



VSMPO-AVISMA Corporation

Cert 17326Y15



1, Parkovaya St., Verkhinaya Saida, Sverdlovsk reg., 624 760, RUSSIA

Phone (34345) 2-38-32, 2-17-66
Fax (34345) 2-47-36, 2-05-00

INSPECTION CERTIFICATE

Heat # 8-27-09856



CERTIFICATE: 17326Y15

Purchaser: Tirus International SA, Switzerland

Quality/alloy: Ti-6Al-4V

Date: 24.09.2015

Contract: 28020282TKR Annex 13

Purchaser order: 15-0014353/DO-0006307/Buffer Piero Rosa

Terms of delivery: MSRR 8632 iss. 11 AMS 4911 N

Sheet #	Units	Weight, (kg)	Object	Dimensions (mm) or Drawing #	Heat #	Lot #
Sheet #	513	437	Sheet	1.05±0.07 x 235 x 755	8-27-09856	22506

Chemical Composition, %	Fe	C	Al	V	H	Y	O+N	N	O	Residuals, %
AMS 4911 N	max 0,30	max 0,08	5,50 - 6,75	3,50 - 4,50	See below	max 0,0050	max 0,25	max 0,05	max 0,20	each max 0,10 total 0,40
MSRR 8632 Iss. 11	0,17	0,004	6,51	4,13		<0,001	0,173	0,001	0,172	<0,10 0,0468
TOP	0,18	0,005	6,50	4,17		<0,001	0,167	0,001	0,166	<0,10 0,0452
BOTTOM										

Requirement:	0,20% proof stress	Tensile strength	Elongation	Heat treatment conditions	In the Part, %
AMS 4911 N	min 870	920-1180	min 8	T, °C time	# max 0,0125
MSRR 8632 Iss. 11	8	914	1004	790 60 min air cooling	46 0,0062
	8	928	1000		

Microstructure testing: As per AMS 4911 N par. 3.5.4.2
BS 31A 100.2009 par. 44
Material without surface contamination
Ultrasonic inspection: N/A

We certify that, subject to acceptance of concessions listed hereafter, the supplies detailed here were manufactured in accordance with the technical specifications of the contract, order or sub-order and that all inspections operations and tests, having been completed, the supplies comply in every respect with the relevant product specifications, drawings, and relevant standards and regulations in force. Information particular to the supplies delivered, specify the reference of concessions granted.

Material # 20
Approval number 883607
Rolling direction along the long side
Cutting to 755 mm along the direction of the last rolling
Width and length tolerances as per BS 31A 100.2009 (tbl. 5)
Flatness deviation shall not exceed 12,7 mm to AMS 2242 G (2008)
Ingot melted by VSMPO, Verkhinaya Saida, Russia
Material Code TCA
Sheets is manufactured in accordance with Method MP 39.035 RR-00 Rev. D
Production start-up date: 21.07.2015

Approved by Bagirova M.V.

Signature

Stamp





"WSMPO-AVISMA Corporation"

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ANNEX TO INSPECTION CERTIFICATE

RRES 90000 C SABRe_Edition 2_Revision 1
EN 10204-3, TAB 5100EN,ISO 9001 CERT No of 117 048912

ANNEX 1 TO CERTIFICATE

17326Y15

Requirement:	Sample #	Bend test Angle	Sample #	Bend test Angle	Requirement:	Sample #	Bend test Angle	Sample #	Bend test Angle
MSRR 8632 Iss.11	1	180°	45	180°	AMS 4911 N	1	105°	45	105°
	2	180°	47	180°		2	105°	47	105°
	3	180°	49	180°		3	105°	49	105°
	4	180°	51	180°		4	105°	51	105°
	8	180°	52	180°		8	105°	52	105°
	9	180°	53	180°		9	105°	53	105°
	10	180°	54	180°		10	105°	54	105°
	11	180°	55	180°		11	105°	55	105°
	12	180°	56	180°		12	105°	56	105°
	13	180°	57	180°		13	105°	57	105°
	14	180°	58	180°		14	105°	58	105°
	15	180°	59	180°		15	105°	59	105°
	16	180°	60	180°		16	105°	60	105°
	17	180°	5	180°		17	105°	5	105°
	18	180°	6	180°		18	105°	6	105°
	19	180°	7	180°		19	105°	7	105°
	20	180°	15	180°		20	105°	15	105°
	21	180°	25	180°		21	105°	25	105°
	22	180°	26	180°		22	105°	26	105°
	23	180°	28	180°		23	105°	28	105°
	24	180°	31	180°		24	105°	31	105°
	29	180°	32	180°		29	105°	32	105°
	30	180°	33	180°		30	105°	33	105°
	34	180°	40	180°		34	105°	40	105°
	35	180°	41	180°		35	105°	41	105°
	36	180°	42	180°		36	105°	42	105°
	37	180°	46	180°		37	105°	46	105°
	38	180°	48	180°		38	105°	48	105°
	39	180°	50	180°		39	105°	50	105°
	43	180°	27	180°		43	105°	27	105°
	44	180°		180°		44	105°		105°

Approved by: Bagirova M.V.

Signature

Stamp

