68	288
108																								

PRODUCT MANAGER

QUALITY MANAGER






Сертификат за инспекција (3.1) - Хемиска анализа
Извештај од тестот (2.2) - Механички својства
INSPECTION CERTIFICATE (3.1) - Chemical analysis
TEST REPORT (2.2) - Mechanical properties

Дата/Date: 2025-06-30

Сертификат номер/Cert no: EC27916505 rev. 0

Наша поръчка/Our order: 0101300879
Наш реф. №/Our ref: Ferenc Kis
Клиент. №/Cust no: BGB00003
Ваша дата/Your date: 20250625

Ваша поръчка/Your order: 1402-4511184418
Ваш реф. №/Your ref:
Ваш факс/Your fax:
Ваш и-мейл/Your e-mail:

Адрес за фактура/Invoice address

PALFINGER PRODUKTsIONTEHNIK B-Ja EOOD
KOMPLEKS BETA
5980 CHERVEN BRJAG
Bulgaria

Пол. На серт./Cert receiver

Адрес на доставка/Delivery address

PALFINGER PRODUKTsIONSTEHNİK B-Ja
EOOD
INDUSTRIALNA ZONA
8672 TENEVO
Bulgaria

ДОСТАВКА/DELIVERY

Парч. №/Lot no:

PVZ2511747

ПРОДУКТ/PRODUCT

Марка/Brand: ESAB
Опис./Desc: OK AristoRod 12.63 1.0mm 18kg
Арт. (GIN) №/Item no: 1A63106910
Плавка №/Heat number: 511147
Количество/Quantity: 1008 KGM

ХИМИЧЕСКИ СЪСТАВ/CHEMICAL ANALYSIS

Actual results: acc to EN 10204 - 3.1

Wire/strip

C	0.07%
Si	0.95%
Mn	1.64%
P	0.014%
S	0.009%
Cr	0.02%
Ni	0.01%
Mo	< 0.01%
Cu	0.01%
V	< 0.01%
Al	0.001%
Ti+Zr	0.01%

КЛАСИФИКАЦИИ/CLASSIFICATIONS

EN ISO 14341-A: G 4Si1
EN ISO 14341-A: G 42 3 C1 4Si1
EN ISO 14341-A: G 46 5 M20 4Si1
EN ISO 14341-A: G 46 5 M21 4Si1
SFA/AWS A5.18: ER70S-6
CSA W48: B-G 49A 3 C1 S6
EN ISO 14341-B: G 55A 5 M21 S6
EN ISO 14341-B: G S6

МЕХАНИЧНИ ПОКАЗАТЕЛИ/MECHANICAL PROPS

в съответствие с/Typical data: acc to EN 10204 - 2.2

Tensile

Standard	Shielding Gas	Condition	ReL [MPa/ksi]	Rm [MPa/ksi]	A5 [%]
EN	M21	As welded	490/71	590/86	28

Impact

Standard	Shielding Gas	Condition	Temp [°C/°F]	KV[J/ft-lb]
EN	M21	As welded	-40/-40	90/66
EN	M21	As welded	-50/-58	80/59

A4, A5 = Elongation
ReH = Upper Yield Point
ReL = Lower Yield Point
Rm = Ultimate Tensile Strength
Rp0.2 = Yield Strength 0.2 offset
Rp1.0 = Yield Strength 1.0 offset

Palfinger Produktionstechnik
EOOD Werk Tenevo
Tenevo
8672 Tenevo
Bulgarien

Werkzeugnis 2.2

Test Report 2.2

nach / as per : EN 10204

Nr. 2023-2031018383-10-106944-003

Rev. 0 Seite / Page 1 / 1

Bestell-Nr	PO no	1402 4510607277	vom / of	04.04.2023
Auftrags-Nr.	Order no.	1031015701		
Lieferschein/Pos./Splitt	Delivery note/pos./split	2031018383/000000/000010	vom / of	25.04.2023
Produkt	Product	Massivdrahtelektrode / solid wire		
Handelsname	Trade name	BÖHLER X 70-IG		
Normbezeichnung	Standard designation	EN ISO 16834-A - G 69 5 M21 Mn3Ni1CrMo AWS A5.28: ER110S-G		
Abmessung	Dimension	1,2 mm		249195
Charge	Heat no.	106944		54888
Liefermenge	Quantity	216,0 KG		21A3510G G025

Chemische Analyse in % des Produktes

Chemical composition in % of the product

C	Si	Mn	P	S	Cr	Mo	Ni	V	Cu				
0,10	0,54	1,53	0,007	0,012	0,24	0,25	1,28	0,07	0,06				

Mechanische Gütewerte

Mechanical properties

Zugversuch		Tensile test					
T	ReL / Rp 0,2 MPa	Rp 1,0 MPa	Rm MPa	A (Lo = 5d) %	Z %	WBH PWHT	Bemerkung Remarks
20°C	≥ 690		770 - 940	≥ 17			
Kerbschlagbiegeversuch		Impact test					
T	Kerbschlagarbeit Impact energy KV / J	Mittelwert Average KV / J	Laterale Breitung Lateral expansion mm	Duktiler Bruchanteil Shear fracture %	WBH PWHT	Bemerkung Remarks	
-50°C	≥ 47						
20°C	≥ 170						

Ort / Town
Kapfenberg

Datum / Date
25.04.2023

Dieses Zeugnis wurde maschinell erstellt und gilt auch ohne Unterschrift.
This certificate was issued by DP-equipment and does not require signature.

Abnahmebeauftragter / Authorized representative

Kahofer



Сертификат за инспекција (3.1) - Хемиска анализа
Извештај од тестот (2.2) - Механички својства
INSPECTION CERTIFICATE (3.1) - Chemical analysis
TEST REPORT (2.2) - Mechanical properties

Дата/Date: 2025-06-17

Сертификат номер/Cert no: EC27904304 rev. 0

Наша поръчка/Our order: 0101286212
Наш реф. №/Our ref: Anikó Seregné Horváth
Клиент. №/Сust no: BGB00003
Ваша дата/Your date: 20250604

Ваша поръчка/Your order: 1402-4511167316
Ваш реф. №/Your ref:
Ваш факс/Your fax:
Ваш и-мейл/Your e-mail:

Адрес за фактура/Invoice address
PALFINGER PRODUKTSIONSTEHNİK B-Ja EOOD
КОМПЛЕКС BETA
5980 CHERVEN BRJAG
Bulgaria

Пол. На серт./Cert receiver

Адрес на доставка/Delivery address
PALFINGER PRODUKTSIONSTEHNİK B-Ja
EOOD
INDUSTRIALNA ZONA
8672 TENEVO
Bulgaria

ДОСТАВКА/DELIVERY Парт. №/Lot no: PVZ2410913

ПРОДУКТ/PRODUCT

Марка/Brand: ESAB
Опис./Desc: OK AristoRod 12.63 1.6mm 300kg
Арт. (GIN) №/Item no: 1A63169A60
Плавка №/Heat number: 52860
Количество/Quantity: 4800 KGM

ХИМИЧЕСКИ СЪСТАВ/CHEMICAL ANALYSIS

Actual results: acc to EN 10204 - 3.1

Wire/strip	
C	0.06%
Si	0.91%
Mn	1.65%
P	0.010%
S	0.011%
Cr	0.03%
Ni	0.01%
Mo	< 0.01%
Cu	0.01%
V	< 0.01%
Al	0.001%
Ti+Zr	0.01%

КЛАСИФИКАЦИИ/CLASSIFICATIONS

EN ISO 14341-A: G 4Si1
EN ISO 14341-A: G 42 3 C1 4Si1
EN ISO 14341-A: G 46 5 M20 4Si1
EN ISO 14341-A: G 46 5 M21 4Si1
SFA/AWS A5.18: ER70S-6
CSA W48: B-G 49A 3 C1 S6
EN ISO 14341-B: G 55A 5 M21 S6
EN ISO 14341-B: G S6

МЕХАНИЧНИ ПОКАЗАТЕЛИ/MECHANICAL PROPS

в съответствие с/Typical data: acc to EN 10204 - 2.2

Tensile

Standard	Shielding Gas	Condition	ReL [MPa/ksi]	Rm [MPa/ksi]	A5 [%]
EN	M21	As welded	490/71	590/86	28

Impact

Standard	Shielding Gas	Condition	Temp [°C/°F]	KV[J/ft-lb]
EN	M21	As welded	-40/-40	90/66
EN	M21	As welded	-50/-58	80/59

A4, A5 = Elongation
ReH = Upper Yield Point
ReL = Lower Yield Point
Rm = Ultimate Tensile Strength
Rp0.2 = Yield Strength 0.2 offset
Rp1.0 = Yield Strength 1.0 offset



