

0260.1

INSPECTION CERTIFICATE

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AVSMPO
"VSMPO-AVISMA Corporation"
Purchaser: TIRUS INTERNATIONAL SA, Switzerland
Quality/Alloy: GRADE2

EN 10204-2.1 JS 21002EN ISO 9001 CERT. No 01 117 048312



CERTIFICATE: 07870Y12
Contract: 84054105TDD Annex 26
Purchaser order: 28633-RM/VS-2011-01
Terms of delivery: ASTM F 67-06

Date: 31.03.2012
Condition of delivery: Annealed
Object: SHEET

Sheet No	Units	Weight (kg)	Object	Dimensions (mm/inch) or Drawing No	Heat No	Lot No
1-79, 81-97, 112	97	539	SHEET	0,63 x 1000 x 2000	8-02-01213	8720-2

Chemical Composition, %	Ti-remainder			Residuals, max %
	Fe	C	N	
Requirement:	max	max	max	each total
ASTM F 67-06	0.30	0.08	0.03	0.10 0.40
TOP	0.029	0.003	0.002	<0.10 0.08
BOTTOM	0.032	0.003	0.001	<0.10 0.088

Requirement:	Tensile strength	Elongation	Heat treatment	In the Part, %		Bend test
				Sample	H	
ASTM F 67-06	KSI	%	T, C	time	max	Transverse
					min	
20	48.3	27.0	670	20 min	0.0022	105°
40	47.6	26.9	air cooling	40	0.0023	105°
60	47.9	26.8		80		105°
80	47.4	27.0		80		108°
100	51.2	25.0		100		105°
112	47.9	27.2		112		105°

Microstructure testing: As per ASTM F 67-06 par. 9.1; Free from alpha-case
ISO 5832-2 Part. 2: 1989(F) grain size # 8.5.

Ultrasonic inspection: N/A

We certify that, subject to acceptance of comprehensive final inspection, the specified sheet metal was manufactured in accordance with the technical specifications of this contract, under our supervision and that all inspection certificates and test results have been completed, the samples tested in every respect with the relevant mechanical properties, and relevant standards and regulations in force, including the reference of construction grade.

It is allowed to deliver with deformation 1-3%
Tolerance size and marking, as per ASTM B 265-10.
Mercury Free.
Production start-up date: 26.12.2011

Signature: *[Handwritten Signature]*

Prepared by: Levina O.V.
Name: Mitrokhina O.K.

Stamp: *[Circular Stamp]*



Form# V058
Rev. 1
3 Jan 2011

INSPECTION REPORT

Alloy: GR 2	VSMPO P.O.#: 27108-RM	Inspected By: BY	Date: 6-13-12
Form: SHEET	Length Tol: + 1/2" / - 0.00"	QA Approval: <i>[Signature]</i>	Date: 0-14-12
Size: T .025" W 39.375" L 78.75"	Width / Ø Tol: + 1/16" / - 0.00"	Thickness (Tol): +/- 0.003"	Invoice #: 756 1444 - 2012

Package #	Heat #	Qty	ID #	Test ID	V/D 1	V/D 2	Width	Length	AIR
1145	8-02-01213	32		31	.026	.026	39 3/8	78 1/2	A
				30	.026	.026	39 3/8	78 1/8	A
				29	.026	.026	39 3/8	78 1/8	A
				28	.026	.026	39 3/8	78 1/8	A
				27	.026	.026	39 3/8	78 1/8	A
				26	.026	.026	39 3/8	78 1/8	A
1146	8-02-01213	32		62	.027	.027	39 3/8	78 3/16	A
				61	.025	.025	39 3/8	78 3/16	A
				59	.025	.026	39 3/8	78 3/16	A
				58	.026	.026	39 3/8	78 3/8	A
				57	.026	.026	39 3/8	78 3/8	A
				56	.025	.026	39 3/8	78 3/16	A
1147	8-2-01213	33		85	.027	.027	39 3/8	78 1/8	A
				84	.027	.027	39 3/8	78 15/16	A
				83	.027	.027	39 3/8	78 1/8	A
				82	.027	.027	39 3/8	78 1/8	A
				81	.027	.027	39 3/8	78 1/8	A
				79	.027	.027	39 3/8	78 1/8	A

Stencil Markings: VSMPO ASTM F-67-06 GRADE 2 LOT 8720-2 HT A GAGE 0.63MM	Tool ID: T M -14
Visual Inspection: 012	Tool ID: D M 27