

C086335



# CD23189 (9) CARRS STAINLESS STEELS

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

Telephone: 0114 285 5886  
Fax No.: 0114 285 4982  
Website: <http://www.elgcarrs.co.uk>  
e-mail: [info@elgcarrs.co.uk](mailto:info@elgcarrs.co.uk)

Purchaser - Besteller - Acheteur  ASA-Alloys Div of CSM ULC 20 Challenger Crescent Sherwood Park Alberta T8H 2R1 Canada	Inspection Certificate Abnahmegutachten Certificat de réception:	DIN 50048 3,1 EN 10204	Cert No: Zeugnis Nr: Cert No:	135171-a	Date: Datum: Date:	27/06/13
	Customer Order No: Kundenbestellnummer: No. de Comande Client:	PO29778	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 9in Dia. x 5200lbs 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:	50632  W130673/00	3708 LB 1682 Kgs.			

Chemical Analysis - Chemische Analyse - Analyse Chimique													
Cast No. Schmelznummer No. de Coulee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N		
CD23189	.022	.38	1.45	.034	.008	16.7	2.06	10.35	.34	.20	.057		

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

Mechanical Properties - Mechanische Eigenschaften - Caractéristiques Mécanique										
Test No. Probe Nr No. d'Essai	Test dimension Probeabmessung Dimension	Proof Stress Streckgrenze Limite d'Elasticité		Tensile strength Zugfestigkeit Résistance à la traction	Elong % A Bruchdehnung % Allongement %		Red of Area % Bruchverschnürung % Striction %		Impact Kerbschlaghöhe Résistance	Hardness Harta Dureté
		0.2%	1.0%		Lo 5D	4D				
244800	9"	36.5 ksi		78 ksi	65 %	79 %			142 HB	

Remarks - Bemerkungen - Remarques

Ultrasonically tested and found satisfactory  
 Intercrystalline corrosion test to ASTM A262E 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