





SILCOTUB S.A.  
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INSPECTION CERTIFICATE  
ABNAHMEPRUEFEZEUGNIS  
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: 0213/09364  
Page / Seite: 2 / 7  
Date / Datum: May 31, 2013

Customer / Kunde: BUHLMANN R.F.S. GMBH & CO.  
Manufacturing Process / Herstellungsprozess: NORMALIZED  
Product Type / Art des Produkts: PO-13-00001815504  
Customer's Order Item / Kunden Bestell-Nr.:  
Customer's Reference / Kunden Referenz-Nr.:  
Standard or Specification / Norm oder Spezifikation: ACCORDING TO EN 10216-2 TC2, AD2000W4, PED, EK120232 R.01 + TEMP. BUHLMANN-0071  
GEM, EN 10216-2 TC2, AD2000W4, PED, EK120232 R.01 + TEMP. BUHLMANN-0071  
Dimensions / Abmessungen: Schedule / Bezeichnung: Length / Länge: 6000 mm + 6700 mm  
@ 31.8mm O.D. x 4.5mm W.T.  
Steel Grade / Werkstoff: STEEL, 16MO3 TC2  
STAHLE, 16MO3 TC2  
Quantity / Menge: 800 pcs/Pz  
2416,4 lb  
1037 kg  
Ends / Enden: RÖHRSCHWARZD  
PLAIN ENDS (SQUARE CUT)  
GLATTEN ENDEN  
Nominal Weight / Theor. Gewicht: 2,04 lb/lb  
3,04 kg/lb

TENSILE TEST / ZUGVERSUCH

Heat N° Charge Nr.	Sample N° Probe Nr.	Specimen condition Probenzustand				Specimen dimensions Probenabmessungen				Test Temp		Y.S. 0.2% Min. - Max. -		U.T.S. Min. - Max. -	
		La	Sc	Type Typ	Ch	Seca	Area abmessung	Fischba	mm <sup>2</sup>	°C	MPa	MPa			
730223	K8709L	B	AM	St	L	10.10 x 4.50	50.20			+200	-277		444		

AM: As manufactured / wie geliefert  
B: Body / Körper  
L: Longitudinal / Längs  
La: Location of sample / Probenortnahme  
Max: Maximum / Maximal  
Min: Minimum / Minimal  
Dir: Orientation / Richtung  
Req: Required / Gebodet  
Sec: Specimen condition / Probenzustand  
Sec: Strip specimen / Streifenprobe  
U.T.S: Ultimate Tensile Strength / Auszugsspannung  
Y.S: Yield Strength / Streckgrenze

CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

Composition % / Zusammensetzung %													
x 100							x 1000						
C	Mn	Si	Ni	Cr	Mo	Cu	P	S	Sn	Al	N		
Min	20	80	35	30	35	30	25	20	-	40	-		
Max	12	40	10	-	25	-	-	-	-	-	-		
Heat N°	Sample N°	P	Min	22	80	35	35	30	25	25	45	-	-
Charge Nr.	Probe Nr.	P	Min	10	40	10	-	20	-	-	-	-	-
730223	K8709L	P	19	70	21	15	27	13	11	1	13	27	78

Composition % / Zusammensetzung %													
x 100							x 1000						
C	Mn	Si	Ni	Cr	Mo	Cu	P	S	Sn	Al	N		
Min	20	80	35	30	35	30	25	20	-	40	-		
Max	12	40	10	-	25	-	-	-	-	-	-		
Heat N°	Sample N°	P	Min	22	80	35	35	30	25	25	45	-	-
Charge Nr.	Probe Nr.	P	Min	10	40	10	-	20	-	-	-	-	-
730223	K8709L	P	19	70	21	15	27	13	11	1	13	27	78

This certificate is issued by a duly authorized person and is valid only for the purpose specified. The signatory certifies the information given is correct.  
"Tensile" is stamped by a duly authorized person and is valid only for the purpose specified. The signatory certifies the information given is correct.  
The information is stamped by a duly authorized person and is valid only for the purpose specified. The signatory certifies the information given is correct.  
The information is stamped by a duly authorized person and is valid only for the purpose specified. The signatory certifies the information given is correct.