ПРОТОКОЛ / REPORT ВИЗУАЛНО ИЗПИТВАНЕ / VISUAL TESTING № 25-173-001-TL / 17.12.2025

S.№ 4359

Изпитван продукт / Tested object		Заварени съединения /Welded joints		
Изпитване (параметър)/ Testing (detectable feature)		Вид и големина на несъвършенства, отклонение в геометричните размери / Type and size of imperfections, geometry deviations		
Заявка №/дата/ Request №/date		25-173-TL/ 16.12.2025		
Клиент/ Customer		PALFINGER MARINE		
Клиентска поръчка/ Customer order №		4511268378		
Обект/ Object		Цилиндър/ Zylinder – CPUP0009, S.№ 4359		
Подобект/ Subobject	Цилиндрова тръба/ Zylinderrohr- HY1375AMRB1X, S.№ 4359	Изпитван елемент/ Tested element:	Зав. съединение/ Welded joint W1 ÷ W3	Вид на зав. съединения/ Type of the welded joints RW, FW
Чертеж №/ Drawing №	HY-1375A	Материал/ Material	S460BK+S	Размери/ Dimensions, mm по чертеж/ acc. drawing HY-1375A
Стандарт/ Standard	БДС EN ISO 17637:2017	Обем на изпитване/ Scope of testing [mm]	1 137	Дата и място на изпитване/ Testing date and place 16.12.2025- Тенево/ Tenevo
Състояние на повърхността/ Surface condition	<input checked="" type="checkbox"/> As it is/ Какмо е <input type="checkbox"/> Ground/ Шлифована	<input type="checkbox"/> Sand blasted/ Бластиране <input type="checkbox"/> Machined/ Машинно обработена	Термообработка / Heat Treatment	<input checked="" type="checkbox"/> Не/ No <input type="checkbox"/> Преди/ Before <input type="checkbox"/> След /After
Оборудване/ Equipment	Лупа с увеличение x 4/ Magnifying glass 4x Шублер/ Calliper „MITUTOYO”, № 53154 Ролетка/ Tape-line FatMax BladeArmor, № 0122 Комбиниран измерителен уред /Multipurpose measuring device TWILIMITED, Cambridge, UK, № VT03		Използван метод / Testing method	<input checked="" type="checkbox"/> Пряк/ Direct <input type="checkbox"/> Непряк/ Indirect
Интензитет на видима светлина, апарат/ Visible Light Intensity, Equipment: MAVO SPOT 2 USB, S/N: M508G/1G40557		500 ÷ 550 lx	Височина на изпитване/ Height of testing[m]	-
Резултати / Results:		Ниво за приемане/ Acceptance level: EN ISO 5817:2023 – acceptance level B		
Заварено съединение/ Welded joint	Обем на изпитване/ Scope of testing (%)	Резултат / Result(*)	Вид на несъвършенствата / Type of the imperfections	Забележки / Remarks
W1	100	1	-	-
W2	100	1	-	-
W3	100	1	-	-
(1) Приемливо/Няма индикации /Acceptable / No Indications (2) Приемливо/Няма неприемливи индикации /Acceptable / No Unacceptable Indications (3) Отхвърлено/Неприемливи индикации Rejected / Unacceptable Indications				
Забележки / Notes: 1. Забранява се размножаването на протокола или части от него! /Making copies of the report or parts of it is forbidden ! 2. Валидни са само подпечатани с печата на лабораторията листи! / Only sheets sealed by the Laboratory are valid! 3. Посочените резултати се отнасят само за изпитваните образци ! / The stated results are only valid for the tested samples! 4. Multitest ООД се освобождава от административна отговорност, когато информацията се предоставя от клиента и може да повлияе на валидността на резултатите! / Multitest Ltd is released from administrative liability when the information is provided by the client and may affect the validity of the results!				
Приложения / Appendices: 1		Страница/ Всяко страници/ Page/Total number of pages: 1/2		
Извършил изпитването / Test completed by: Красимир Радев/ Krasimir Radev Level II acc. to БДС EN ISO 9712		Ръководител лаборатория / Head of laboratory: инж. Гроздан Пеев/ Dipl. eng. Grozdan Peev Level III acc. to БДС EN ISO 9712		Приел, дата/ Accepted by, date:

ОФ 708-6 Ред.01



ПРОТОКОЛ/ REPORT МАГНИТНО-ПРАХОВО ИЗПИТВАНЕ/ MAGNETIC POWDER TESTING № 25-173-002-TL / 17.12.2025

S.№ 4359

Изпитван продукт / Tested object		Заварени съединения /Welded joints			
Изпитване (параметър)/ Testing (detectable feature)		Вид и големина на повърхностни и подповърхностни нецялостности/ индикации / Type and size of surface and subsurface discontinuities/ indications			
Заявка №/дата/ Request №/date		25-173-TL/ 16.12.2025			
Клиент/ Customer		PALFINGER MARINE			
Клиентска поръчка/ Customer order №		4511268378			
Обект/ Object		Цилиндър/ Zylinder – CPUP0009, S.№ 4359			
Подобект/ Subobject	Цилиндрова тръба/ Zylinderrohr- HY1375AMRB1X, S.№ 4359	Изпитван елемент/ Tested element:	Зав. съединение/ Welded joint W1 + W3	Вид на зав. съединения/ Type of the welded joints	BW, FW
Чертеж №/ Drawing №	HY-1375A	Материал/ Material	S460BK+S	Размери/ Dimensions, mm	по чертеж/ acc. drawing HY-1375A
Състояние на повърхността/ Surface condition	<input type="checkbox"/> Както е/ As found <input type="checkbox"/> Шлифована/ Ground <input checked="" type="checkbox"/> Бластирана/ Sand blasted <input type="checkbox"/> Машино обработана/ Machined	Температура на повърхността (°C)/ Surface temperature(°C)	<input type="checkbox"/> T < 10 <input checked="" type="checkbox"/> 10 ≤ T ≤ 50 <input type="checkbox"/> T > 50	Термообработка/ Heat Treatment	<input checked="" type="checkbox"/> He/ No <input type="checkbox"/> Преди/Before <input type="checkbox"/> След/ After
Обем на изпитване/ Scope of testing [mm]	1 137			Дата и място на изпитване/ Testing date and place	16.12.2025- Тенево/ Tenevo
Стандарт/ Standard	БДС EN ISO 17638:2017	Използван метод / Testing method В приложено магнитно поле/ In applied magnetic field	Височина на изпитване/ Height of testing[m]		
Апарат, Производител, № / Equipment, Manufacturer, № Електромагнитен дефектоскоп ES-X Flex Ferrous probe 220V, № 9833 / Electromagnetic fault detector ES-X Flex Ferrous probe 220V , № 9833 Шублер/ Calliper „MITUTOYO“, № 53154 Ролетка/ Tape-line FatMax BladeArmor, № 0122 Комбиниран уред/ Modular system TESTO 350 M/XL № 00754499					
Магнитна суспензия/Magnetic suspension Партида/ Batch №	Fluorescent Magnetic Detecting Medium B 101B	Източник на UV светлина/ Black Light Lamp	MR 98 WAN, №980743		
Измервател на UV интензитет/ UV rays intensity meter	UVP J221-San Gabriel, USA	UV интензитет/ UV intensity [W/m ²]	40		
Вид на тока/ Current type	~ 220 V	Индикатор на магнитно поле/ Magnetic indicator	NA-16; PARKER RESEARCH CORPORATION	Интензитет на видима/ светлина, апарат/ Visible Light Intensity, Equipment: MAVO SPOT 2 USB, S/N: M508G/IG40557	15÷20 lx
Техника и посока на намагнитване / Magnetizing technique and field irection[mm]	d ≥ 75; b ≤ d/2; β . 90°	Продължителност на намагнитване/ Magnetizing duration [s]	≥ 7	Интензивност на магнитното поле/ Magnetic field strength	(3.0) kA/m
Резултати/ Results*: Ниво за приемане/ Acceptance level : 2X - EN ISO 23278:2015					
Заварено съединение/ Welded joint №	Вид на несъвършенствата / Type of the imperfections	Обем на изпитването / Scope of testing (%)	Резултат / Result(*)	Забележки/ Remarks	
W1	-	100	1	-	
W2	-	100	1	-	
W3	-	100	1	-	
(1) Приемливо/Няма индикации /Acceptable / No Indications (2) Приемливо/Няма неприемливи индикации /Acceptable / No Unacceptable Indications (3) Отхвърлено/Неприемливи индикации/ Rejected / Unacceptable Indications					
Забележки / Notes: 1. Забранява се размножаването на протокола или части от него! /Making copies of the report or parts of it is forbidden ! 2. Валидни са само подпечатани с печата на лабораторията листи! / Only sheets sealed by the Laboratory are valid! 3. Посочените резултати се отнасят само за изпитваните образци ! / The stated results are only valid for the tested samples! 4. Multitest ООД се освобождава от административна отговорност, когато информацията се предоставя от клиента и може да повлияе на валидността на резултатите! / Multitest Ltd is released from administrative liability when the information is provided by the client and may affect the validity of the results!					
Приложения / Appendices: 1		Страница/ Всички страници/ Page/Total number of pages: 1/2			
Извършил изпитването / Test completed by: Красимир Радев/ Krasimir Radev Level II acc. to БДС EN ISO 9712		Ръководител лаборатория / Head of laboratory: инж. Гроздан Пеев/ Dipl. eng. Grozdan Peev Level III acc. to БДС EN ISO 9712		Приел, дата/ Accepted by, date:	

