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				8/6/2019 10-10-32 am	Printed 8/6/2019 1			Adam Gillam
\$0.00	0.00%:	Sales Tax @ 0.00%:		Haynes International, Inc.	Haynes	,)·)*	Signed
\$720.00	lmount:	SubTotal Amount:	If items shipped in accordance with the order related to this invoice were exported from the United States, compliance with all applicable law, including, without limitation, the Export Admininstration Regulations, is required. Without limiting the generality of the foregoing, diversion of such items contrary to U.S. law is strictly prohibited.	s, compliance with all applicat rsion of such items contrary to	If items shipped in accordance with the order related to this invoice were exported from the United States, compliance with all applicable law, including, without limit the Export Admininstration Regulations, is required. Without limiting the generality of the foregoing, diversion of such items contrary to U.S. law is strictly prohibited.	elated to this invoice were red. Without limiting the g	ance with the order rel n Regulations, is requir	f items shipped in accorda he Export Admininstration
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			wide, 48.0000in long	1200 - 0.1300), 21.6600in	HASTELLOY® X ALLOY SHEET 0.1250 in thk (min/max range: 0.1200 - 0.1300), 21.6600in wide, 48.0000	ALLOY SHEET 0.1250 i	HASTELLOY® X &	
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T ,	201/15 LE VAN VIET STREET,	Ŋ					T STREET,	201/15 LE VAN VIET STREET,
EMBER COMPANY	SUPER MATERIALS ONE MEMBER COMPANY	S)MPANY LIMITED	ONE MEMBER CO	SUPER MATERIALS ONE MEMBER COMPANY LIMITED
	Shipped To:	S						Sold To:
	Code: CHASUS33	0		Account No.: 641625124	Account			US -1350
\# 021000021, Swif	Account # 641625124, ABA # 021000021, Swift	A		ABA No.: 071000013	ABA No.			Cnicago, IL
ricago, Illinois 6060	Bank: JP Morgan Chase, Chicago, Illinois 60603	5		Chicago, Illinois 60603	Chicago,			35082 Eagle Way
ernational, Inc.	Account Name: Haynes International, Inc.	>		JP Morgan Chase	JP Morg		nal, Inc.	Haynes International, Inc.
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\$5.00	Total Amount Due (USD)	T.	0:11:37 am	Printed 8/6/2019 10:11:37 am		Adam Gillam
\$0.00	Sales Tax @ 0.00%:	Si	Haynes International, Inc.	Hayne) ブ 大)	Signed
\$5.00	SubTotal Amount:		es, compliance with all applicables applicables of such items contrary to	exported from the United State enerality of the foregoing, dive	If items shipped in accordance with the order related to this invoice were exported from the United States, compliance with all applicable law, including, without limitation, the Export Admininstration Regulations, is required. Without limiting the generality of the foregoing, diversion of such items contrary to U.S. law is strictly prohibited.	If items shipped in accordance the Export Admininstration Re
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	HO CHI MINH CITY					700000
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SUPER MATERIALS ONE MEMBER COMPANY	SUPER MATERIALS ON				SOPER MATERIALS ONE MEMBER COMPANY LIMITED 201/15 LE VAN VIET STREET,	201/15 LE VAN VIET STREET,
	Shipped To:					Sold To:
	Code: CHASUS33		Account No.: 641625124	Account		US 06/8-1350
Account # 641625124, ABA # 021000021, Swift	Account # 641625124,		ABA No.: 071000013	ABA No		Chicago, IL
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Rokomo, IN 46904-9013	Kokon			Shipped Via		Shipped From
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1020 W Park Avenue			Cash Discount	Payment Terms	Purchase Order	Sales Order
Haynes International, Inc.			Invoice Account	Invoice Date		10RINV60119407
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				Invoice		

HAYNES INTERNATIONAL INC.