FOR03171

# INSPECTION CERTIFICATE ABNAHMEPRUEFZEUGNIS (UNI EN 10204 3.2 / ISO 10474 3.2)

Customer / Kunde: <b>BUHLMANN R.F.S. GMBH &amp; CO.</b>	Customer's Order Item / Kunden Bestell-Nr.: <b>PO-13-00001815594</b>	Customer's Reference / Kunden Referenz-Nr.: <b>2252009/002</b>	Manufacturer's Works Order Nr / Auftrags-Nr.: <b>2252009/002</b>
Manufacturing Process / Herstellungsprozess: <b>NORMALIZED</b>	Product Type / Art des Produkts: <b>See note nr.1</b>	Surface / Oberfläche: <b>INT AND EXT BARE</b>	End / Enden: <b>ROHSCHWARZ</b>
Standard or Specification / Norm oder Spezifikation: <b>ACCORDING TO EN 10216-2 TC2, AD2000W4 PED, EK120232 R.01 + TEMP. BUHLMANN-007H</b>	Length / Laenge: <b>6000 mm ± 6700 mm</b>	Steel Grade / Werkstoff: <b>STEEL 16MO3 TC2</b>	End / Enden: <b>PLAIN ENDS (SQUARE CUT)</b>
Dimensions / Abmessungen: <b>ø 31.8mm O.D. x 4.5mm W.T.</b>	Schedule / Schedule: <b>See note nr.1</b>	STRAHL 16MO3 TC2	GLATTEN ENDEN
		Quantity / Menge: <b>80Pcs/Pz</b>	Nominal Weight / Theor. Gewicht: <b>2.04 lb/lft</b>
			<b>3.04 Kg/m</b>

## CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

H: Heat / Charge	Max: Maximum / Maximal	Min: Minimum / Minimal	P: Product / Produkt
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## IMPACT TEST / KERBSCHLAGPROBE

Heat N°	Sample N°	Zone	Temp. °C	Unit / Einheit: JOULE
730223	R2769L	0050d	27.0	28.0
			27.0	30.0
			27.0	28.0

Alt: As manufactured / wie gewalzt	Ind. Min. Req: Individual Minimum Required /	Ls: Location of sample / Probenentnahme	Sc: Specimen condition / Probenzustand
Avg: Average / Mittelwert	Ind. Min. Req: Individual Minimum Required /	Req. Min. Avg: Required minimum average /	Temp: Temperature / Temperatur
B: Body / Körper	Ind. Min. Req: Individual Minimum Required /	mindestens gef. Mittelwert	

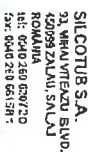
## FLATTENING TEST / Falversuch

Heat N°	Sample N°	Zone	Temp. °C	Unit / Einheit: JOULE
730223	R2769L	0050d	27.0	28.0
			27.0	30.0
			27.0	28.0

Alt: As manufactured / wie gewalzt	Ind. Min. Req: Individual Minimum Required /	Ls: Location of sample / Probenentnahme	Sc: Specimen condition / Probenzustand
Avg: Average / Mittelwert	Ind. Min. Req: Individual Minimum Required /	Req. Min. Avg: Required minimum average /	Temp: Temperature / Temperatur
B: Body / Körper	Ind. Min. Req: Individual Minimum Required /	mindestens gef. Mittelwert	

Heat N°	Sample N°	Zone	Temp. °C	Unit / Einheit: JOULE
730223	R2769L	0050d	27.0	28.0
			27.0	30.0
			27.0	28.0





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# FLARING TEST / AUFWEITVERSUCH

Abb.: As manufactured / wie geliefert	E1 / E2: Ends of Sampling / Probenends	Sc: Specimen condition / Probenzustand
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Ihre Bestellung A14-00774\_Pos.