ОФ 708-6 Ред.01





ПРОТОКОЛ / REPORT УЛТРАЗВУКОВО ИЗПИТВАНЕ / ULTRASONIC TESTING № 25-173-003-TL / 17.12.2025

S.№ 4359

Изпитван продукт / Tested object :		Заварени съединения /Welded joints			
Изпитване (параметър)/ Testing (detectable feature)		Вид и големина на нецялостности / Type and size of imperfections			
Заявка №/дата/ Request №/date:		25-173-TL/ 16.12.2025			
Клиент/ Customer:		PALFINGER MARINE			
Клиентска поръчка/ Customer order №		4511268378			
Обект/ Object		Цилиндър/ Zylinder – CPUP0009, S.№ 4359			
Подобект/ Subobject	Цилиндрова тръба/ Zylinderrohr- HY1375AMRB1X, S.№ 4342	Изпитван елемент/ Tested element:	Зав. съединение/ Welded joint W1	Вид на зав. съединения/ Type of the welded joints	BW
Състояние на повърхността/ Surface condition	<input checked="" type="checkbox"/> Както е/ As it is <input type="checkbox"/> Шлифувана/ Ground <input type="checkbox"/> Бластирана/ Sand blasted <input type="checkbox"/> Машинно обработена/ Machined	Термообработка/ Heat Treatment	<input checked="" type="checkbox"/> He/ No <input type="checkbox"/> Преди/Before <input type="checkbox"/> След/ After	Температура на повърхността (°C)/ Surface temperature (°C)	<input type="checkbox"/> T < 10 <input checked="" type="checkbox"/> 10 ≤ T ≤ 50 <input type="checkbox"/> T > 50
Размери/ Dimensions [mm]:	Дебелина/ Thickness: 14	Обем на изпитване/ Scope of testing [mm]	860	Дата и място на изпитване/ Testing date and place	16.12.2025- Тенево/ Tenevo
Стандарт/ Standard: БДС EN ISO 17640:2018- ниво/ level B				Височина на изпитване/ Height of testing[m]	
Апаратура / Equipment		Ултразвуков дефектоскоп OMNISCAN MX/ OMNI/ Ultrasonic fault detector OMNISCAN MX OMNI №1895 Шублер/ Calliper „MITUTOYO”, № 53154 Ролетка/ Tape-line FatMax BladeArmor, № 0122 Комбиниран уред/ Modular system TESTO 350 M/XL № 00754499		Осезатели/ Probes	
Calibration blocks/ Контролни блокове	V1	Contact medium/ Контактна среда	машинно масло/ oil		
Ниво за оценяване/ Evaluation level	/Н ₀ / - 14dB	Ниво за записване/ Recording level	/Н ₀ / - 8dB		
Базово ниво/ Base level - /Н ₀ /	1. 63 dB (KARL DEUTSCH SE 10/6 P4), s=70 mm 2. 55 dB (MWB 60°), s=28mm, p=56mm 3. 61 dB (MWB 70°), s=40.88 mm, p=81.76 mm		Метод за настройване на чувствителността/ Sensibility adjustment method		
Корекция на загуби от преминаване/ Correction of loss from passing	2 dB		Разположение на осезателите/ Location of the probes		
				A, X, Y съгл./ according БДС EN ISO 17640:2019	
Резултати/ Results:		Ниво за приемане / Acceptance level: 2 - БДС EN ISO 11666:2018			
Заварено съединение/ Welded joint №	Местоположение и размери на дефектите/ Location and sizes of imperfection [mm]		Амплитуда/ Echo height	Резултат / Result ^(*)	
W1	-		-	1	
(1) Acceptable / No Indications / Приемливо/Няма индикации (2) Acceptable / No Unacceptable Indications / Приемливо/Няма неприемливи индикации (3) Rejected / Unacceptable Indications / Отхвърлено/Неприемливи индикации					
Забележки / Notes: 1. Забранява се размножаването на протокола или части от него! /Making copies of the report or parts of it is forbidden ! 2. Валидни са само подпечатани с печата на лабораторията листи! / Only sheets sealed by the Laboratory are valid! 3. Посочените резултати се отнасят само за изпитваните образци ! / The stated results are only valid for the tested samples! 4. Multitest ООД се освобождава от административна отговорност, когато информацията се предоставя от клиента и може да повлияе на валидността на резултатите! / Multitest Ltd is released from administrative liability when the information is provided by the client and may affect the validity of the results!					
Приложения / Appendices: 1			Страница: Вечко страници/ Page/Total number of pages: 1/ 2		
Извършил изпитването / Test completed by: Красимир Радев/ Krasimir Radev Level II acc. to БДС EN ISO 9712		Ръководител лаборатория / Head of laboratory: инж. Гроздан Пеев/ Dipl. eng. Grozdan Peev Level III acc. to БДС EN ISO 9712		Приел, дата/ Accepted by, date:	

ОФ-708-8 Ред.01

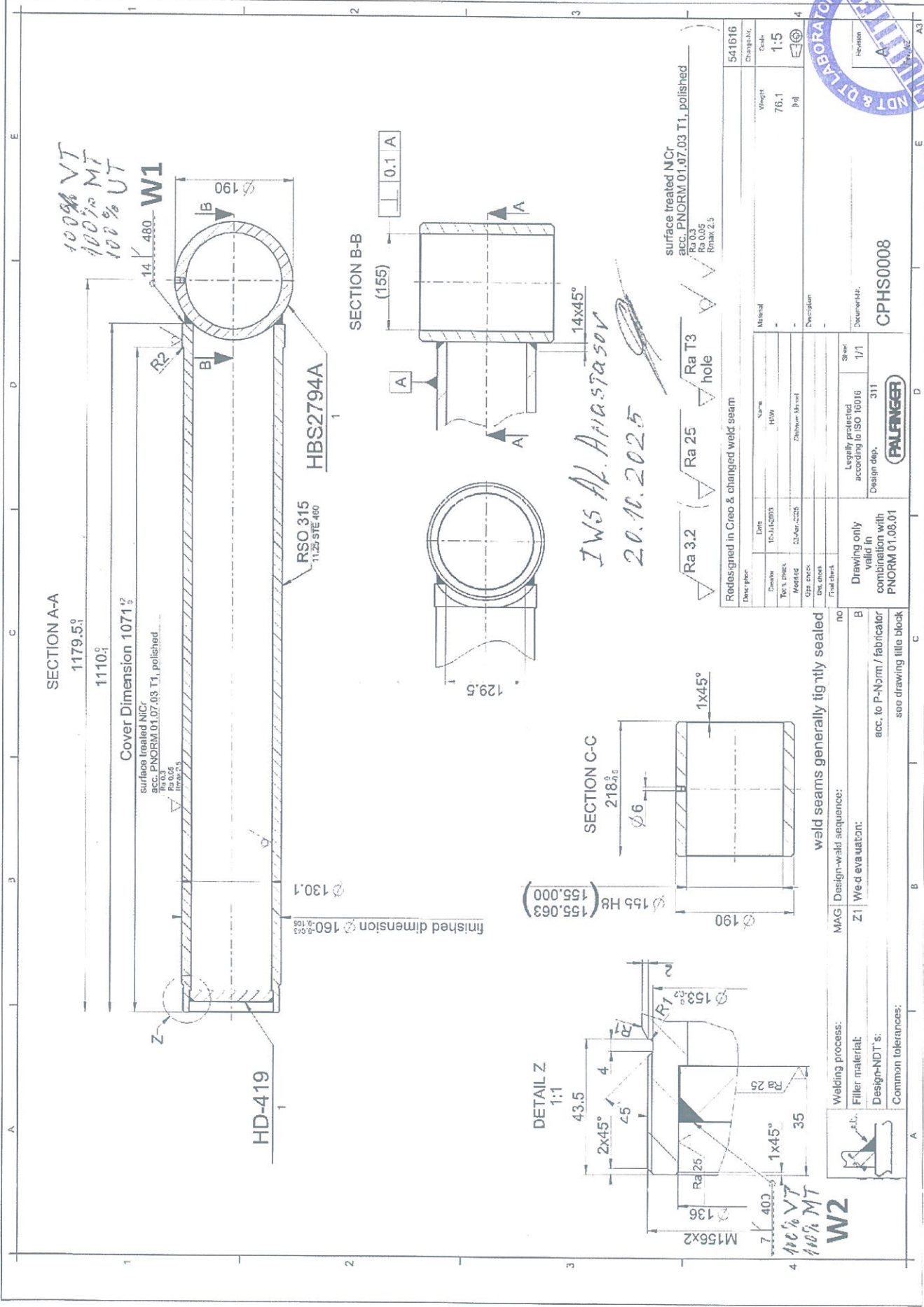


ПРОТОКОЛ / REPORT ВИЗУАЛНО ИЗПИТВАНЕ / VISUAL TESTING № 25-156-049-TL / 25.11.2025

S.№ 4359

Изпитван продукт / Tested object		Заварени съединения /Welded joints			
Изпитване (параметър)/ Testing (detectable feature)		Вид и големина на несъвършенства, отклонение в геометричните размери/ Type and size of imperfections, geometry deviations			
Заявка №/дата/ Request №/date		25-156-TL / 20.11.2025			
Клиент/ Customer		PALFINGER MARINE			
Клиентска поръчка/ Customer order №		4511268378			
Обект/ Object		Цилиндър/ Zylinder – CPUP0009, S.№ 4359			
Подобект/ Subobject	Бутален прът/ Kolbenstange- CPHS0008MRB1X, S.№ 4359	Изпитван елемент/ Tested element:	Зав. съединения/ Welded joints W1, W2	Вид на зав. съединения/ Type of the welded joints	BW
Чертеж №/ Drawing №	CPHS008	Материал/ Material	STE460	Размери/ Dimensions, mm	по чертеж/ acc. drawing CPHS008
Стандарт/ Standard	БДС EN ISO 17637:2017	Обем на изпитване/ Scope of testing [mm]	880	Дата и място на изпитване/ Testing date and place	20.11.2025- Тенево/ Tenevo
Състояние на повърхността/ Surface condition	<input checked="" type="checkbox"/> As it is/ Какмо е <input type="checkbox"/> Ground/ Шлифована	<input type="checkbox"/> Sand blasted/ Бластиране <input type="checkbox"/> Machined/ Машинно обработена	Термообработка / Heat Treatment	<input checked="" type="checkbox"/> Не/ No <input type="checkbox"/> Преди/ Before <input type="checkbox"/> След /After	
Оборудване/ Equipment	Лупа с увеличение x 4/ Magnifying glass 4x Шублер/ Calliper „MITUTOYO”, № 53154 Ролетка/ Tape-line FatMax BladeArmor, № 0122 Комбиниран измерителен уред /Multipurpose measuring device TWILIMITED, Cambridge, UK, № VT03		Използван метод / Testing method	<input checked="" type="checkbox"/> Пряк/ Direct <input type="checkbox"/> Непряк/ Indirect	
Интензитет на видима светлина, апарат/ Visible Light Intensity, Equipment: MAVO SPOT 2 USB, S/N: M508G/1G40557	500 ÷ 550 lx		Височина на изпитване/ Height of testing[m]	-	
Резултати / Results:		Ниво за приемане/ Acceptance level: EN ISO 5817:2023 – acceptance level B			
Заварено съединение/ Welded joint	Обем на изпитване/ Scope of testing (%)	Резултат / Result ⁽¹⁾	Вид на несъвършенствата / Type of the imperfections		Забележки / Remarks
W1	100	1	-		-
W2	100	1	-		-
(1) Приемливо/Няма индикации /Acceptable / No Indications (2) Приемливо/Няма неприемливи индикации /Acceptable / No Unacceptable Indications (3) Отхвърлено/Неприемливи индикации Rejected / Unacceptable Indications					
Забележки / Notes: 1. Забранява се размножаването на протокола или части от него! /Making copies of the report or parts of it is forbidden ! 2. Валидни са само подпечатани с печата на лабораторията листи! / Only sheets sealed by the Laboratory are valid! 3. Посочените резултати се отнасят само за изпитваните образци ! / The stated results are only valid for the tested samples! 4. Мултитест ООД се освобождава от административна отговорност, когато информацията се предоставя от клиента и може да повлияе на валидността на резултатите! / Multitest Ltd is released from administrative liability when the information is provided by the client and may affect the validity of the results!					
Приложения / Appendices: 1		Страница / Вкупно страници/ Page/Total number of pages: 1/2			
Извършил изпитването / Test completed by: Красимир Радев/ Krasimir Radev Level II acc. to БДС EN ISO 9712		Ръководител лаборатория / Head of laboratory: инж. Гроздан Пеев/ Dipl. eng. Grozdan Peev Level III acc. to БДС EN ISO 9712		Приел, дата/ Accepted by, date:	

