



CARRS STAINLESS STEELS

A Division of ELG Haniel Metals Ltd.
Wadsley Bridge, Sheffield, S6 1LL, England

Telephone: 0114 285 5866
Fax No.: 0114 285 4952
Website: <http://www.elgcarrs.co.uk>
e-mail: info@elgcarrs.co.uk

CD24074 - 11in

C108886

Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 20 Challenger Crescent Sherwood Park Alberta T8H 2R1 Canada	Inspection Certificate: Abnahmeprüfzeugnis: Certificat de reception:	DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert No:	139257	Date: Datum: Date:	08/07/14
	Customer Order No: Kundenbestellnummer: No. de Commande Client:	P032403	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 11in Dia. x 13200 lbs 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			4702 LB 2133 Kgs.
	Our Order No: Unsere Auftr.-Nr: notre Comm. No:	52363 W143024/01				

Chemical Analysis - Chemische Analyse - Analyse Chimique													
Cast No Schmelznummer No. de Cuilee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N		
CD24074	.012	.45	1.19	.037	.010	16.75	2.12	10.17	.42	.21	.047		

Heat Treatment - Wärmebehandlung - Traitement Thermique	Solution annealed @ 1060 C for 3 hours & Water Quenched
---------------------------------------------------------	---------------------------------------------------------

Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique									
Test No Probe Nr No. d'Essai	Test dimension Probabmessung Dimension	Proof Stress Streckgrenze Limite d'Elasticite 0.2%	Rp 1.0%	Tensile strength Zugfestigkeit Resistance a la traction Rm	Elong % A Bruchdehnung % Allongement % Lo 5D 4D	Red of Area % Z Bruchseinschnürung % Striction %	Impact Kerbschlagzähigkeit Resilience	Hardness Härte Durete	
273483	11" L	32.9 ksi		75 ksi	67 %	78 %		144 HB	

Remarks - Bemerkungen - Remarques

Ultrasonically tested to ASTM A388 and found satisfactory
 Intercrystalline corrosion test to ASTM A262:E satisfactory
 Grain size to ASTM E112 - 2.5
 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:
 Chris Ryall - Quality Manager

Approved signatory for
 ELG Carrs Stainless Steels