# INSPECTION CERTIFICATE ABNAHMEPRUEFZEUGNIS (UNI EN 10204 3.2 / ISO 10474 3.2)

Customer / Kunde: BUHLMANN R.F.S. GMBH & CO.	Customer's Order Item / Kunden Bestell-Nr.: PO-13-0000181/5504	Customer's Reference / Kunden Referenz-Nr.: Z252006/002
Manufacturing Process / Herstellungsprozess: NORMALIZED	Product Type / Art des Produkts: See note nr.1 Sehen Sie Anmerkung nr.1	Surface / Oberfläche: INT AND EXT BARE ROHSCHWARZ
Standard or Specification / Norm oder Spezifikation: ACCORDING TO EN 10216-2 TC2, AD2000W4, PED, EK120232 R.01 + TEMP BUHLMANN-007H	Steel Grade / Werkstoff: STEEL 16MO3 TC2	Ends / Enden: PLAIN ENDS (SQUARE CUT)
Dimensions / Abmessungen: GEM. EN 10216-2 TC2, AD2000W4, PED, EK120232 R.01 + TEMP BUHLMANN-007H	Length / Laenge: 6000 mm + 6700 mm	GLATTEN ENDEN
ø 31.8mm O.D. x 4.5mm W.T.	Schedule / Schedule: 1183 10" ft	Normal Weight / Theor. Gewicht: 2.04 lb/ft
		3.04 kg/m

## SUPPLEMENTARY INFORMATION / ZUSÄTZLICHE INFORMATIONEN

Standard EN 10216-2 Year:2002 Revision: A2. Revision year:2007	Standard EN 10216-2 Jahr:2002 Neuausgabe: A2. Neuausgaben-Jahr:2007
Standard EN 10216-2 Year:2002 Revision: A2. Revision year:2007	Standard EN 10216-2 Jahr:2002 Neuausgabe: A2. Neuausgaben-Jahr:2007
Standard EN 10216-2 Year:2002 Revision: A2. Revision year:2007	Standard EN 10216-2 Jahr:2002 Neuausgabe: A2. Neuausgaben-Jahr:2007

<p>PRODUCT DESCRIPTION NOTES</p> <p>Anmerkung 1 ist die volle Beschreibung der Art des Produkts</p> <p>SEAMLESS HOT FINISHED STEEL TUBES FOR BOILER ( WITH EXTRA REQUIREMENTS )</p> <p>NAHTLOSE QUALITÄTSTAHLROHRE WARMGEFERTIGT ALS KESSELROHRE (MIT ZUSÄTZLICHEN ANFORDERUNGEN)</p>	<p>PRODUCT DESCRIPTION NOTES</p> <p>Anmerkung 1 ist die volle Beschreibung der Art des Produkts</p> <p>SEAMLESS HOT FINISHED STEEL TUBES FOR BOILER ( WITH EXTRA REQUIREMENTS )</p> <p>NAHTLOSE QUALITÄTSTAHLROHRE WARMGEFERTIGT ALS KESSELROHRE (MIT ZUSÄTZLICHEN ANFORDERUNGEN)</p>
<p>NONDESTRUCTIVE TEST (EDDY CURRENT) ACC. TO ISO 10863-1 + ISO 10863-2, E3H</p> <p>hole diameter 1.3 mm max. WITHOUT OBJECTIONS</p> <p>NONDESTRUCTIVE TEST EMI ACC. TO ISO 10863-3, WITHOUT OBJECTIONS</p> <p>NONDESTRUCTIVE TEST (UT) ACC. TO EN 10246-7 U2C - ISO 10863-10 U2C:</p> <p>WITHOUT OBJECTIONS</p> <p>WIRKUP CONTROL: WITHOUT OBJECTIONS</p> <p>HEAT TREATMENT: NORMALIZED</p> <p>MATERIAL ACCORDING TO PED 9723EC + AD 2000 W4</p> <p>WE DECLARE THAT THE MINIMUM IMPACT TEST VALUE OF 40 J AT 0°C, for LONGITUDINAL FULL SIZE 10x10 SPECIMEN IS GUARANTEED.</p> <p>WITHOUT PERFORMING THE TEST</p> <p>The material supplied is capable of complying with specified properties (within the normal scatter band).</p> <p>The manufacturing processes have remained equivalent to those for the steel for which the test results were obtained.</p>	<p>NONDESTRUCTIVE TEST (EDDY CURRENT) ACC. TO ISO 10863-1 + ISO 10863-2, E3H</p> <p>hole diameter 1.3 mm max. WITHOUT OBJECTIONS</p> <p>NONDESTRUCTIVE TEST EMI ACC. TO ISO 10863-3, WITHOUT OBJECTIONS</p> <p>NONDESTRUCTIVE TEST (UT) ACC. TO EN 10246-7 U2C - ISO 10863-10 U2C:</p> <p>WITHOUT OBJECTIONS</p> <p>WIRKUP CONTROL: WITHOUT OBJECTIONS</p> <p>HEAT TREATMENT: NORMALIZED</p> <p>MATERIAL ACCORDING TO PED 9723EC + AD 2000 W4</p> <p>WE DECLARE THAT THE MINIMUM IMPACT TEST VALUE OF 40 J AT 0°C, for LONGITUDINAL FULL SIZE 10x10 SPECIMEN IS GUARANTEED.</p> <p>WITHOUT PERFORMING THE TEST</p> <p>The material supplied is capable of complying with specified properties (within the normal scatter band).</p> <p>The manufacturing processes have remained equivalent to those for the steel for which the test results were obtained.</p>