ОФ 708-6 Ред.01



SECTION A-A
1179.5^{±0.1}
1110^{±0.1}

Cover Dimension 1071^{±0.2}
surface treated NiCr
acc. PNORM 01.07.03 T1, polished
Ra 0.03
Ra 0.05
Rmax 2.5

HD-419

RSO 315
1129 STE 480

HBS2794A

SECTION B-B
(155)

DETAIL Z
1:1

SECTION C-C

surface treated NiCr
acc. PNORM 01.07.03 T1, polished
Ra 0.03
Ra 0.05
Rmax 2.5

IWS AL. Anastasov
20.10.2025

Redesigned in Creo & changed weld seam

541616

Date	Drawn	Checked	Material	Weight	Scale
15.11.2023	HW			76.1	1:5
23.09.2025					

Welding process:	MAG	Design-weld sequence:	no
Filler material:	Z1	We-d evaluation:	B
Design-NDT's:		acc. to P-Norm / fabricator	
Common tolerances:		see drawing title block	

Design dep.	311	Legally protected according to ISO 15016	Sheet	1/1
Design-NDT's:				
Document No.	CPHS0008			



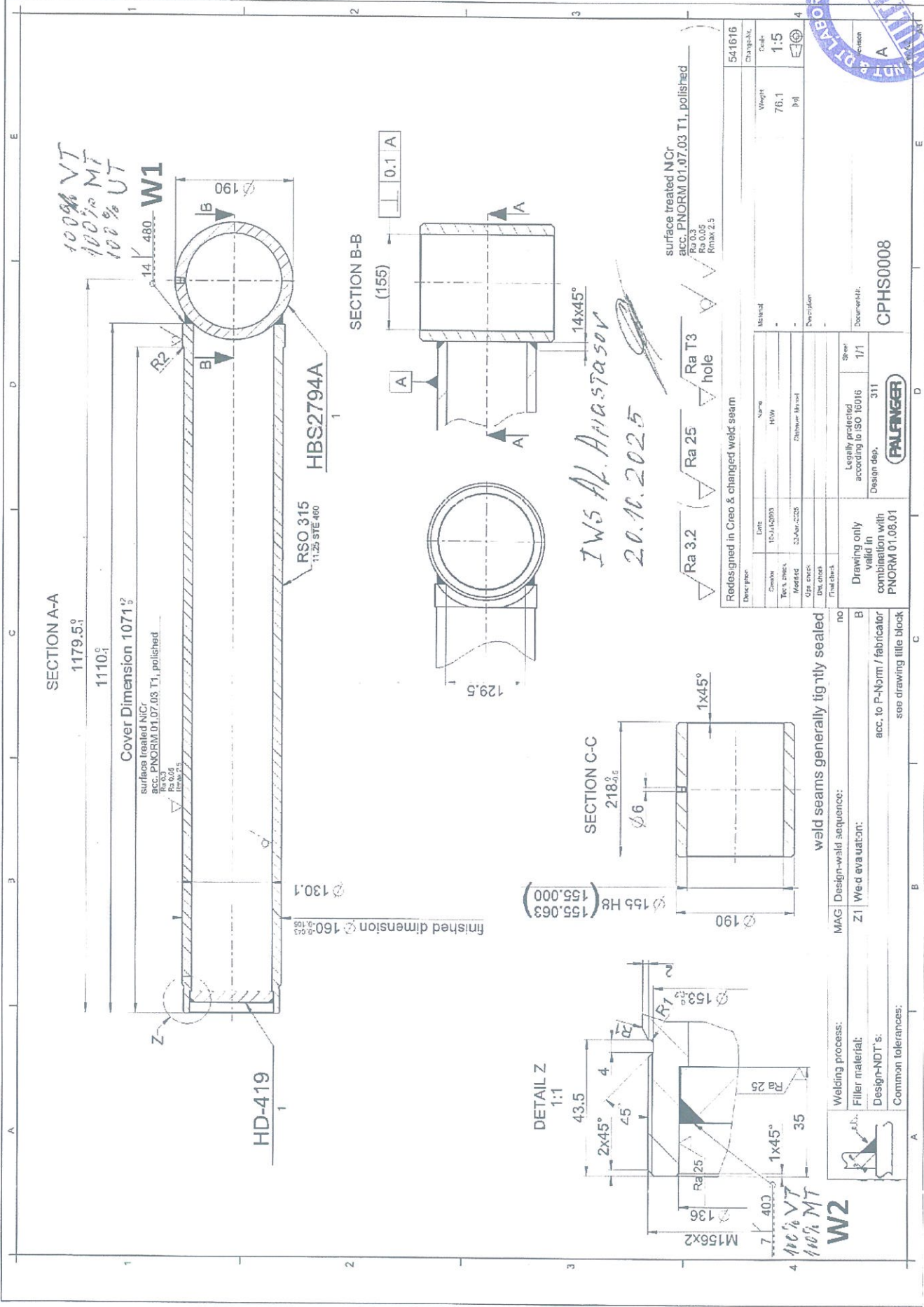


ПРОТОКОЛ/ REPORT МАГНИТНО-ПРАХОВО ИЗПИТВАНЕ/ MAGNETIC POWDER TESTING № 25-156-050-TL / 25.11.2025

S.№ 4359

Изпитван продукт / Tested object		Заварени съединения /Welded joints			
Изпитване (параметър)/ Testing (detectable feature)		Вид и големина на повърхностни и подповърхностни нецялостности/ индикации / Type and size of surface and subsurface discontinuities/ indications			
Заявка №/дата/ Request №/date		25-156-TL / 20.11.2025			
Клиент/ Customer		PALFINGER MARINE			
Клиентска поръчка/ Customer order №		4511268378			
Обект/ Object		Цилиндър/ Zylinder – CPUP0009, S.№ 4359			
Подобект/ Subobject	Бутален прът/ Kolbenstange- CPHS0008MRB1X, S.№ 4359	Изпитван елемент/ Tested element:	Зав. съединение/ Welded joint W1, W2	Вид на заварените съединения/ Type of the welded joints	BW
Чертеж №/ Drawing №	CPHS008	Материал/ Material	STE460	Размери/ Dimensions, mm	по чертеж/ acc. drawing CPHS008
Състояние на повърхността/ Surface condition	<input type="checkbox"/> Както е/ As found <input type="checkbox"/> Шлифована/ Ground <input checked="" type="checkbox"/> Бластирана/ Sand blasted <input type="checkbox"/> Машинно обработена/ Machined	Температура на повърхността (°C)/ Surface temperature(°C)	<input type="checkbox"/> T < 10 <input checked="" type="checkbox"/> 10 ≤ T ≤ 50 <input type="checkbox"/> T > 50	Термообработка/ Heat Treatment	<input checked="" type="checkbox"/> Не/ No <input type="checkbox"/> Преди/Before <input type="checkbox"/> След/ After
Обем на изпитване/ Scope of testing [mm]	880			Дата и място на изпитване/ Testing date and place	20.11.2025 Тенево/ Tenevo
Стандарт/ Standard	БДС EN ISO 17638:2017		Използван метод / Testing method В приложено магнитно поле/ In applied magnetic field	Височина на изпитване/ Height of testing[m]	
Апарат, Производител, № / Equipment, Manufacturer, №		Електромагнитен дефектоскоп ES-X Flex Ferrous probe 220V, № 9833 / Electromagnetic fault detector ES-X Flex Ferrous probe 220V, № 9833 Шублер/ Calliper „MITUTOYO“, № 53154 Ролетка/ Tape-line FatMax BladeArmor, № 0122 Комбиниран уред/ Modular system TESTO 350 M/XL № 00754499			
Магнитна суспензия/Magnetic suspension Партида/ Batch №	Fluorescent Magnetic Detecting Medium B 101B	Източник на UV светлина/ Black Light Lamp		MR 98 WAN, № 980743	
Измервател на UV интензитет/ UV rays intensity meter	UVP J221-San Gabriel, USA		UV интензитет/ UV intensity [W/m ²]	40	
Вид на тока/ Current type	~ 220 V	Индикатор на магнитно поле/ Magnetic indicator	NA-16; PARKER RESEARCH CORPORATION	Интензитет на видима/ светлина, апарат/ Visible Light Intensity, Equipment: MAVO SPOT 2 USB, S/N: M508G/1G40557	15÷20 lx
Техника и посока на намагнитване / Magnetizing technique and field irection[mm]	d ≥ 75; b ≤ d/2; β . 90°	Продължителност на намагнитване/ Magnetizing duration [s]	≥ 7	Интензивност на магнитното поле/ Magnetic field strength	(3.0) kA/m
Резултати/ Results*:		Ниво за приемане/ Acceptance level : 2X - EN ISO 23278:2015			
Заварено съединение/ Welded joint №	Вид на несъвършенствата / Type of the imperfections	Обем на изпитването / Scope of testing (%)	Резултат / Result ⁽¹⁾	Забележки/ Remarks	
W1	-	100	1	-	
W2	-	100	1	-	
(1) Приемливо/Няма индикации /Acceptable / No Indications (2) Приемливо/Няма неприемливи индикации /Acceptable / No Unacceptable Indications (3) Отхвърлено/Неприемливи индикации/ Rejected / Unacceptable Indications					
Забележки / Notes: 1. Забранява се размножаването на протокола или части от него! /Making copies of the report or parts of it is forbidden ! 2. Валидни са само подпечатани с печата на лабораторията листи! / Only sheets sealed by the Laboratory are valid! 3. Посочените резултати се отнасят само за изпитваните образци ! / The stated results are only valid for the tested samples! 4. Multitest ООД се освобождава от административна отговорност, когато информацията се предостави от клиента и може да повлияе на валидността на резултатите! / Multitest Ltd is released from administrative liability when the information is provided by the client and may affect the validity of the results!					
Приложения / Appendices: 1		Страница/ Всички страници/ Page/Total number of pages: 1/ 2			
Извършил изпитването / Test completed by: Красимир Радев/ Krasimir Radev Level II acc. to БДС EN ISO 9712		Ръководител лаборатория / Head of laboratory: инж. Гроздан Пеев/ Dipl. eng. Grozdan Peev Level III acc. to БДС EN ISO 9712		Приел, дата/ Accepted by, date:	

