



LIFTING TECHNOLOGIES

GOODS: GRADE S SHACKLES
SURFACE: HDG BODY & YELLOW PIN

TEST REPORT

PO# 230812AMG

DATE: January 22, 2024

SIZE:	WLL	REQUIRED	ACTUAL	BATCH ID
	TON	BS (TON)	AVERAGE	
BOW TYPE	0.50	3	4.0	D203
	0.75	4.5	5.2	D201
	1.50	9	9.6	D202/5
	4.75	28.5	29.5	D205
	6.5	39	40.0	D203
	8.5	51	52.0	D203
	9.5	57	58.0	D202
	12.0	72	75.0	D203
	13.5	81	82.0	D203
	25.0	150	151.0	D202
BOW SAFETY	3.25	19.5	20.0	D202
	4.75	28.5	29.0	D202
	8.5	51	52.0	D203
	13.5	81	82.0	D201
	17.0	102	106.0	D202
	25.0	150	151.0	D202
	35.0	210	211.0	D204
	55.0	330	330.0	D202
	85.0	510	510.0	D201
DEE TYPE	3.25	19.5	23.0	D202
	4.75	28.5	33.0	D203
	6.5	39	43.0	D202
	8.5	51	53.0	D202
	9.5	57	58.0	D202
	13.5	81	83.0	D201

CHEMICAL COMPOSITION BODY:

ELEMENTS	C	Si	Mn	S	P	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 NEW PIN:

ELEMENTS	C	Si	Mn	S	P	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): 32, 32, 31, 32, 32, 31, 31, 32, 31, 32

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