



# CD 24057 A - 11

## CARRS STAINLESS STEELS

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

Telephone: 0114 265 6666  
 Fax No.: 0114 265 4982  
 Website: http://www.elgcarrs.co.uk  
 e-mail: info@elgcarrs.co.uk

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 réception:	DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert No:	138862	Date: Datum: Date:	13/05/14
	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 ABTM A182-08a, 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:	52368  W143024/00	8058 LB 3655 Kgs.			

Chemical Analysis - Chemische Analyse - Analyse Chimique													
Cast No Schmelznummer No. de Coulee	C	SI	Mn	P	S	Cr	Mo	NI	Cu	Co	N		
CD24057 A	.018	.36	1.32	.035	.010	16.6	2.04	10.07	.375	.19	.048		

Heat Treatment - Wärmebehandlung - Traitement Thermique      Solution annealed @ 1060 C for 5Hrs and water quenched

Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique								
Test No Probe Nr No. d'Essai	Test dimension Probestabmessung Dimension	Proof Stress Streckgrenze Limite d'Elasticite 0.2%	Rp 1.0%	Tensile strength Zugfestigkeit Resistance a la traction Rm	Elong % Bruchdehnung % Allongement % Lo 5D 4D	Red of Area % Bruchdehnung % Striction % Z	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
MN1817	11"DIA L	38.4 ksi		81.2 ksi	70 %	76 %	143 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  
 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 Rynill - Quality Manager  
 Approved signatory for  
 ELG Carrs Stainless Steels