ОФ 708-6 Ред.01



IWS AL. Anastasov
20.10.2025



ПРОТОКОЛ / REPORT УЛТРАЗВУКОВО ИЗПИТВАНЕ / ULTRASONIC TESTING № 25-156-051-TL / 25.11.2025

S.№ 4359

Изпитван продукт / Tested object :		Заварени съединения /Welded joints	
Изпитване (параметър)/ Testing (detectable feature)		Вид и големина на нецялостности / Type and size of imperfections	
Заявка №/дата/ Request №/date:		25-156-TL/ 20.11.2025	
Клиент/ Customer:		PALFINGER MARINE	
Клиентска поръчка/ Customer order №		4511268378	
Обект/ Object		Цилиндър/ Zylinder – CPUP0009, S.№ 4359	
Подобект/ Subobject	Бутален прът/ Kolbenstange- CPHS0008MRB1X, S.№ 4359	Изпитван елемент/ Tested element:	Зав. съединение/ Welded joint W1
Състояние на повърхността/ Surface condition	<input checked="" type="checkbox"/> Както е/ As it is <input type="checkbox"/> Шлифована/ Ground <input type="checkbox"/> Бластирана/ Sand blasted <input type="checkbox"/> Машинно обработена/ Machined	Термообработка/ Heat Treatment	<input checked="" type="checkbox"/> Не/ No <input type="checkbox"/> Преди/Before <input type="checkbox"/> След/ After
Размери/ Dimensions [mm]:	Дебелина/ Thickness: 14.95 15.35	Обем на изпитване/ Scope of testing [mm]	345
Стандарт/ Standard: БДС EN ISO 17640:2019- ниво B БДС EN ISO 17640:2019- level B		Дата и място на изпитване/ Testing date and place	
Апаратура / Equipment		Височина на изпитване/ Height of testing[m]	
Ултразвуков дефектоскоп OMNISCAN MX/ OMNI/ Ultrasonic fault detector OMNISCAN MX OMNI №1895 Шублер/ Calliper „MITUTOYO“, № 53154 Ролетка/ Tare-line FatMax BladeArmor, № 0122 Комбиниран уред/ Modular system TESTO 350 M/XL № 00754499		Осезатели/ Probes	
Calibration blocks/ Контролни блокове	V1	Contact medium/ Контактна среда	машинно масло/ oil
Ниво за оценяване/ Evaluation level	/Ho/ - 14dB	Ниво за записване/ Recording level	/Ho/ - 4dB
Базово ниво/ Base level - /Ho/	1. 63 dB (KARL DEUTSCH SE 10/6 P4), s=74.75 mm 2. 55 dB (MWB 45°), s=21.23 mm, p=42.46 mm 3. 61 dB (MWB 60°), s=29.9 mm, p=59.8 mm	Метод за настройване на чувствителността/ Sensitivity adjustment method	
Корекция на загуби от преминаване/ Correction of loss from passing	2 dB	Разположение на осезателите/ Location of the probes	A, X, Y съгл./ according БДС EN ISO 17640:2019
Резултати/ Results:		Ниво за приемане / Acceptance level : 2- БДС EN ISO 11666:2018	
Заварено съединение/ Welded joint №	Местоположение и размери на дефектите/ Location and sizes of imperfection [mm]	Амплитуда/ Echo height	Резултат / Result ^(*)
W1	-	-	1
(1) Acceptable / No Indications / Приемливо/Няма индикации (2) Acceptable / No Unacceptable Indications / Приемливо/Няма неприемливи индикации (3) Rejected / Unacceptable Indications / Отхвърлено/Неприемливи индикации			
Забележки / Notes: 1. Забранява се размножаването на протокола или части от него! /Making copies of the report or parts of it is forbidden ! 2. Валидни са само подпечатани с печата на лабораторията листи! / Only sheets sealed by the Laboratory are valid! 3. Посочените резултати се отнасят само за изпитваните образци ! / The stated results are only valid for the tested samples! 4. Multitest ООД се освобождава от административна отговорност, когато информацията се предоставя от клиента и може да повлияе на валидността на резултатите! / Multitest Ltd is released from administrative liability when the information is provided by the client and may affect the validity of the results!			
Приложения / Appendices: 1		Страница/ Всичко страници/ Page/Total number of pages: 1/ 2	
Извършил изпитването / Test completed by: Красимир Радев/ Krasimir Radev Level II acc. to БДС EN ISO 9712 ОФ 708-8 Ред.01		Ръководител лаборатория / Head of laboratory: инж. Гроздан Пеев/ Dipl. eng. Grozdan Peev Level III acc. to БДС EN ISO 9712 	
		Приел, дата/ Accepted by, date:	

NDT OPERATOR QUALIFICATION CERTIFICATE



No. **22BG00003PN13/RC**

Operator	RADEV KRASIMIR	
Born in	VARNA-BULGARIA	on 21/03/1982
Employed by	MULTITEST LTD.	
Located in	Varna	

THIS IS TO CERTIFY that the non destructive test operator is qualified by examinations at the LEVEL 2 according to UNI EN ISO 9712:2012 standard and to RINA Rule RC/C 14

in the method:

VISUAL

for the sectors:

Pre-service and in service testing of equipment, plants and structures

This certificate is valid from	24 June 2022	to	23 June 2027
Issued at	GENOVA	on	24 June 2022

Alessandro Romei
(Certification EMEA Region
Senior Director)

RINA Services S.p.A.
Via Corsica 12 - 16128 Genova

Operator

This certificate consist of 1 page



PRS N° 066 C

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



NDT OPERATOR QUALIFICATION CERTIFICATE



No. 22BG00003PN11/RC

Operator	RADEV KRASIMIR		
Born in	VARNA-BULGARIA	on	21/03/1982
Employed by	MULTITEST LTD.		
Located in	Varna		

THIS IS TO CERTIFY that the non destructive test operator is qualified by examinations at the LEVEL 2 according to UNI EN ISO 9712:2012 standard and to RINA Rule RC/C 14

in the method:

MAGNETIC PARTICLE

for the sectors:

Pre-service and in service testing of equipment, plants and structures

This certificate is valid from	24 June 2022	to	23 June 2027
Issued at	GENOVA	on	24 June 2022

Alessandro Romei
(Certification EMEA Region
Senior Director)

Operator

RINA Services S.p.A.
Via Corsica 12 - 16128 Genova

This certificate consist of 1 page



PRS N° 066 C

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



NDT OPERATOR QUALIFICATION CERTIFICATE



No. 22BG00015PN2

Operator	RADEV KRASIMIR		
Born in	VARNA-BULGARIA	on	21/03/1982
Employed by	MULTITEST LTD.		
Located in	Varna		

THIS IS TO CERTIFY that the non destructive test operator is qualified by examinations at the LEVEL 2 according to UNI EN ISO 9712:2012 standard and to RINA Rule RC/C 14

in the method:

ULTRASONIC

for the sectors:

Pre-service and in service testing of equipment, plants and structures

This certificate is valid from	4 November 2022	to	3 November 2027
Issued at	GENOVA	on	4 November 2022



Operator

Alessandro Romei
(Certification EMEA Region
Senior Director)



RINA Services S.p.A.
Via Corsica 12 - 16128 Genova

This certificate consist of 1 page



PRS N° 066 C

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



Protokol from pressure test

PALFINGER

Протокол от изпитване с налягане

Tenevo

Record No.: **240525**
Запис No:

Manufacturer: **Palfinger Produktionstechnik**
Производител: **Bulgarien EOOD**
8672 Tenevo, Yambol, Bulgaria

Customer: **Palfinger Marine GmbH,**
Клиент: **Slowenien**
2000 Maribor, Spelina Ulica 22

Master order: **306919474**
Произв. п-ка:

Customer order No.: **4511268378 / 100678681**
Клиентска поръчка:

Cylinder type: **CPUP0009X**
Цилиндър тип:

Customer type No.: **CPUP0009**
Клиентски артикул:

Serial No.: **4359**
Сериен номер:

Drawing No.: **CPUP0009**
Чертеж номер:

Index: **A**
Индекс

HYDRAULIC CYLINDER'S TEST PLANE

Test program: **CPUP0009**
Програма за изпитване:

Inspector Stamp / Name: **T Patev**
Контрольор Щемпел / Име:

Cleanliness of oil under ISO4406: **13/11/8**
Чистота на маслото ISO4406:

Testing temperature: **30°C**
Температура на маслото:

- | | | |
|----|---|--|
| 1. | Venting of the cylinder
Обезвъздушаване на цилиндъра | Yes / Да |
| 2. | Rinsing the cylinder - only cylinders with internal oil pipes
Изплакване на цилиндъра - само цилиндри с вътрешни масло проводи | No / Не |
| 3. | Pressure at the bottom: 420 Bar.
Налягане от към дъното:
Number of double moves: 2
Брой двойни ходове: | Pressure at the nut: 420 Bar.
Налягане от към затвора:
Retention time under pressure: 50 Sek.
Време за задържане: |
| 4. | Inspection for leaks: Yes / Да
Контрол за течове:
Pressure keeping: Yes / Да
Задържа налягане: | Visible external leaks: No / Не
Видими външни течове: |
| 5. | Draining the test oil from the cylinder
Източване на изпитващото масло от цилиндъра | Yes / Да |
| 6. | After testing the cylinder is filled with oil:
След изпитване цилиндъра е напълнен с масло: | cylinder is empty / празен |
| 7. | All feeders are hermetically sealed with metal stoppers
Всички хранващи отвори и питатели са херметически затворени с метални тапи | Yes / Да |

Acceptability of cylinder:

Marking: **TEN 17.12.2025**
Маркировка: **T - CPUP0009**

APPROVED / Приема се

S.No.: **4359**
Tp **420 Bar. Wp Bar.**

Comment:
Коментар:

Stamp and Signature:
Печат и Подпис:



Date of test: **17.12.2025**
Дата на изпитване:

