

C085575

ASA PO 78062
 wo 5952 CPA 6FOE40
 103 pcs

CARRS STAINLESS STEELS

A Division of ELG Haniel Metals Ltd.
 Wadsley Bridge, Sheffield, S6 1LL, England **CD23183 (9")**

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Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 20 Challenger Crescent Sherwood Park Alberta T8H 2R1 Canada <i>ok 8/16/13</i>	Inspection Certificate: Abnahmeprüfzeugnis: Certificat de reception:	DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr. Cert No:	135041-a	Date: Datum: Date:	26/06/13
	Customer Order No: Kundenstellnummer: No. de Commande Client	P029532	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 9in 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 W139680/00	3175 LB 1440 Kgs.			

Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Coulée	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N								
Heat# 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 % Le 5D 4D	Red of Area % Bruchdehnung % Striction % Z	Impact Kerbschlagzähigkeit Resilience	Hardness Harta Durete
244881	9"	36.2 ksi		81 ksi	66 %	82 %		148 HB

Remarks - Bemerkungen - Remarques
 Ultrasonically tested and found satisfactory
 Intercrystalline corrosion test to ASTM A262:E satisfactory
 Grain size to ASTM E112 - 1
 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*
 Chris Ryall - Quality Manager



Approved signatory for
 ELG Carrs Stainless Steels