PACKING LIST

6-Aug-19

CUSTOMER: SUPER MATERIALS ONE MEMBER COMPANY PO NO. SM-HAYNES/100719

ALLOY: HASTELLOY® X ALLOY
FORWARDER: FED EX INTL
TRACKING 788821722674

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Kristina Brierly		7/	26/2019						
	Se Sc		Ship To • Destinataire • Bestell Super MATER	Ship To • Destinataire • Bestell SUPER MATER LE VAN VIET S' LIMITED HIEP HO CHI MINH (70000) 11 21.70 14 CNC59 14 CNC59 15 CNC59 17 CNC59 17	Ship To Destinataire e Bestell SUPER MATER LE VAN VIET S' LIMITED HIEP HO CHI MINH (700000	Ship To - Destinataire - Restellmenge	Ship To Destinataire • Bestellmenge SUPER MATERIALS ONE MEMBER 201/15 LE VAN VIET STREET, COMPANY LIMITED HIEP PHU WARD, DISTRICT 9, HO CHI MINH CITY 700000 Cr Cu Fe Mn Mo Ni 21.70 Pb Mg V Ag La Concess Pb Mg V Ag Table 1 PC Table 2 Pb Mg V Ag Table 2 Pb Mg V Ag Table 2 Pb Mg V Ag	Ship To Destinataire	Sup To Defination + Stock clarges No. Available resides No.

Reference Commande Bestellungs Nr 880496-1-0 Tensile Test at Room Temperature ● Essai De Traction A Temp. Ambiante ● Zugversuch Sales Order No Date Entered
Date De Commande
Bestelldatum 07/10/2019 CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS Reference Client Kundenbestelldaten SM-HAYNES/100719 Customer Reference Report No.
Rapport No
Zeugnis Nr
20190726001

International

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Haynes International 1020 West Park Avenue

Kokomo, Indiana, 46902 USA PO Box 9013

88 HRBW	q	Annealed Hardness Durette Recuit Geglueht Haerte	109000 PSI		Ultimate Zugfestigkeit	Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.
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νı	Grain Size		49000 PSI		0.2% Yield Lim. Elast. A 0.2% 0.2% Strieckgrenze	• Essai De Tractio Bei Raum Temp.
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	(6)					ch

Certification Technician

Certified By • Certifie Par • Bescheinigt Durch: Kristina Brierly

7/26/2019

1) 3901672301

Date Entered | Customer Reference | Report No. |

Sales Order No Reference Commande Bestellungs Nr 880496-1-0

Date Entered
Date De Commande
Bestelldatum
07/10/2019

Reference Client Kundenbestelldaten SM-HAYNES/100719

Report No.
Rapport No
Zeugnis Nr
20190726001

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IAYNES International

Haynes International 1020 West Park Avenue PO Box 9013 Kokomo, Indiana, 46902 USA

All tests and inspections have been performed and results meet specification requirements.

THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION

THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE UNITED STATES.

evaluated for alloy depletion, IGA and IGO at 500x. Results are acceptable. using Plate 1 for the comparison method at 100x. ASTM E 1181-02(2015) and ASTM E930-18 are used for evaluation as required. Samples were prepared using ASTM E3-11(2017) and SOP 459-002. The material has been When microstructure analysis is performed, the sample is etched with HCL and H2O2 (electrolytic). Samples were viewed at 100-500x magnification. Grain size evaluation was performed to the requirements of ASTM E112-13

For RTT Testing for plate >= .250" and < .500" without a reduction of area requirement, a flat specimen with a reduced section length of 2.25" and a width of 0.500" is used For RTT, ETT, Stress Rupture and Creep Testing for all sheet and plate < .250" thick, a flat specimen with a reduced section length of 2.25" and a width of 0.500" is used

For ETT, Stress Rupture and Creep Testing for bar and plate thickness >= .375" and billet, a bar specimen with a reduced section length of 1.25" and a diameter of .250" is used For ETT, Stress Rupture and Creep Testing for bar and plate with thickness >= .250" and < .375", a bar specimen with a reduced section length of 1.00" and a diameter of .160" is used

For RTT Testing for bar and plate thickness >= .750", a bar specimen with a reduced section length of 2.25" and a diameter of .500" is used. For RTT Testing for bar and plate thickness >= .375" and < .750", a bar specimen with a reduced section length of 1.25" and a diameter of .250" is used

For notch Stress Rupture Testing, a bar specimen with a reduced section length of 1.00" and a diameter of .250" is used. For Chappy Testing of a material thickness < .400", a specimen of .394" x .197" is used.

For Charpy Testing of a material thickness >= .400", a specimen of .394" x .394" is used.