Лауфкарта за цилиндри с приемане Race card for cylinder to acceptance		PALFINGER Tenevo	
Цилиндър номер Cylinder number	CPUP0009MRB1	Сериен номер Serial number	4359
Произв. поръчка Master Order	306919474	Начало Begin	04.12.25
Клиентска поръчка Customer order	4511268378 100678681	Край Finish	04.12.25
Части за монтиране / Mounting parts			
НУ - тръба на цил. Cylinder tube	HY1375AMRB1	Пр.поръчка / Сер. н-р Prod. order / Serial Nr.	306919471 4359
НСК - пръти Piston rod	CPHS0008MRB1	Пр.поръчка / Сер. н-р Prod. order / Serial Nr.	306919472 4359
НК - бутала Piston	НК 185MRB1	Пр.поръчка / Плавка Prod. order / Heat Nr.	306919470 4359
НУ - затвор Cylinder nut	HV 412MRB1	Пр.поръчка / Плавка Prod. order / Heat Nr.	306919473 4359
Име на инспектора Name Inspector	V. Filipov	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Изпитване с налягане Pressure Test		Дата / Протокол Date of test / Protokol	17.12.25 240525
Работно място Workstation	MMP021	Маркировка на ц-ра Marking of cylinder	TEN 17.12.2025 T-CPUP0009 S. Nr. 4359 Tp 420 bar / Wp bar.
Програма за изпит. Test Program	CPUP0009GEP		
Инсп-ор шемпел/име Inspector stamp/name	T Patev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Приемане от сертифицираща организация Approval from certification body		Дата / Организация Date / Body	17.12.25 MRB
Име на инспектора Name Inspector	Filipov	Резултат от прием. Result of acceptance	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
коментари Comments			

Лауфкарта за цилиндрови тръби с приемане Race card for cylinder tube with acceptance		PALFINGER	
		Tenevo	
Цилиндър номер (HY) Cylinder tube number	HY1375AMRB1	Сериен номер Serial number	4359
Произв. поръчка Master Order	306919471	Начало Begin	21.11.25
Клиентска поръчка Customer order	4511268378 100678681	Край Finish	04.12.25
Сурови материали 3.1 / Raw Material 3.1			
Позиция име Pos. Name	AVRO0668PSO1	Плавка / Партида Heat Nr. / Int. charge	953835 D2267
Позиция име Pos. Name	HD 924MRB1 / AVXHD 919MRB1	Плавка / Партида Heat Nr. / Int. charge	530904 B2025/294
Позиция име Pos. Name	HBS2795MRB1 / RSO 361	Плавка / Партида Heat Nr. / Int. charge	R64954 D1855
Име на инспектора Name Inspector	V. Filipov	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Заваряване - първа операция Welding - 1		Перс. номер / име Personal Number & Name	8.12.2025
Работно място Workstation	BOX8	Щемпел на заварчик Weld Number	SK
Заваръчна тел / Welding Wire			
Производител Manufacturer	ESAB	Описание Designation	ESAB OK. Aristo Rod 12.63
Диаметър Diameter	1mm	Партида Batch	PVZ2511747
Номер на артикул Material number	1A63106910	Име на инспектора Name Inspector	St.Ivanov
Заваряване - втора операция Welding - 2		Перс. номер / име Personal Number & Name	12.12.2025
Работно място Workstation	ROYC 22	Щемпел на заварчик Weld Number	FC
Заваръчна тел / Welding Wire			
Производител Manufacturer	Boehler	Описание Designation	X - 70 - IG
Диаметър Diameter	1,2mm	Партида Batch	106944
Номер на артикул Material number	-	Име на инспектора Name Inspector	St.Ivanov
Контрол на размерите of the dimensions		Inspection	Дата / Протокол Date of inspection / Protokol
			16.12.25 2512-0541
Име на инспектора Name Inspector	Babachev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Безразрушителен контрол VT NDT Inspection VT		Дата / Протокол Date of inspection / Protokol	12.12.25 25-173-001
Инспектор номер/име Inspector number/name	Radev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Безразрушителен контрол MT NDT Inspection MT		Дата / Протокол Date of inspection / Protokol	12.12.25 25-173-002
Инспектор номер/име Inspector number/name	Radev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Безразрушителен контрол UT NDT Inspection UT		Дата / Протокол Date of inspection / Protokol	12.12.25 25-173-003
Инспектор номер/име Inspector number/name	Radev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
коментари Comments			

Лауфкарта за бутални пръти с приемане Race card for piston rot with acceptance		PALFINGER	
		Tenevo	
Цилиндър номер (HY) Cylinder tube number	CPHS0008MRB1	Сериен номер Serial number	4359
Произв. поръчка Master Order	306919472	Начало Begin	12.11.25
Клиентска поръчка Customer order	4511268378 100678681	Край Finish	13.01.26
Сурови материали 3.1 / Raw Material 3.1			
Позиция име Pos. Name	RSO 315	Плавка / Партида Heat Nr. / Int. charge	R65253 D1908
Позиция име Pos. Name	HBS2794AMRB1 / RSO 209	Плавка / Партида Heat Nr. / Int. charge	995925 D1356
Име на инспектора Name Inspector	V. Filipov	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Заваряване - първа операция Welding - 1		Перс. номер / име Personal Number & Name	18.11.2025
Работно място Workstation	ROYC 19	Щемпел на заварчик Weld Number	DG
Заваръчна тел / Welding Wire			
Производител Manufacturer	ESAB	Описание Designation	ESAB OK. Aristo Rod 12.63
Диаметър Diameter	1,6mm	Партида Batch	PVZ2410913
Номер на артикул Material number	1A63169A60	Име на инспектора Name Inspector	AI.Anastasov
Контрол на размерите of the dimensions		Дата / Протокол Date of inspection / Protokol	16.12.25 2512-0548
Име на инспектора Name Inspector	Dimitrov	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Безразрушителен контрол VT NDT Inspection VT		Дата / Протокол Date of inspection / Protokol	25.11.25 25-156-049
Инспектор номер/име Inspector number/name	Radev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Безразрушителен контрол MT NDT Inspection MT		Дата / Протокол Date of inspection / Protokol	25.11.25 25-156-050
Инспектор номер/име Inspector number/name	Radev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
Безразрушителен контрол UT NDT Inspection UT		Дата / Протокол Date of inspection / Protokol	25.11.25 25-156-051
Инспектор номер/име Inspector number/name	Radev	Резултат от контрола Result of inspection	OK <input checked="" type="checkbox"/> NOK <input type="checkbox"/>
коментари Comments			

Hydraulikzylinder:

CPUR0009K

Цилиндър Zylinderrohr

Обозначение Bezeichnung	HY1375AMRB1	Индекс Zeichnungsindex	E	Черт. н-р Zeichn.Nr.		Поръчка Fertigungsauf.		Протокол н-р Protokoll Nr.	
				Размера е Ist - Wert	Nr.	Размера е Ist - Wert	Nr.	Размера е Ist - Wert	Nr.
Контролиран признак Prüfmerkmal		Размера трябва да е Soll - Wert		Размера е Ist - Wert		Размера е Ist - Wert		Размера е Ist - Wert	
Сериен номер Lauende Nr.	→		Nr. 4359		Nr.		Nr.		Nr.
Резба	M258x2.5		OK					2512-0541	
Обща дължина на цилиндъра	1134-1		1134						
Ориентация на първи нипел °	45°		44,7°						
Размер от челото на цилиндъра до нипела	96.3		96,6						
Ориентация на втори нипел	29		29						
Височина на втори нипел	89		89,5						
Ø на работната повърхност	Ø250 ^{+0.072}		+0,06						
Позиция на M10x1	30		30						
Ø на HBS	Ø105 ^{+0.054}		+0,03						
Дължина на HBS	288-0.5		-0,25						
Детайлите са: Teile sind:			OK <input checked="" type="checkbox"/>	OK <input type="checkbox"/>	nicht OK <input type="checkbox"/>	OK <input type="checkbox"/>	OK <input type="checkbox"/>	nicht OK <input type="checkbox"/>	OK <input type="checkbox"/>

Бутален прът Kolbenstange

Обозначение Bezeichnung	CPHS0008MRB1	Индекс Zeichnungsindex	A	Черт. н-р Zeichn.Nr.		Поръчка Fertigungsauf.		Протокол н-р Protokoll Nr.	
				Размера е Ist - Wert	Nr.	Размера е Ist - Wert	Nr.	Размера е Ist - Wert	Nr.
Резба	M156X2		OK					2512-0548	
Дължина на раб. повърхност (Abdeckmaß)	1071+2		1071						
Дължина до центъра на отвора	1179.5-1		1179,5						
Ø - на работната повърхност	Ø160 ^{-0.043}		-0,07						
Ø - на втулката	Ø155 ^{+0.063}		+0,01						
Ширина на втулката или на HIB	218 -0.5		-0,4						
Ra - стойност на работната повърхност	0.05-0.3		0,07						
Детайлите са: Teile sind:			OK <input checked="" type="checkbox"/>	OK <input type="checkbox"/>	nicht OK <input type="checkbox"/>	OK <input type="checkbox"/>	OK <input type="checkbox"/>	nicht OK <input type="checkbox"/>	OK <input type="checkbox"/>

Други: Всеки контролиран детайл от прототипна серия се шемпелова със сериен номер съответстващ на номера в измервателния протокол.

