

TEST REPORT



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DATE: 02/28/2020

ATL# 020400

CLIENT: TMS TITANIUM
 ATTN: QUALITY CONTROL
 12215 KIRKHAM ROAD SUITE 300
 POWAY, CA 92064

QTY: 1
 1" THK X 3" X 3" GD
 1 PC. LOT# 19-11791TMS1.0THK

MATERIAL: 6Al-4V TI GRADE 5 COND. A

SPEC: ASTM-B-265/15 GR. 5

TENSILE TEST (METHOD: ASTM-E8/16Ae1)

SPECIMEN ID	TEMP	INSPECTION			YIELD		ULTIMATE		ELONGATION IN 4D			REDUCT OF AREA		LOC. OF FRACT (A)
		VISUAL INSPECT OK?	ORIG. DIAM.	ORIG. AREA	ACTUAL LOAD IN LBS	KSI	ACTUAL LOAD IN LBS	KSI	ORIG. GAGE LENGTH	ELONG INCHES	PER-CENT	FINAL DIAM.	PER-CENT RedA	
L	RT	OK	0.252	0.0499	6237	125	7003	140	1.00	0.138	14	0.188	44	1
REQUIRED, MINIMUM						120	130				10			

Strain Rate: 0.005 inch per inch per minute; Yield determined at 0.2% Offset; Elongation calculated after fracture ATE# 502

(A) 1 = Center Fracture; 2 = Outer Quarter Fracture; 3 = Fractured @ Gage Mark; 4 = Fractured @ Radius; 5 = Material Flaw/Defect

CHEMICAL ANALYSIS: (% BY WEIGHT)

	Al	V	Fe	O.E	O.T	*C	**H	***O	***N
Actual:	6.0	3.8	0.20	<0.1	<0.4	0.01	0.003	0.12	0.0011
Min Req:	5.5	3.5	-	-	-	-	-	-	-
Max Req:	6.75	4.5	0.40	0.1	0.4	0.08	0.015	0.20	0.05

METHOD: ASTM-E1086/14 MOD

ATE# 202 OES

STD'S: NBS654B, IARM175C

*METHOD: ASTM-E1941/10(16)

ATE# 200

STD'S: AR891, 502-891 *by combustion

**METHOD: ASTM-E1447/09(2016)

ATE# 207

STD'S: AR650 **by inert gas fusion

***METHOD: ASTM-E1409/13

ATE# 207

STD'S: AR631 ***by inert gas fusion

Remarks: Material as tested, conforms to requirements.

Respectfully Submitted:

Sharon A. Norton
 Sharon A. Norton, Quality Assurance

Date: 2/28/2020

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