Chemistry methods based on: ASTM E 1019-18 (Carbon, Sulfur, Nitrogen), ASTM E-3047-16 (Optical Emission/Spark), ASTM E 1621-13 (XRF), ASTM E 1479-16 (ICP).

bar), ASTM E290-14 (Bend), ASTM E23-18 (Charpy). Mechanical Test Methods based on: ASTM E8/E8M-16a (Room Temperature Tensile), ASTM E21-17 (Elevated Temperature Tensile), ASTM E139-11 (2018) (Stress Rupture/Creep Testing), ASTM E292-18 (Stress Rupture notch

Hardness Test Methods based on: ASTM E10-18 (Brinell), ASTM E18-19 (Rockwell), ASTM E384-17 (Vickers) For VdTUV, Mechanical Test Methods based on: ISO 6892-1:2016 (Room Temperature Tensile), ISO 6892-2:2011 (Elevated Temperature Tensile), ISO 148-1:2016 (Charpy)

Mill Orders Used: 3901672301 (1 PC)

A) 2100 °F to 2150 °F

Method of Chemistry Analysis for Heat# 84706 BUTT END *02: O.E. (P,Si); LECO (C,S); XARL LINFIT (Co,Cr,Fe,Mn,Mo,Ni,W);

Certified By ◆ Certifie Par ◆ Bescheinigt Durch: Kristina Brierly Certification Technician

7/26/2019

Sales Order No	CERTIFI Date Entered	TIFICATI	CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIE • WERKSZEUGNIS Date Entered Customer Reference Report No.	ESTS • RAPPC Customer Reference	PPORT I)'ESSAIS	CERTIFII Repo	TFIE • WERK Report No.	SZEUGN	IS Pages of Pages	f Pages				2	H	Haynes International	<u>a</u>
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Certified By • Certifie Par • Bescheinigt Durch: Kristina Brierly Certification Technician	ertifie Par • chnician	Bescheini	igt Durch:	Kristina I	Brierly				7/26/2019									
No.	m	Š.	ż	,														

HAYNESInternational

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Haynes International 1020 West Park Avenue PO Rox 9013

PO Box 9013 Kokomo, Indiana, 46902 USA

Tensile Test at	Tensile Test at Room Temperature ● Essai De Traction A Temp. Ambiante ● Zugversuch Bei Raum Temp.	• Essai De Trac Rei Raum Tem	tion A Temp. / n.	\mbiante • Zu	gversuch		Tensile Test	at Elevated Tei V	Tensile Test at Elevated Temperature • Essai De Traction A Hte.Temp. Warm Zugversuch	e Traction A Ht	.Temp.		Stress Rupt	Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch	• Essai A Char	ge De Rupture	Zeitstandvers	auch
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Certified By • Certifie Pa Certification Technician	Certified By • Certifie Par • Bescheinigt Durch: Kristina Brierly Certification Technician	Bescheinig	t Durch: Kı	ristina Bri	erly		7/26/2019		1) 3901763202									

CERTIFICATION OF TESTS ullet RAPPORT D'ESSAIS CERTIFIE ullet WERKSZEUGNIS Customer Reference

Reference Commande Sales Order No 880496-2-0 Bestellungs Nr

Date De Commande 07/10/2019 Date Entered Bestelldatum

SM-HAYNES/100719 Kundenbestelldaten Reference Client

20190726002 Rapport No Zeugnis Nr Report No.

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International

Kokomo, Indiana, 46902 USA 1020 West Park Avenue Haynes International PO Box 9013

THIS MATERIAL WAS MELTED AND MANUFACTURED IN THE UNITED STATES.