Дата: 17.12.2025г.
Изпитващ: С. Димитров
Prüfer:

Welder's certificate

Certificate no.: 4OSL 0100 25 038
Designation: ISO 9606-1 135 P FW FM1 S t10 PB ml
Welder's name: KOLEV, Stefan (SK) **WPS-Reference:** 096
Legitimation method: EGN 9205199049 **Job knowledge:** not tested
Date and place of birth: 19.05.1992 in Yambol, Bulgaria **Test report no.:** 4OSL R 0100 25 038
Employer: Palfinger Produktionstechnik Bulgaria" EOOD, 8672 Tenevo, Bulgaria
Remark:
Test Specification: БДС EN ISO 9606-1:2018

	Test piece	Range of qualification
Welding process(es)	135	135, 138
Transfer mode	G	S, G, P
Product type (plate P or tube T)	P	P, T
Type of weld	FW	FW
Material group(s) / subgroups	1.3	1 + 11
Filler material group(s)	FM1	FM1, FM2
Filler material (designation)	S	S, M (Root S)
Shielding gas	EN ISO 14175 – M21 – ArC – 18	Similar shielding gas
Auxiliaries (e.g. backing gas)	-	-----
Type of current and polarity	DC/positive(=/+)	-----
Material thickness [mm]	10	≥ 3
Deposited thickness [mm]	-	-----
Outside pipe diameter [mm]	-	D ≥ 75 (rot.); D ≥ 500 (fixed)
Welding position(s)	PB	PA, PB
Weld details	--	-----
Single layer (sl) / multi layer (ml)	ml	sl, ml
Additional information	-	

Type of test	Performed and accepted	Not tested
Visual testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiography testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Macroscopic examination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fracture test	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bend test	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notch tensile test	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Prof. Dr. - Ing. T. Ivanov
 Body for certification of personnel
 TÜV NORD Bulgaria EOOD, Reg. No 4OSL

Revalidation according 9.3 a	Date of welding 22.08.2025	Qualification valid until 21.08.2028	Date of issue 03.09.2025
------------------------------	----------------------------	--------------------------------------	--------------------------

REVALIDATION FOR QUALIFICATION BY CERTIFICATION BODY FOR THE FOLLOWING 2 YEARS (clause 9.3b)

CONFIRMATION OF THE VALIDITY BY EMPLOYER/ WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS (clause 9.2)

Date	Signature	Position or title

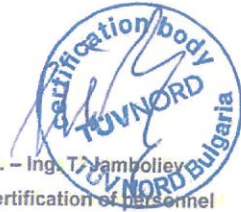
Date	Signature	Position or title

Welder's certificate

Certificate no.: 4OSL 0100 25 055
Designation: ISO 9606-1 135 T FW FM1 S t2.5 D13 PB ml
 135 T FW FM1 S t8 D80 PB ml
Welder's name: KOLEV, Stefan (SK) **WPS-Reference:** 171
Legitimation method: EGN 9205199049 **Job knowledge:** not tested
Date and place of birth: 19.05.1992 in Yambol, Bulgaria **Test report no.:** 4OSL R 0100 25 055
Employer: Palfinger Produktionstechnik Bulgaria" EOOD, 8672 Tenevo, Bulgaria
Remark: --
Test Specification: БДС EN ISO 9606-1:2018

	Test piece		Range of qualification
Welding process(es)	135		135, 138
Transfer mode	G		S, G, P
Product type (plate P or tube T)	T		P, T
Type of weld	FW		FW, Branch connection ($\alpha = 90^\circ$)
Material group(s) / subgroups	1.3	1.2	1 + 11
Filler material group(s)	FM1		FM1, FM2
Filler material (designation)	S		S, M (Root S)
Shielding gas	EN ISO 14175 – M21 – ArC – 18		Similar shielding gas
Auxiliaries (e.g. backing gas)	-		-----
Type of current and polarity	DC/positive(=+)		-----
Material thickness [mm]	8	2.5	2.5 + 8
Deposited thickness [mm]	-		-----
Outside pipe diameter [mm]	80	13	13 + 80
Welding position(s)	PB		PA, PB
Weld details	--		-----
Single layer (sl) / multi-layer (ml)	ml		sl, ml
Additional information	-		

Type of test	Performed and accepted	Not tested
Visual testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiography testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Macroscopic examination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fracture test	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bend test	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Notch tensile test	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Prof. Dr. – Ing. T. Yamboliev
 Body for certification of personnel
 TÜV NORD Bulgaria EOOD, Reg. No 4OSL

Revalidation according 9.3 a	Date of welding 22.08.2025	Qualification valid until 21.08.2028	Date of issue 03.09.2025
------------------------------	----------------------------	--------------------------------------	--------------------------

REVALIDATION FOR QUALIFICATION BY CERTIFICATION BODY FOR THE FOLLOWING 2 YEARS (clause 9.3b)

CONFIRMATION OF THE VALIDITY BY EMPLOYER/ WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS (clause 9.2)

Date	Signature	Position or title

Date	Signature	Position or title

CERTIFICATE 4OSL 0100 23 056



2 Designation(s) **Welder's certificate ISO 9606-1 135 T FW FM1 S t2.5 D13 PB ml
135 T FW FM1 S t8 D80 PB ml**

Examining body: Body for certification of personnel
TUV NORD Bulgaria EOOD

3
4 WPS-Reference : 171
5 Welder's name : **DEMIREV, Hrisimir (FC)**
6 Identification : EGN 7312049103
7 Method of Identification : Welder ID
8 Date / place of birth : 04.12.1973 in Yambol, Bulgaria
9 Employer: : „Palfinger Produktionstechnik Bulgaria“ EOOD, 8672 Tenevo, Bulgaria
10 Code / Testing standard : БДС EN ISO 9606-1:2018
11 Remark : --
12 Job knowledge : not tested

	Test piece	Range of qualification
14 Welding process(es)	135	135, 138
15 Transfer mode	G	S, G, P
16 Product type (plate or pipe)	T	P, T
17 Type of weld	FW	FW, Branch connection ($\alpha = 90^\circ$)
18 Material group(s) / subgroups	1.3 1.2	1 + 11
19 Filler material group(s)	FM1	FM1, FM2
20 Filler material (designation)	S	S, M (Root S)
21 Shielding gas	EN ISO 14175 – M21 – ArC – 18	Similar shielding gas
22 Auxiliaries (e.g. backing gas)	-	-----
23 Type of current and polarity	DC/positive(=+)	-----
24 Material thickness [mm]	8 2.5	≥ 2.5
25 Deposited thickness [mm]	-	-----
26 Outside pipe diameter [mm]	80 13	13 + 80
27 Welding position(s)	PB	PA, PB
28 Weld details	-	-----
29 Multi- / single layer	ml	-----

30 Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

Type of test	Performed and accepted	not tested
34 Visual testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35 Radiography testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36 Macroscopic examination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37 Fracture test	<input checked="" type="checkbox"/>	<input type="checkbox"/>
38 Bend test	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39 Notch tensile test	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Revalidation acc 9.3 a



Eng. Dobromir Dobrev
Body for certification of personnel
TUV NORD Bulgaria EOOD, Reg. No 4OSL

Place, date Plovdiv, 14.06.2023
Date of welding: 06.06.2023
Validity of qualification until: 05.06.2026

40 REVALIDATION FOR QUALIFICATION BY CERTIFICATION BODY FOR THE FOLLOWING 2 YEARS (clause 9.3b)

CONFIRMATION OF THE VALIDITY BY EMPLOYER/ WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS (clause 9.2)

Date	Signature	Position or title

Date	Signature	Position or title
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2023.11.27 09:26:41 +02'00'</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2024.05.21 10:32:02 +03'00'</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2024.11.19 10:49:37 +02'00'</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2025.05.13 08:04:29 +03'00'</small>	
Yordan Dimitrov	<small>Digitally signed by Yordan Dimitrov Date: 2025.11.06 11:02:18 +02'00'</small>	



Орган за Сертификация на Лица ТЮФ Норд България ЕООД, 4000 Пловдив, ул. Н. Геров 13, www.tuev-nord.bg
Акредитация от ИА БСА съгласно БДС EN ISO/IEC 17024:2012, рег. № 4OSL, валиден сертификат до: 22.7.2025
Body for Certification of Personnel TÜV Nord Bulgaria Ltd., 4000 Plovdiv, 13 Nayden Gerov str, www.tuev-nord.bg
Accredited by EA BAS according to БДС EN ISO/IEC 17024:2012, registration № 4OSL, valid certificate until: 22.7.2025

1 **Qualification test certificate for welding operator**
 2 **CERTIFICATE 4OSL 0100 23 073**



Examiner: Body for certification of personnel
 TÜV NORD Bulgaria EOOD

- 4 WPS-Reference: : 451 PPT
- 5 Name weld. operator/setter: : DEMIREV, Hrisimir (FC)
- 6 Identification: : EGN 7312049103
- 7 Method of identification: : Welder ID
- 8 Date and place of birth: : 04.12.1973 in Yambol, Bulgaria
- 9 Employer : „Palfinger Produktionstechnik Bulgaria“ EOOD, 8672 Tenevo, Bulgaria
- 10 Code/testing standard: : БДС EN ISO 14732 : 2013
- 11 Remark: : -
- 12 Job knowledge: : acceptable

	Test piece	Range of qualification
14 Welding process	135 EN ISO 4063	135 EN ISO 4063
15 Welding equipment	CLOOS	CLOOS
16 Welding unit	CLOOS R32 TC	ROYC019,ROYC022,ROYC023,ROYC024,ROYC048,ROYC058,ROYC083,ROYC084,ROYC091
17 Details for fully mechanized welding		
18 Visual control/visual remote control	-	-
19 Automatic arc length control	-	-
20 Automatic joint tracking	-	-
21 Welding position	-	-
22 Single run/multi run	-	-
23 Material backing	-	-
24 Consumable insert	EN ISO 14341 – A – G 46 4 M21 4Si1	EN ISO 14341 – A – G 46 4 M21 4Si1
25 Details for automatic welding		
26 Joint sensor	With joint sensor	With joint sensor
27 Automatic arc length control	With automatic arc length control	With automatic arc length control
28 Single run/multi run technique	ml	sl, ml
29 Type of welding unit	Robot welding with rotary positioner	Robot welding

30 Additional information is available on attached sheet and/or welding procedure specification No.: 451 PPT

31 The qualification is based on:

- 32 welding procedure test (see 4.1 a)
- 33 pre-production welding test (see 4.1 b)
- 34 standard test piece (see 4.1 c)
- 35 production test or production sample testing (see 4.1d)

36 Results of the qualification test see documents:
 37 Reports № 232190/ 26.09.2023

Prof. Dr. – Ing. G. Jamboliev
 Body for certification of personnel
 of TÜV NORD Bulgaria EOOD
 Reg. No 4OSL

Revalidation Location, date: Plovdiv, 29.09.2023
 Acc. Date of welding of test piece: 21.09.2023
 5.3 a) Validity of qualification until: 20.09.2029

38 RE-VALIDATION FOR QUALIFICATION BY EXAMINER
 EXAMINING BODY FOR THE FOLLOWING 3 YEARS
 (SEE CLAUSE 5.3b)

RE-VALIDATION FOR QUALIFICATION BY EMPLOYER/
 WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS
 (SEE CLAUSE 5)

