



DET NORSKE VERITAS

Certificate No.: ESN 09-22555

PRODUCT CERTIFICATE

THIS IS TO CERTIFY THAT:

Product description: 100 pcs. of Enorm lifting chain (Grade 10) 2-leg 16x 8157mm acc. to drwg. S56 026

Type designation: Type 30

Serial No: 1 to 100
ESN 09-22555

Marking: marking on tag: 30°-22,2t; C.No. 06092;
1 to 100; to be used in pairs

Manufactured by: J.D. Theile GmbH & Co. KG, D-58239
(manufacturer and location) Schwerte

Manufacturer No.: 12308-001

Ordered by (customer): Certex Norge AS N-4067 Stavanger

Customer reference: 443802-1

Intended for: Offshore Container

Conforms with the following specification/standard:
(if necessary use Appendix to certificates form no. 40 91a)

DNV Standard for Certification No. 2.7-1 "Offshore containers" (April 2006)

Following data / test results annexed: Works certificate C.No. 06092 (including test results)

Remarks/test results:

Valid data: Enhanced Working Load (WL): 25t
Angle of inclination : 30°
WLL = Rating of container : 22,2t

This data are only valid by using the lifting sets in pairs!

☒ If marked x, see encl.

For Det Norske Veritas AS

Essen
Place

2009-07-31
Date



Zühr, Michael
Surveyor

Declaration by manufacturer (when applicable)

The undersigned manufacturer declares that the specified product has been built and tested in conformity with the specification/standard stated above and the conditions referred to in:

Type Approval Certificate No.: S-4474

Quality System Certificate No.: CERT-13263-2003-AQ-ESN-TGA

Manufacturing Survey Arrangement No.: R-1818

This Product Certificate is valid only when endorsed by a DNV Surveyor. The endorsement is a statement that the conditions stipulated in the Manufacturing Survey Arrangement for the product in question have been complied with.

Manufacturer:

Schwerte
Place

2009-06-30
Date

N. Richter
Name

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Abnahmeprüfzeugnis 3.1 EN 10204 test certificate

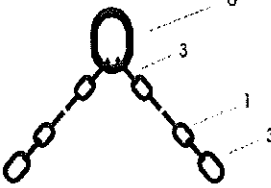
Leimather Str. 26 - 58239 Schwerte
Tel. +49 2304 757-0 - Fax +49 2304 757-177

Nummer:
number: 06092

Datum:
date: 30.06.2009

Blatt:
page: 1

Gegenstand: Item: ENORM-Lifting chain (Grade 10)2 -leg 16x8157mm acc. to drawg. S 56 026		Menge: quantity: 100 pcs.	
Hersteller: manufacturer: J.D Theile GmbH & Co. KG		Komm.-Nr.: works no: 12308-001	
Besteller: purchaser: Certex Norge AS N- 4067 Stavanger		Bestell-Nr.: order no: 443802-1	
Vorschrift: requirement: DNV 2.7- 1 April 06	Artikelnummer: ident. no: 0430816012	Werkstoff: material: Cr Ni Mo leg. Edelbaustahl	Hersteller: manufact. H3 - 8E
WLL: rating of container: 22,2 t	to be used in pairs	Zusammenstellung / sling components 1) Kette K1 chain 200x164 lks. 16x48mm	Kennzeichng marking H3-10-5-9
gerechn. Tragfähigkeit: enhanced WL: 25 t		2) Kette K2 chain	818-2-8E
Prüfkraft: proof force: MPF1= 236 kN	Neigungswinkel: angle of vertical: 30°	3) Glied G3 link 400pcs. 20x85x40mm	E
Bruchkraft: breaking force: >378 kN	MPF 2 = 1,732 x MPF 1 MPF 3 = 2,598 x MPF 1 MPF 4 = MPF 3	4) Glied G4 link 200pcs. 22x115x50mm	J
Bruchdehnung: elongation: >20 %		5) Glied G5 link	818-4-8E
Wärmebehandlung: Härten: 900°C Wasser Anlassen: 420°C 6 Std. Luft		6) Glied G6 link 100pcs. 36x260x140mm	K

