



CARRS STAINLESS STEELS

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

CO# 3449

Telephone: 0114 285 5866
Fax No.: 0114 285 4962
Website: <http://www.elgcarrs.co.uk>
e-mail: info@elgcarrs.co.uk

Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 81 Steinway Boulevard Etobicoke Ontario M9W 6H6 Canada	Inspection Certificate: Abnahmeprüfzeugnis: Certificat de reception:	DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert No:	143501-a	Date: Datum: Date:	16/10/15
	Customer Order No: Kundenbestellnummer: No. de Commande Client:	P037272	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 6.5in Dia. x 2600lbs Electric Melt & Vacuum Degassed Stainless Steel Solution Annealed Forged ASA 1.4301/1.4307/304L EN10088-3 :05 EN10272:07 ASTM A182-09a, A276-08a, A479-10 F304/F304L, 304/304L ASME SA182-LE, SA276-LE, SA479-LE, F304/F304L, 304/304L NACE MR0175-LE/ISO 15156, QQS 763F			
	Our Order No: Unsere Auftr.-Nr: notre Comm. No:	54177 W146608/00	2328 LB 1056 Kgs.			

Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Coulee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	N									
CD25189A	.013	.56	1.27	.035	.009	18.08	.44	8.23	.30	.045									

Heat Treatment - Wärmebehandlung - Traitement Thermique

Solution annealed @ 1060 C for 3 hours & Water Quenched

Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique

Test No Probe Nr No. d'Essai	Test dimension Probeabmessung Dimension		Proof Stress Streckgrenze Limite d'Elasticite		Tensile strength Zugfestigkeit Resistance a la traction	Elong % A Bruchdehnung % Allongement %		Red of Area % Z Bruchseinschnürung % Striction %	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
			0.2%	1.0%		Lo 5D	4D			
MP7189	6.5"	L	35.5 ksi	39.3 ksi	87.7 ksi		68 %	79 %		131 HB
MP7190	6.5"	Tr	33.9 ksi	38.4 ksi	83.8 ksi	56 %				

Remarks - Bemerkungen - Remarques

Ultrasonically tested to ASTM A388 and found satisfactory
 Intercrystalline corrosion test to ASTM A262:E satisfactory
 Intercrystalline corrosion test to BS EN ISO 3651-2 Satisfactory
 Grain size to ASTM E112 - 1.5
 No welding performed
 No contact with Mercury or radioactive elements
 Approved to PED 97/23/EC TUV cert issued No 13595-01
 Material in accordance with ASME Sec II Part A :04/Addenda 06

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 Ryall - Quality Manager
 Approved signatory for
 ELG Carrs Stainless Steels