Date	Signature	Position or title

Date	Signature	Position or title
	Digitally signed by Dimitrov Jordan Date: 2024.03.12 14:56:50 +02'00'	
	Digitally signed by Dimitrov Jordan Date: 2024.09.16 10:06:49 +03'00'	
	Digitally signed by Dimitrov Jordan Date: 2025.03.07 10:41:36 +02'00'	
	Digitally signed by Dimitrov Jordan Date: 2025.09.15 12:42:43 +03'00'	



CERTIFICATE 4OSL 0100 23 023



2 Designation(s) **Welder's certificate ISO 9606-1 135 P FW FM1 S t10 PB ml**

3 Examining body: Body for certification of personnel
TUV NORD Bulgaria EOOD

- 4 WPS-Reference : 096
- 5 Welder's name : **STRATIEV, Georgi (DG)**
- 6 Identification : EGN 7706279082
- 7 Method of Identification : Welder ID
- 8 Date / place of birth : 27.06.1977 in Elhovo, Bulgaria
- 9 Employer: : Palfinger Produktionstechnik Bulgaria" EOOD, 8672 Tenevo, Bulgaria
- 10 Code / Testing standard : БДС EN ISO 9606-1:2018
- 11 Remark : --
- 12 Job knowledge : not tested

13	Test piece	Range of qualification
14	Welding process(es) 135	135, 138
15	Transfer mode G	S, G, P
16	Product type (plate or pipe) P	P, T
17	Type of weld FW	FW
18	Material group(s) / subgroups 1.2	1 + 11
19	Filler material group(s) FM1	FM1, FM2
20	Filler material (designation) S	S, M (Root S)
21	Shielding gas EN ISO 14175 – M21 – ArC – 18	Similar shielding gas
22	Auxiliaries (e.g. backing gas) -	-----
23	Type of current and polarity DC/positive(=+)	-----
24	Material thickness [mm] 10	≥ 3
25	Deposited thickness [mm] -	-----
26	Outside pipe diameter [mm] -	D ≥ 75 in PA and PB (rot.); D ≥ 500 in PB (fixed)
27	Welding position(s) PB	PA, PB
28	Weld details -	-----
29	Multi- / single layer ml	

30 Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

31	Type of test	Performed and accepted	not tested
34	Visual testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Radiography testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36	Macroscopic examination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37	Fracture test	<input checked="" type="checkbox"/>	<input type="checkbox"/>
38	Bend test	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39	Notch tensile test	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Revalidation acc 9.3 a



Eng. Dobromir Dobrev
Body for certification of personnel
TUV NORD Bulgaria EOOD, Reg. No 4OSL
Place, date Plovdiv, 14.04.2023
Date of welding: 06.04.2023
Validity of qualification until: 05.04.2026

40 REVALIDATION FOR QUALIFICATION BY CERTIFICATION BODY FOR THE FOLLOWING 2 YEARS (clause 9.3b)

41	Date	Signature	Position or title

CONFIRMATION OF THE VALIDITY BY EMPLOYER/ WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS (clause 9.2)

Date	Signature	Position or title
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2023.10.09 16:33:50+0300</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2024.04.11 13:23:30+0300</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2024.09.30 09:01:49+0300</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2025.03.24 15:42:57+0200</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2025.09.15 15:25:24+0200</small>	



Орган за Сертификация на Лица ТЮФ Норд България ЕООД, 4000 Пловдив, ул. Н. Геров 13, www.tuev-nord.bg
Акредитация от ИА БСА съгласно БДС EN ISO/IEC 17024:2012, пер. № 40СЛ.
Body for Certification of Personnel TÜV Nord Bulgaria Ltd., 4000 Plovdiv, 13 Nayden Gerov str., www.tuev-nord.bg
Accredited by EA BAS according to БДС EN ISO/IEC 17024:2012, registration № 40СЛ.

CERTIFICATE 4OSL 0100 23 033



2 Designation(s) **Welder's certificate ISO 9606-1 135 T FW FM1 S t2.5 D13 PB ml**
135 T FW FM1 S t8 D80 PB ml

Examining body: Body for certification of personnel
 TÜV NORD Bulgaria EOOD

- 4 WPS-Reference : 171
- 5 Welder's name : **STRATIEV, Georgi (DG)**
- 6 Identification : EGN 7706279082
- 7 Method of Identification : Welder ID
- 8 Date / place of birth : 27.06.1977 in Elhovo, Bulgaria
- 9 Employer: : „Palfinger Produktionstechnik Bulgaria“ EOOD, 8672 Tenevo, Bulgaria
- 10 Code / Testing standard : БДС EN ISO 9606-1:2018
- 11 Remark : --
- 12 Job knowledge : not tested

13	Test piece	Range of qualification
14 Welding process(es)	135	135, 138
15 Transfer mode	G	S, G, P
16 Product type (plate or pipe)	T	P, T
17 Type of weld	FW	FW, Branch connection ($\alpha = 90^\circ$)
18 Material group(s) / subgroups	1.3 1.2	1 + 11
19 Filler material group(s)	FM1	FM1, FM2
20 Filler material (designation)	S	S, M (Root S)
21 Shielding gas	EN ISO 14175 – M21 – ArC – 18	Similar shielding gas
22 Auxiliaries (e.g. backing gas)	-	-----
23 Type of current and polarity	DC/positive(=+)	-----
24 Material thickness [mm]	8 2.5	≥ 2.5
25 Deposited thickness [mm]	-	-----
26 Outside pipe diameter [mm]	80 13	13 + 80
27 Welding position(s)	PB	PA, PB
28 Weld details	-	-----
29 Multi- / single layer	ml	sl

30 Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

31	Type of test	Performed and accepted	not tested
34	Visual testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35	Radiography testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
36	Macroscopic examination	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37	Fracture test	<input checked="" type="checkbox"/>	<input type="checkbox"/>
38	Bend test	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39	Notch tensile test	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Revalidation acc 9.3 a



Eng. Dobromir Dobrev
 Body for certification of personnel
TÜV NORD Bulgaria EOOD, Reg. No 4OSL
 Place, date Plovdiv, 14.04.2023
 Date of welding: 07.04.2023
 Validity of qualification until: 06.04.2026

40 REVALIDATION FOR QUALIFICATION BY CERTIFICATION BODY FOR THE FOLLOWING 2 YEARS (clause 9.3b)

CONFIRMATION OF THE VALIDITY BY EMPLOYER/ WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS (clause 9.2)

41	Date	Signature	Position or title

41	Date	Signature	Position or title



Organ за Сертификация на Лица ТЮФ Норд България ЕООД, 4000 Пловдив, ул. Н. Геров 13, www.tuev-nord.bg
 Акредитация от ИА БСА съгласно БДС EN ISO/IEC 17024:2012, пер. № 40СЛ.
 Body for Certification of Personnel TÜV Nord Bulgaria Ltd., 4000 Plovdiv, 13 Nayden Gerov str., www.tuev-nord.bg
 Accredited by EA BAS according to БДС EN ISO/IEC 17024:2012, registration № 40СЛ.

1 **Qualification test certificate for welding operator**
 2 **CERTIFICATE 4OSL 0100 23 077**



Examiner: Body for certification of personnel
 TÜV NORD Bulgaria EOOD

- 4 WPS-Reference: : 451 PPT
- 5 Name weld. operator/setter: : STRATIEV, Georgi (DG)
- 6 Identification: : EGN 7706279082
- 7 Method of identification: : Welder ID
- 8 Date and place of birth: : 27.06.1977 in Elhovo, Bulgaria
- 9 Employer : „Palfinger Produktionstechnik Bulgaria“ EOOD, 8672 Tenevo, Bulgaria
- 10 Code/testing standard: : БДС EN ISO 14732 : 2013
- 11 Remark: : -
- 12 Job knowledge: : acceptable

	Test piece	Range of qualification
14 Welding process	135 EN ISO 4063	135 EN ISO 4063
15 Welding equipment	CLOOS	CLOOS
16 Welding unit	CLOOS R32 TC	ROYC019,ROYC022,ROYC023,ROYC024,ROYC048,ROYC056,ROYC083,ROYC084,ROYC091
17 Details for fully mechanized welding		
18 Visual control/visual remote control	-	-
19 Automatic arc length control	-	-
20 Automatic joint tracking	-	-
21 Welding position	-	-
22 Single run/multi run	-	-
23 Material backing	-	-
24 Consumable insert	EN ISO 14341 – A – G 46 4 M21 4Si1	EN ISO 14341 – A – G 46 4 M21 4Si1
25 Details for automatic welding		
26 Joint sensor	With joint sensor	With joint sensor
27 Automatic arc length control	With automatic arc length control	With automatic arc length control
28 Single run/multi run technique	ml	sl, ml
29 Type of welding unit	Robot welding with rotary positioner	Robot welding

30 Additional information is available on attached sheet and/or welding procedure specification No.: 451 PPT

31 The qualification is based on:

- 32 welding procedure test (see 4.1 a))
- 33 pre-production welding test (see 4.1 b))
- 34 standard test piece (see 4.1 c))
- 35 production test or production sample testing (see 4.1d))

36 Results of the qualification test see documents:
 37 Reports № 232188/ 26.09.2023

Prof. Dr. – Ing. T. Jamboliev
 Body for certification of personnel
 of TÜV NORD Bulgaria EOOD
 Reg. No 4OSL

Revalidation Location, date: Plovdiv, 29.09.2023
 Acc. Date of welding of test piece: 21.09.2023
 5.3 a) Validity of qualification until: 20.09.2029

38 RE-VALIDATION FOR QUALIFICATION BY EXAMINER EXAMINING BODY FOR THE FOLLOWING 3 YEARS (SEE CLAUSE 5.3b)

RE-VALIDATION FOR QUALIFICATION BY EMPLOYER/ WELDING COORDINATOR FOR THE FOLLOWING 6 MONTHS (SEE CLAUSE 5)

Date	Signature	Position or title

Date	Signature	Position or title
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2024 04 11 13:24:27 +0300</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2024 09 30 09:02:47 +0300</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2025 03 24 15:44:09 +0200</small>	
Dimitrov Yordan	<small>Digitally signed by Dimitrov Yordan Date: 2025 09 15 15:26:27 +0300</small>	