Maßprüfung dimension test	Dicke d _m diameter					Teilung t pitch					Breite innen b ₁ inside width					Breite außen b ₂ outside width								
	Teile: Comp.:	Soll Req.	Los lot 1	Los lot 2	Los lot 3	Soll Req.	Los lot 1	Los lot 2	Los lot 3	Soll Req.	Los lot 1	Los lot 2	Los lot 3	Soll Req.	Los lot 1	Los lot 2	Los lot 3							
	1	16±0,6	16,3	16,4	16,4	48±1,4	48,0	47,9	47,9	>20,8	22,6	22,7	22,4	<59,2	55,9	56,0	55,9							
	3	20±1	20,2			85±4,2	83,0			40±2	41,2			<59,2	57,1									
	4	22±1,1	22,3			115±5,7	113,6			50±2,5	50,4													
	6	36±1,8	36,2			260±13	257,0			140±7	51,2													
	1	los 4-6	16,5	16,5	16,5	48±1,4	47,9	48,0	47,8	>20,8	22,4	22,4	22	<59,2	55,9	55,8	55,9							
	1	los 7-9	16,6	16,5	16,4	48±1,4	47,7	48,0	48,0	>20,8	22,2	22,2	22,2	<59,2	56,1	55,9	55,8							
	1	los 10-12	16,4	16,4	16,3	48±1,4	48,0	47,9	47,9	>20,8	22,2	22,6	22	<59,2	55,9	56,1	56,1							
Zugversuch static tensile test	Fertigungsprüfkraft kN proof force					Bruchkraft kN breaking force					Bruchdehnung % elongation					 "Type 30" Gewicht: 10.370 kg								
	Teile: Comp.:	Soll Req.	Los lot 1	Los lot 2	Los lot 3	Soll Req.	Los lot 1	Los lot 2	Los lot 3	Soll Req.	Los lot 1	Los lot 2	Los lot 3											
	1	>236	>236	>236	>236	>378	391	393	388	>20	34,5	37,5	36,2											
	1	los 4-6	>236	>236	>236	>378	397	384	383	>20	36,5	37,9	37,5											
	1	los 6-9	>236	>236	>236	>378	392	390	393	>20	39,1	39,1	34,5											
	1	los 10-12	>236	>236	>236	>378	398	391	399	>20	37,5	36,6	36,2											
	3	>236	>236																					
	4	>236	>236																					
	6	>409	>409																					
Analyse steel analysis	Teile: Comp.:	Schmelze-Nr. cast number	C	Si	Mn	P	S	Cr	Mo	Ni	Al													
	1	386331	0,190	0,150	0,930	0,011	0,010	0,640	0,680	1,050	0,036													
	3	1072829	0,220	0,200	1,320	0,008	0,009	0,530	0,520	1,040	0,033													
	4	240480	0,200	0,170	1,310	0,010	0,009	0,460	0,600	1,000	0,029													
	6	1090259	0,220	0,190	1,300	0,009	0,009	0,570	0,520	1,030	0,028													
Kerbschlagbiegeversuch nach Charpy impact test EN 10045 T1	Grundwerkstoff/material Schweiße/welded side KV = > 42 J KV = > 27 J					Biegeversuch bend test					Kennzeichnung marking A-Gld. H3-8E-09, C.No.06092 numeriert von 1... 100					ESN 09-22555 marking on Tag: 30°-22,2 t; C.No.06092 numeriert von 1 ...100; Type 30 to be used in pairs red coated Qualitätswesen / quality management								
	Probenform Charpy V-notch					Durchbiegung mm deflection																		
	Teile: Comp.:	Soll Req.	Ist Actual	Ist Actual	Ist Actual	Soll Req.	Los lot 1	Los lot 2	Los lot 3															
	1	>27/42	35/51	36/52	38/50	13	13	13	13	ohne anriss														
	3	>27/42	39/49	37/48	36/50	13	13	13	13	ohne anriss														
	4	>27/42	35/45	37/46	35/47	13	13	13	13	ohne anriss														
	6	>27/42	37/55	39/54	39/52	13	13	13	13	ohne anriss														
	Ergebnis der Prüfung results of tests					ohne Beanstandung					Richter Sachverständiger/expert													