



CD21107
CARRS STAINLESS STEELS
 A Division of ELG Haniel Metals Ltd.
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CO85579

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Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 20 Challenger Crescent Sherwood Park Alberta T8H 2R1 Canada	Inspection Certificate: Abnahmeprüfzeugnis: Certificat de reception: <div style="border: 1px solid red; padding: 2px; display: inline-block;"> DIN 50049 3.1 EN 10204 </div>	Cert No: Zeugnis Nr: Cert No: 135018-a	Date: Datum: Date: 26/08/13
<div style="color: red; font-size: 2em; font-weight: bold; margin-left: 100px;"> Ju 11/31/14 </div>	Customer Order No: Kundenstellnummer: No. de Commande Client: PO29778	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 11in Dia x 8000lbs Electric Melt & Vacuum Degassed Stainless Steel Solution Annealed Forged ASA 4404/316L EN 10088-3:5 ASTM A182-09a, A276-08a, A479-10 F316/F316L 316/316L ASME SA182-LE, SA276-LE, SA479-LE F316/F316L 316/316L NACE MR0175-09/ISO 15156	
	Our Order No: Unsere Auftr.-Nr: notre Comm. No: 50632 W139670/00	8698 LB 3945 Kgs.	

Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Coulee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N								
Heat# CD21107	.012	.32	1.18	.032	.011	16.25	2.14	10.38	.32	.18	.040								

Heat Treatment - Wärmebehandlung - Traitement Thermique

Solution annealed @ 1060 C for 4 hours & Water Quenched

Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique

Test No Probe Nr No. d'Essai	Test dimension Probeabmessung Dimension		Proof Stress Rp Streckgrenze Limite d'Elasticite		Tensile strength Rm Zugfestigkeit Resistance a la traction	Elong % A Bruchdehnung % Allongement %		Red of Area % Z Brucheinschnürung % Striction %		Impact Kerbschlagzähigkeit Resilience	Hardness Härte Durete
			0.2%	1.0%		Lo 5D	4D				
MM0274	11"	L	37.6 ksi		75 KSI	67 %	78 %				140 HB

Remarks - Bemerkungen - Remarques

Ultrasonically tested and found satisfactory
 Intercrystalline corrosion test to ASTM A262:E satisfactory
 Grain size to ASTM E112 -
 Material produced by ELG Carrs Stainless Steels in the United Kingdom



The material detailed has been manufactured and tested in accordance with the Quality Assurance system ISO 9001:2008 and the requirements of the specification/ order.

Signed: *C Ryall*
 Chris Ryall - Quality Manager



Approved signatory for
 ELG Carrs Stainless Steels

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