THIS MATERIAL IS FREE FROM MERCURY, CADMIUM, RADIUM, AND ALPHA SOURCE CONTAMINATION All tests and inspections have been performed and results meet specification requirements.

evaluated for alloy depletion, IGA and IGO at 500x. Results are acceptable. using Plate 1 for the comparison method at 100x. ASTM E 1181-02(2015) and ASTM E930-18 are used for evaluation as required. Samples were prepared using ASTM E3-11(2017) and SOP 459-002. The material has been When microstructure analysis is performed, the sample is etched with HCL and H2O2 (electrolytic). Samples were viewed at 100-500x magnification. Grain size evaluation was performed to the requirements of ASTM E112-13

For RTT Testing for plate >= .250" and < .500" without a reduction of area requirement, a flat specimen with a reduced section length of 2.25" and a width of 0.500" is used For RTT, ETT, Stress Rupture and Creep Testing for all sheet and plate < .250" thick, a flat specimen with a reduced section length of 2.25" and a width of 0.500" is used For ETT, Stress Rupture and Creep Testing for bar and plate with thickness >= .250" and < .375", a bar specimen with a reduced section length of 1.00" and a diameter of .160" is used

For RTT Testing for bar and plate thickness >= .375" and < .750", a bar specimen with a reduced section length of 1.25" and a diameter of .250" is used For ETT, Stress Rupture and Creep Testing for bar and plate thickness >= .375" and billet, a bar specimen with a reduced section length of 1.25" and a diameter of .250" is used

For RTT Testing for bar and plate thickness >= .750", a bar specimen with a reduced section length of 2.25" and a diameter of .500" is used. For notch Stress Rupture Testing, a bar specimen with a reduced section length of 1.00" and a diameter of 250" is used.

For Charpy Testing of a material thickness < .400", a specimen of .394" x .197" is used.

For Charpy Testing of a material thickness >= .400", a specimen of .394" x .394" is used.

bar), ASTM E290-14 (Bend), ASTM E23-18 (Charpy). Mechanical Test Methods based on: ASTM E8/E8M-16a (Room Temperature Tensile), ASTM E21-17 (Elevated Temperature Tensile), ASTM E139-11 (2018) (Stress Rupture/Creep Testing), ASTM E292-18 (Stress Rupture notch Chemistry methods based on: ASTM E 1019-18 (Carbon, Sulfur, Nitrogen), ASTM E-3047-16 (Optical Emission/Spark), ASTM E 1621-13 (XRF), ASTM E 1479-16 (ICP).

For VdTUV, Mechanical Test Methods based on: ISO 6892-1:2016 (Room Temperature Tensile), ISO 6892-2:2011 (Elevated Temperature Tensile), ISO 148-1:2016 (Charpy)

Hardness Test Methods based on: ASTM E10-18 (Brinell), ASTM E18-19 (Rockwell), ASTM E384-17 (Vickers)

Mill Orders Used: 3901763202 (1 PC)

A) 2100 °F to 2150 °F

Method of Chemistry Analysis for Heat# 84702 BUTT END *04: O.E. (P,Si); LECO (C,S); XARL LINFIT (Co,Cr,Fe,Mn,Mo,Ni,W);

Certified By • Certifie Par • Bescheinigt Durch: Kristina Brierly Certification Technician

7/26/2019



Haynes International, Inc. 1020 West Park Avenue PO Box 9013 Kokomo, IN 46904-9013

Tel: 765-456-6000 Fax: 765-456-6905 www.haynesintl.com

Certificate of Origin

			ICCHED DV THE					
	Name	<u> </u>	ISSUED BY THE M	MANUFACTI				
			1020 West Park Avenue	4	Name	SUPER MATERI	ALS ONE MEMBER	COMPANY
			PO Box 9013				ENZHARD NORD	
	Address			_	Address	201/15 s	LE VAN VIET STRE	ET
1.Exporter			Kokomo, IN 46902-9013				IU WARD, DISTRIC	Г9,
				4.Importer		HO CHI MIN	IH CITY 700000, VI	ETNAM
	Telephone		765-456-6000		Telephor	ne		
	Fax		765-456-6905		Fax			
	E-mail	j	hinkle@haynesintl.com		E-mail			
FO	RWARDING A	GENT	NAME		·	ADDRESS		
			FED EX INTL					
			5.Specification	on of Item(s)			
	scription of Go		Schedule B detail HS Tariff Classification number	Qty & Unit	GROSS WGT (LB)	MEASUREMENT (INCHES)	PREFERENCE CRITERION	Country of Origin
HAST	ELLOY® X ALLO	SHEET	7506.20.1500	2 PCS	126	53x27x9	wo	US

