

C153015

1 of 3



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

Telephone: 0114 285 5866
 Fax No.: 0114 285 4862
 Website: http://www.elgcarrs.co.uk
 e-mail: info@elgcarrs.co.uk

Date: 5/3/2016 To: ASA ALLOYS (EDMONTON) SO#: S088570 L#: 1 PO#: P038231 Part: 11413005 Qty: 2466

Inspection Certificate: Abnahmeprüfzeugnis: Certificat de reception:		DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert. No:	145649	Date: Datum: Date:	15/03/16
Customer Order No: Kundenbestellnummer: No. de Commande Client:		P04220	Product Description - Beschreibung des Erzeugnisses - Description du Produit:			
Our Order No: Unsere Auftr.-Nr: notre Comm. No:		55171	13.125in Dia. x 11000 lbs Electric Melt & Vacuum Degassed Stainless Steel 3896 LB 1767 Kgs.			
		W148431/00	Solution Annealed Forged SS1 REV 5 316/316L/F316/F316L ASTM A276-13a, A479-14, A182-14b, A484-14a, A193-14 B8M CL1 ASME SA182, ASME SA479, ASME SA193 B8M CL1, SAE AMS-QQ-S-763B AMS 5653, AMS 5648, NACE MR0175, ISO 15156-3, NACE MR0103			

Chemical Analysis - Chemische Analyse - Analyse Chimique													
Cast No Schmelznummer No. de Cotelee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	N	Co		
CD25640 A	.013	.41	1.39	.040	.025	16.92	2.10	10.29	.38	.054	.20		

Heat Treatment - Wärmebehandlung - Traitement Thermique: Solution annealed @ 1940 F for 4 hours & Water Quenched

Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique											
Test No Probe Nr No. d'Essai	Test dimension Probabmessung 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	A	Red of Area % Bruchinschnurung % Striction %	Z	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
MR4636	13.125" L	283 MPa	333 MPa	561 MPa		52.5 %	55 %	75 %			131 HB

Remarks - Bemerkungen - Remarques:
 Ultrasonically tested to ASTM A388 and found satisfactory
 Intercrystalline corrosion test to ASTM A262:E satisfactory
 Intercrystalline corrosion test to ASTM A262:A satisfactory
 Grain size to ASTM E112 - 3
 Microstructure and macrostructure see attached sheet.
 No welding performed
 No contact with Mercury or radioactive elements
 Nominal Size = 13"dia
 Material produced by ELG Carrs Stainless Steels in the United Kingdom.
 Hot Working Reduction - 4.8:1

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