This certificate is issued by a computerized system and is valid with electronic signature. On the original certificate the code mark given colored "For-File" is stamped. In case the owner of the original certificate requires a copy of it, he must attest its conformity to the original one. Using soon thereafter the response to the request for any demand of not allowed data. After alteration under falsification will be subjected to the law.

FOR0317.1



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<b>INSPECTION CERTIFICATE</b>		<b>Number / Nummer:</b>	<b>Page / Seite:</b>
ABNAHMEPRUEFEZEUGNIS		02/13/09364	6 / 7
(UNI EN 10204 3.2 / ISO 10474 3.2)		<b>Date / Datum:</b> May 31, 2013	
Customer / Kunde: BUHLMANN R.F.S. GMBH & CO.		Customer's Order Item / Kunden Bestell-Nr.: PO-13-0000181/5504	
Manufacturing Process / Herstellungsprozess: NORMALIZED		Product Type / Art des Produkts: See note nr.1	
Standard or Specification / Norm oder Spezifikation: ACCORDING TO EN 10216-2 TC2, AD2000W4, PED, EN120232 R.01 + TEMP.BUHLMANN-007/1		Steel Grade / Werkstoff: STEEL, 18MO3 TC2	
GEM. EN 10216-2 TC2, AD2000W4, PED, EN120232 R.01 + TEMP.BUHLMANN-007/1		STAHl, 18MO3 TC2	
Dimensions / Abmessungen:		Length / Länge:	Quantity / Menge: 500 pcs/Pz
ø 31.8mm O.D. x 4.5mm W.T.		6000 mm ± 6700 mm	1183'40" ft
		350.84 mlt	2416.4 lb
			1097 kg
			Normal Weight / theo. Gewicht: 3.04 Kg/m
<b>SUPPLEMENTARY INFORMATION / ZUSÄTZLICHE INFORMATIONEN</b>			
Supplementary Information Zusätzliche Informationen			
TUBES SUITABLE FOR BENDING. AFTER UT INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF. 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. Tenaris IT Identification number for MTC: 55009.4			
TUBES SUITABLE FOR BENDING. AFTER UT INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF. BESICHTIGUNG UND MASSKONTROLLE WURDE OHNE BEANSTANDUNGEN DURCHFUEHRT. BERÜHRTETER STAHL, AUS ELEKTROFURN, IM FEINKORNN, IM BLASTROOFEN CERTIFIZIERT. DAS GELIEFERTE MATERIAL ENTSPRICHT BESTELLVORSCHRIFTEN. Tenaris IT-Identifikationsnummer für MTC: 55009.4			
TESTS HAVE BEEN SELECTED ON 4 MOTHER TUBES, BEFORE CUTTING TUBES IN FINISHED LENGTHS (HEAT 720225).			
<b>MARKING / MARKIERUNG</b>			
Marking Markierung			
STENCILING ***** Marcij pro vopisne - nu sa coboia ***** POANSQUARE 2 CAPE TE mrcij pro vopisne albe, TSL EN 10216-2, 18MO3 TC2, 3.18 x 4.5 HEAT NO CTC #000, C-225009002, C-225009002			
LACIERUNG ***** Marcij pro vopisne - nu sa coboia ***** POANSQUARE 2 CAPE TE mrcij pro vopisne albe, TSL EN 10216-2, 18MO3 TC2, 3.18 x 4.5 HEAT NO CTC #000, C-225009002, C-225009002			
LEGEND HINWEISTEXT			
This certificate is issued by a computerized system and it is not an electronic signature. On the original certificate the code mark given cannot be scanned. In case the owner of the original certificate would in case a copy of it, in any way, it is not valid. Any alteration or falsification will be subjected to the law. Dieses Zeugnis wird durch ein Computersystem ausgestellt und ist keine elektronische Unterschrift. Das Originalzeugnis ist nicht scannbar. Im Falle, dass der Eigentümer des Originalzeugnisses eine Kopie davon erstellt, ist diese nicht gültig. Jegliche Änderung oder Fälschung wird strafrechtlich verfolgt.			