PURCH	IASE ORDER N	IIIMRED	CAA HAVINTO (CAATA					
	**		SM-HAYNES/100719		T PERIOD			
ĐO	CUMENT NUN	/IBER	10SO1880496-1, -2		ER OF AGES		2	
COMMER	RICAL INVOICE	NUMBER	10RINV60119406, 10RINV60119407		TRY OF		VIETNAM	
certify that:								
The informati	on in this docu	ment is true an	d accurate and I assume the responsibi	lime for annual				
understand	that I am liable	for any false st	atements or material omissions made	on or in conne	ction with t	his document.		
I agree to ma vas given of ar	intain, and pre ny changes that	sent upon requ would affect th	est, documentation necessary to supp ne accuracy or validity of this Certificate	ort this Certific	cate, and to	inform, in writing, all	persons to whom	the Certificate
his certificate co	onsists of1_	pages, includi	ing all attachments.					
he undersigne	d Jennifer S. H	i nkle (Owner or A	<u>lgent),</u> does hereby declare for the abov	e named shinn	er, the ann	ds as described above		
hipped and co	nsigned as indi	cated and are p	roducts of the United States of Americ	a.	er, the good	us us described above v	vere	
Sworn to bef	ore me on:	6-Aug-19						
. Authorized S	ignature:							
1		5.7.	+					
IAYNES INT	TERNATION	AL, INC						

Jennifer S. Hinkle, Inside Sales Associate

Email: jhinkle@haynesintl.com

Telephone : 765-456-6036 Fax: 765-456-6905 Received, subject to the classifications and lawfully filed tarrifs in effect on the date of the issue of the Bill of Lading, from

Bill of lading number BOL304651



THIS NUMBER MUST BE SHOWN ON FREIGHT BILL

HAY	N	ES
Interna	tio	nal

Ship from Haynes International Inc. (LaPorte) 3238 N Hwy 39 La Porte, IN 46350 United States

Note to Carrier

If Prepaid, when submitting a freight bill for payment, a copy of this Bill of Lading must be attached and mailed to:

Haynes International

C/o AFS

P.O. Box 18170 Shreveport, LA 71138

Ship to

SUPER MATERIALS ONE MEMBER COMPANY LIMITED

201/15 LE VAN VIET STREET, HIEP PHU WARD, DISTRICT 9, HO CHI MINH CITY

700000 Vietnam Bill third-party freight charges to:

The property described below, in apparent good order, except as noted(contents and condition of contents of packages unknown), marked, consigned, and destined as The property described below, in apparent good order, except as indedicontents and contained or published any person or corporation in possession of the property under indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official Southern, Western, and Illinois Freight Classification in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, set forth in the classification or tariff which governs the transportation of this shipment and the said terms and conditions are hereby agreed to by shipper and accepted by himself and his assigns.

numbe		AYNES	/100719	Traile	r number			Seal n	umbers
Date 8/1/201			er EX INTL ECONOMY	Terms		C.O.D	. Amount	Freigh 0	nt charges
No.	Package typ	е	Order Number(s)		Description of a	ticles	LTL CI	ass	Gross weight
1	Box		10SO1880496 - 1.00, 10SO1880496 - 2.00		ALLOY SHEET		70		126.00
				······································					
	_								
	1								
	Total packag	es	1				Tetal		
12.55	Notes :	-					Total gross	weight	126.00

Subject to Section 7 of conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of the shipment without payment of freight and all other lawful charges. Haynes International inc.

(Signature of Consignor)

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

†The fiber boxes used for this shipment conform to the specifications set forth in the box master's certificate thereon, and all other requirements of Rule 41 of the Uniform Federal Classification.

†This is to certify that the above articles are properly described by name and are packed and marked and are in proper condition for transportation, according to the egulations prescribed by the Interstate Commerce Commission and the Commandant of the Coast Guard.

NOTE - where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

*Statement below applies only to Metals NOI or Metals Alloys NOI.

The agreed or declared value of the property is hereby specifically stated by the shipper to not be exceeding \$0.40 per lb.

Shipper: Haynes International Inc.

Kristina Brierly

Permanent post office: Address of Shipper

3238 N Hwy 39 La Porte, IN 46350 United States

Carrier

Per: A BRUNER Date 8/1/2019

Pro: 788821722674 Shipment 10SH199962