

CERTIFICATION OF TESTS • RAPPORT D'ESSAIS CERTIFIÉ • WERKSZEUGNIS

Sales Order No Reference Commande Bestellungs Nr 826088-1-0	Date Entered Date De Commande Bestelldatum 03/05/2016	Customer Reference Reference Client Kundenbestelldaten 8652	Report No. Rapport No Zeugnis Nr 20160729054	Pages of Pages Page de Pages Anzahl der Seiten 1 Of 3
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HAYNES
International

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10601

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

Sold To • Client • Bestellaranschrift	Ship To • Destinataire • Bestellmenge	Product Description • Description Produit • Material Beschreibung 0.125 (0.120/0.130) x 48 (48/48.125) x 120 HASTELLOY(R) C-276 ALLOY SHEET - 3.17 MM X 1219 MM X 3048 MM Nadcap Materials Testing Accredited GE# 19762, S400 5/18/2015, S1000 5/29/2015, EN 10204 3.1, AS9100
Specification • Specification • Spezifikation RR9000:SABRe; EMS 70793, B; MR0175-2009, A; ASTM-B-575, 14, UNS# N10276; ASME-SB-575, 2015, UNS# N10276	Quantity Ordered Quantité Commandée Bestellmenge 5085 LB	Quantity Shipped Quantité Expédiée Liefermenge 5144 LB

Heat Number Numero De Coulée Charge Nr	Chemical Analysis • Analyse Chimique • Chemische Analyse																	PRIMARY
	Al	B	C	Cb+Ta (Nb+Ta)	Co	Cr	Cu	Fe	Mn	Mo	Ni	P	S	Si	Ti	V	W	
2760 5 3921			<0.001		1.41	15.74		5.56	0.53	15.25	57.32	0.006	0.003	0.03		0.02	3.41	PRIMARY
	Cb(Nb)	Ta	Zr	Bi	Se	La	C+N+Cb+9	Pb	Mg	Y	Ag	N	Ca	Al+Ti	Ni+Co	Ni+Mo		
2760 5 3921																	PRIMARY	

Certified By • Certifié Par • Bescheinigt Durch: Julie Clark
Certification Technician

7/29/2016

Julie Clark

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Tensile Test at Room Temperature • Essai De Traction A Temp. Ambiante • Zugversuch Bei Raum Temp.						Tensile Test at Elevated Temperature • Essai De Traction A Hte.Temp. Warm Zugversuch						Stress Rupture Temperature • Essai A Charge De Rupture Zeitstandversuch					
Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Strieckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Strieckgrenze	% Elong In % Allong EN % Dehnung	%RA		Test Essai Versuch	Ultimate Zugfestigkeit	1% Yield Lim. Elast. A 1% 1% Strieckgrenze	0.2% Yield Lim. Elast. A 0.2% 0.2% Strieckgrenze	% Elong In % Allong EN % Dehnung	%RA	Test Essai Versuch	Stress Contrainte Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% RA	
111000 PSI	53000 PSI	50000 PSI	63 %		1)A)	Temp:						Temp:	1500 °F	18000 PSI	62 HRS	129 %	1)A)

Annealed Hardness Durete Recuit Gegueht Haerte	Aged Hardness Durete Vieilli Gealtert Haerte	Grain Size Grosueur De Grain Korngroesse						IGA	Uniformity	Corrosion Rate	Oxidation Rate	Charpy Impact Test				Creep Rupture				
		Grain Size	Predominant Grain Size	Recry. Grain	Unrecry. Grain %	ALA	P&W Figure Number	Attack Depth		Corrosion	Test Method	Toughness Avg	Toughness 1	Toughness 2	Toughness 3	Test Essai Versuch	Stress Contrainte Spannung	Hours Heures Stunden	% Elong In % Allong EN % Dehnung	% Elong @ 15 Hrs
87 HRBW	1)A)	4						0.0001 IN		MPY		Ft. Lbs.	Ft. Lbs.	Ft. Lbs.	Ft. Lbs.	Temp:	PSI			

Certified By • Certifie Par • Bescheinigt Durch: Julie Clark
Certification Technician

7/29/2016

1) 3900687401

Julie Clark

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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.

When microstructure analysis is performed, the etchant used is H2O2 and HCl. Samples were viewed at 100-500x magnification. Grain size evaluation is performed to the requirements of ASTM E112- 96(2004)e2 Plate 1. Samples are prepared per ASTM E3-01. The material has been evaluated for alloy depletion.

No welding performed on this material.

This material was melted and manufactured in the United States.

BEND TEST: Passed.

Mill Orders Used: 3900687401 (5144 LB)

A) 2075 °F to 2100 °F

Method of Chemistry Analysis for Heat# 53921 PRIMARY: O.E. (P,Si); LECO (C,S); XARL LINFIT (Co,Cr,Fe,Mn,Mo,Ni,V,W);

MELT METHOD: AOD/ESR

"NO WELD REPAIRS PERFORMED" & "ROHS COMPLIANT" & "COMPLIES WITH DFARS 252.225-7014 & 225.7002-3(1)(B)" & "UNS-N-10276" & "WERKSTOFF 2.4819" & "DODD-FRANK ACT" & "MATL ONLY MEETS THE CEMISTRY REQUIREMENTS PER NACE MR0103 SECTION 3.1.1.1.1."

3.17 MM X 1219 MM X 3048 MM

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