



CARRS STAINLESS STEELS

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

CD23175

C085571

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Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 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:	134994-a	Date: Datum: Date:	20/06/13
	Customer Order No: Kundenbestellnummer: No. de Commande Client:	P029532	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 6.75in 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 W139676/00	4277 LB 1940 Kgs.			

Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Cousse	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N										
CD23175	.026	.37	1.74	.032	.012	16.52	2.08	10.38	.36	.18	.057										

Heat Treatment - Wärmebehandlung - Traitement Thermique

Solution annealed @ 1060 C for 3 hours & Water Quenched

Mechanical Properties - Mechanische Eigenschaften - Caractéristiques Mécaniques

Test No Probe Nr No. d'Essai	Test dimension Probeabmessung Dimension	Proof Stress Streckgrenze Limite d'Elasticité 0.2%	Rp 1.0%	Tensile strength Zugfestigkeit Resistance a la traction Rm	Elong % A Bruchdehnung % Allongement % Lo 5D 4D	Red of Area % Z Bruchverschnürung % Striction %	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
ML9857	6.75" L	37.9 ksi		78.5 ksi	60 %	75 %		140 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



Certificate No. FM 13615



Reg No 04 701 6068

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

