



Frisa Forjados SA, de C.V.

Valentín G. Rivero No. 127 Los Treviño C.P.
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Sta. Catarina, N.L., México

CERTIFIED COMPANY
ISO 9001: 2015

Co # 5152
1496

Material Test Report No.708525

Certificate per: EN 10204:2004 3.1
Client: SAMUEL, SON & CO., LIMITED

Spec: ASME SA182/SA182M F51 (S31803) Ed. 2017

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Qty	Date	P.O. Number	Part No.	Job Order
1	10/07/2019	W67522C		583300
Description Forged Disc 11.000" X 0.000" X 2.750" .MELTING PRACTICE: EAF LR VD .SERIAL NUMBER NOTE: 01 .LINE ITEM: 3				

HEAT: S6230 (1/1) PCS
CHEMICAL ANALYSIS

HEAT No.		C %	Mn %	P %	S %	Si %	Ni %	Cr %	Mo %
S6230	Ladle	0.01500	1.33000	0.02700	0.00200	0.51000	5.94000	22.74000	3.20000
Supplier		N %							
EQS	Ladle	0.17400							

Hardness (HBW) PCS

Hardness
247
247

HEAT TREATMENT

Quantity	Heat Treat Lot No.	Heat Treatment	Temp. (°F)	Time at Temp (Hrs)	Cooling Medium	Quench. M. Temp. (°F)
1 PCS	577679	Solution annealed	1922	3.00	Water	

Heat: S6230

Track ID: 114/005-19

MECHANICAL PROPERTIES

TENSILE TEST

Orientation	Position	Location	Heat Treat Lot No.	Yield Strength (PSI)	Tensile Strength (PSI)	Elong. (%)	A.R. (%)	Temp Tens °F	Post Welding HT		
									Temp °F	Time	Cycle
Long	1/4 T		570394	76200	108700	35	79	77			

Heat: S6230

HARDNESS HBW QTC

Orientation	Position	Location	Heat Treat Lot No.	Point	Hardness	Post Welding HT		
						Temp °F	Time	Cycle
Long	1/4 T		570394		237			
Long	1/4 T		570394		237			

WE HEREBY CERTIFY THAT ALL TEST RESULTS AND PROCESS INFORMATION CONTAINED HEREIN ARE CORRECT AND TRUE AS CONTAINED IN THE RECORDS OF THE COMPANY AND MEET THE PURCHASE ORDER / SPECIFICATIONS REQUIREMENTS.

NO WELDING REPAIRS IS ALLOWED AND USED IN FRISA ALL MATERIALS ARE MERCURY FREE

CER F-001-3

Ana Marcela Gómez Villarreal

QUALITY ASSURANCE ENGINEER

ANS



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OBSERVATIONS

- . FORGING RATIO: 3.0 TO 1
- . QTC SIZE (4 X 4 X 12)
- . TENSILE TEST: 0.500" DIAMETER SPECIMEN AND 2.0" GAUGE LENGTH
- . FURNACE CALIBRATED AND SURVEYED PER API 6A ANNEX M 20th EDITION REQUIREMENTS
- . HARDNESS ON TEST SPECIMEN IS REPRESENTED BY TWO VALUES.
- . TESTING ACCORDING TO ASTM A370 REV.17
- . NACE MR0175 / ISO 15156-3

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