



R & M Forge & Fittings

6455 Wesco Way
Houston, TX 77041

(713) 896 - 4081 (713) 896 - 6206

www.rmforge.com

MATERIAL TEST REPORT

Date: 11/18/2020

PO# 2020-1174	Line Item: 4	R&M S/O#: 44774
DESCRIPTION: ROUGH MACHINED 1/4" ALLOWANCE - 250 RMS 5.0" OD X 1.25" THK		
TAG: JOB# 1579		
HEAT NUMBER: 57404		QTY. Shipped: 1 PC.
Spec: ASME SA182 F51 (S31803) & PER NACE MR0175		Mill: ACERALAVA (SPAIN)

	C	MN	P	S	SI	Ni	CR	MO	CU	V	CB/NB
LADLE	.014	1.11	.018	.0005	.42	5.28	22.60	3.13			
PRODUCT											
	N	AL	CE	FE	TI	W	SB	SN	AS	CB+TA	J-FACTOR
LADLE	.1735										
PRODUCT											

Mechanical Properties	
YIELD (PSI) 0.2% OFFSET	76,300
TENSILE (PSI)	107,100
ELONG. (%) 2"	41.0
R/A (%)	80.0
HARDNESS	255-269
CVN (FT/LBS) AVG.	158-258-290 235
LAT. EXP.	.076-.083-NB
SHEAR (%)	100-100-NB
CVN TEMP.	-40F

Heat Treatment
SOLUTION ANNEALED @ 1950F FOR 4 HOURS / WATER QUENCHED

Requirements & Other Results
EF AOD
PER EN 10204 3.1
MELTED IN SPAIN AND MANUFACTURED IN USA
CVN @ -40F PER UHA-51
.015 MIN LATERAL EXPANSION

COMMENTS:

THIS PRODUCT HAS NOT COME IN CONTACT WITH MERCURY OR MERCURY COMPOUNDS. NO WELDING PERFORMED.

CERTIFICATION OF CONFORMANCE

THIS IS TO CERTIFY THAT THE ITEMS DESCRIBED ON THIS DOCUMENT ARE IN FULL CONFORMANCE WITH ALL REQUIREMENTS OF YOUR PURCHASE ORDER AND MATERIAL SPECIFICATIONS.

We hereby certify that all test results and process information contained herein are correct and true as contained in the records of the company.

This 18th day of November 2020



 Janela Lian Tan/Quality Assurance

ANS



INSPECTION CERTIFICATE
EN 10204:2004 / 3.1

Number: 712912 Page: 1 / 2	Rev: 01
Created on: Date: 27.01.2020	Modified on: 17.04.2020

ACERÍA DE ALAVA S.A.U.

Registro Mercantil de Álava Tomo 414,Folio 131, Hoja VI-325. NIF A-01.010.958

Poligono Industrial Saracho

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01470 Amurrio(Álava)

FAX: +34 946725062

Spain

E-MAIL: qualityaceralava@tubacex.es

CUSTOMER DESCRIPTION

CLIENT ORDER: 620723

SALES ORDER: 347285

STAINLESS STEEL SQUARE BILLET
RANDOM LENGTHS: 5.000/7.500 MM ,
GRADE: F51, F60, S31803, S32205
STANDARD: ASTM A182/A182M-19
TOLERANCES: ASTM A182/A182M-19
DIMENSIONS: 254 MM SQ
PRODUCTION TYPE: ROLLING

Sales Item	Client Item	Delivery No	Lot No.	Heat No	Pieces	Weight	Un Lgth
50		8120053602	200244796	57404	3	8.724 KG	5000-7500 MM

LOT No	BAR No
200244796	13, 12, 11

RAW MATERIAL

Heat Nr:	Supplier	Method
57404	ACERALAVA (SPAIN)	Electric furnace+AOD

CHEMICAL COMPOSITION (%)

* Heat	Seq	C	Mn	Si	P	S	Ni	Cr	Mo	W	N
L 57404	I	0,014	1,11	0,420	0,018	0,0005	5,28	22,60	3,13	0,030	0,1735

SURFACE FINISH
FULLY SURFACE GROUND

INGOT REDUCTION

Item	Reduction
50	3.70



ACERÍA DE ALAVA S.A.U.
ACERALAVA
C/Polígono Industrial Saracho, 1
01470 Amurrio (Álava) - Spain

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.



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TENSILE TEST

Lot No.	Sample	T	Rp0.2	Rm	A4	A5	Z	Type
		°C	MPa	MPa	%	%	%	
200244796	1	20	562	725	32	31	65	L

NON-DESTRUCTIVE TESTS

STEEL GRADE ASSESMENT BY LASER ANALIZER: WITHOUT OBJECTIONS

REMARKS

STAMP OF THE INSPECTION REPRESENTATIVE: AC1
THIS MATERIAL AND THE ELEMENTS USED ALONG MANUFACTURING ARE MERCURY FREE
NO WELDING WAS PERFORMED ON THE MATERIAL
RADIATION CONTAMINATION TEST: OK

COUNTRY OF ORIGIN: SPAIN



ACERVA DE ALAVA, S.A.U.
ACERALAVA
C/ALBA 100 48900 ALBA (VIZCAYA)

R.D. 10/2008

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