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Ihre Bestellung A14-00774\_Pos.

INSPECTION CERTIFICATE  
ABNAHMEPRUEFZEUGNIS  
(UNI EN 10204 3.2 / ISO 10474 3.2)

Customer / Kunde: BUHLMANN R.F.S. GMBH & CO.	Customer's Order Num / Kunden Bestell-Nr.: PO-13-0009181/5504	Manufacturer's Works Order N° / Auftrags-Nr.: 2252009002
Manufacturing Process / Herstellungsprozess: NORMALIZED	Product Type / Art des Produkts: See note nr.1 Sehen Sie Anmerkung nr.1	Surface / Oberfläche: INT AND EXT BARE
Standard or Specification / Norm oder Spezifikation: ACCORDING TO EN 10216-2 TC2, AD2000W4 PED, EK120232 R.01 + TEMP. BUHLMANN-007/H		ROHSCHWARZD
Dimensions / Abmessungen: p 31,8mm O.D. x 4,5mm W.T.	Length / Länge: 6000 mm ± 6700 mm	Ends / Enden: PLAIN ENDS (SQUARE CUT) GLATTEN ENDEN
	Schedule / Schedule: Length / Länge: 118310" R	Ends / Enden: GLATTEN ENDEN
		Quantity / Menge: 60Pcs/Pz
		2418,4 lb
		1087 kg
		360,84 mt
		2,04 lb/ft
		3,04 Kg/m

MARKING / MARKIERUNG

PUNCHING : POANSONWARE 2 CAPEITE hoonjural cu vopsea alba: _TSL_EN 10 216-2_ 18M43-TC2_ 31,8 x 4,5 _HEAT NO_CTC ####_ 2252009002_	Marking Markierung
LEGEND	VORGESCHRIEBENEN : POANSONWARE 2 CAPEITE hoonjural cu vopsea alba: _TSL_EN 10 216-2_ 18M43-TC2_ 31,8 x 4,5 _HEAT NO_CTC ####_ 2252009002_
	HINWEISTEXT

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance with purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

CUSTOMER - THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE
INSPECTION COMPANY ABNAHMEPRUEFUNGSGESellschaft	QUALITY CERTIFICATION DEPT. QUALITÄTS- UND ZUGABEABTEILUNG PUSCAS Danieba
	QUALITY REGIONAL MANAGER VERANTWORTLICHER QUALITÄTSWEN MORENT Lavefo

This certificate is issued by a computerized system and is a valid with electronic signature. On the original certificate the trade mark given regional printer is stamped. In case the owner of the original certificate would make a copy of it, the first shall be uniformity to the original one being shown through the transparent film for any falsification or not allowed use. Any alteration under falsification will be subjected to the law.

FOR03171

