

## **TEST CERTIFICATE**

This is to certify that the nominated size and quality of the following product has been inspected and tested with following results.

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Page 1

**Customer Sold To:** 

HESNZ 3 Heb Place

Takanini, Auckland, New Zealand

Order:	5041
Invoice:	32016
Date:	10/02/2021
Certificate No:	201020HESNZ

GOODS: GRADE S SHACKLES

SURFACE: HDG BODY & YELLOW PIN

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WLL	REQUIREDACTUAL			BATCH ID	
TON	BS (TON				
0.5	3	3.6		D113/5/201	
1	6	6.5		D118	
1.5	9	9.5		D116/201	
2	12	13.0		D202	
3.25	19.5	20.0		D201	
4.75	28.5	32.5		D201	
6.5	39	40		D201	
9.5	57	58		D201	
12	72	73		D201	
25	150	155		D201	
35	210	214		D201	
6.5	39	40		D201	
25	150	155		D201	
55	330	330		D116	
1	6	8		D117	
1.5	9	11		D115/7	
	WLL TON 0.5 1 1.5 2 3.25 4.75 6.5 9.5 12 25 35 6.5 25 55	WLL REQUIR   TON BS (TON)   0.5 3   1 6   1.5 9   2 12   3.25 19.5   4.75 28.5   6.5 39   9.5 57   12 72   25 150   35 210   6.5 39   25 150   55 330   1 6	WLL REQUIRED ACTUAL   TON BS (TON) AVERAGE   0.5 3 3.6   1 6 6.5   1.5 9 9.5   2 12 13.0   3.25 19.5 20.0   4.75 28.5 32.5   6.5 39 40   9.5 57 58   12 72 73   25 150 155   35 210 214   6.5 39 40   25 150 155   55 330 330   1 6 8	WLL REQUIRED ACTUAL   TON BS (TON) AVERAGE   0.5 3 3.6   1 6 6.5   1.5 9 9.5   2 12 13.0   3.25 19.5 20.0   4.75 28.5 32.5   6.5 39 40   9.5 57 58   12 72 73   25 150 155   35 210 214   6.5 39 40   25 150 155   55 330 330   1 6 8	

CHEMICAL COMPOSITION BODY: Chinese #45

ELEMENTS	С	Si	Mn	S	Р	Al
REQUIRED	< 0.45	0.17-0.37	0.50-0.80	<0.03	< 0.03	>0.025
ACTUAL	0.43	0.25	0.65	0.02	0.02	0.025

CHEMICAL COMPOSITION PIN: Chinese #CM690

ELEMENTS	С	Si	Mn	S	Р	Al
REQUIRED	<0.45	0.15-0.55	1.3-1.9	< 0.03	< 0.03	>0.025
ACTUAL	0.29	0.22	1.7	0.003	0.017	0.043

Heat Treatment: Hardened & Tempered.

HARDNESS(required not more than HRC32):

BODY(actual HRC): 29, 28, 30, 28, 29, 28, 29, 30, 28, 29 PIN(actual HRC): 31, 32, 31, 30, 32, 31, 31, 30, 31, 32

We hereby certify the above test is true and correct. All S shackles are tested as per AS2741.

