



CD23183 (8.5")

CARRS STAINLESS STEELS

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

C085574

Telephone: 0114 285 5866
Fax No.: 0114 285 4962
Website: <http://www.elgcarrs.co.uk>
e-mail: info@elgcarrs.co.uk

Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 20 Challenger Crescent Sherwood Park Alberta T8H 2R1 Canada	Inspection Certificate: Abnahmeprotokoll: Certificat de reception: DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert No: 134907-a	Date: Datum: Date: 24/06/13
Customer Order No: Kundenstellnummer: No. de Commande Client: P029532	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 8.5in Dia. x 4400lbs 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: 50633 W139679/00	5304 LB 2406 Kgs.		

Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Coulee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N									
CD23183	.020	.50	1.49	.037	.009	16.58	2.17	10.13	.31	.21	.077									

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 Probeabmessung Dimension	Proof Stress Streckgrenze Limite d'Elasticite 0.2%	Rp 1.0%	Tensile strength Zugfestigkeit Resistance a la traction Rm	Elong % Bruchdehnung % Allongement % 1a 50 40	Red of Area % Bruchreinschnurung % Sinteren % Z	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
MM0483	8.5" L	38.4 ksi		79.2 ksi	64 %	82 %	141 HB	

Remarks - Bemerkungen - Remarques

Ultrasonically tested and found satisfactory
 Intercrystalline corrosion test to ASTM A262:E satisfactory
 Grain size to ASTM E112 - 0
 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