



# CARRS STAINLESS STEELS

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

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0085576

Purchaser - Besteller - Acheteur  <b>ASA Alloys Div of CSM ULC</b> 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:	134990-a	Date: Datum: Date:	10/08/13
	Customer Order No: Kundenstellnummer: No. de Commande Client:	P029532	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 11in Dia. x 6000lbs 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  W139882/00	8593 LB 3898 Kgs.			

## Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Coudée	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N								
CD23185	.018	.36	1.36	.033	.009	17.09	2.13	10.01	.34	.21	.080								

Heat Treatment - Wärmebehandlung - Traitement Thermique

Solution annealed @ 1060 C for 4 hours & Water Quenched

## Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique

Test No Proba Nr No. d'Essai	Test dimension Probeabmessung Dimension		Proof Stress Streckgrenze Limite d'Elasticite	Rp	Tensile strength Zugfestigkeit Resistance a la traction	Rm	Elong % Bruchdehnung % Allongement %	A	Red of Area % Bruchausrichtung % Striction %	Z	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
			0.2%	1.0%			Lo 5D	4D				
242860	11"	L	40.8 ksi		80.5 ksi		67 %		78 %			150 HB

Remarks - Bemerkungen - Remarques

Ultrasonically tested and found satisfactory  
 Intercrystalline corrosion test to ASTM A262:E satisfactory  
 Grain size to ASTM E112 - 2  
 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

