



CARRS STAINLESS STEELS

A Division of ELG Haniel Metals Ltd.
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HT# CD24568 B

C 117156

Purchaser - Besteller - Acheteur ASA Alloys Div of CSM ULC 20 Challenger Crescent Sherwood Park Alberta T8H 2R1 Canada	Inspection Certificate: Abnahmeprüfzeugnis: Certificat de reception:	DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert No:	140805	Date: Datum: Date:	20/10/14	
	Customer Order No: Kundenbestellnummer: No. de Commande Client:	P033771	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 15in Dia. x 8812lbs 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				8492 LB 3852 Kgs.
	Our Order No: Unsere Auftr.-Nr: notre Comm. No:	53179 W144528/00					

Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No Schmelznummer No. de Coulee	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Co	N								
CD24568 B	.028	.37	1.29	.036	.011	17.06	2.07	10.19	.36	.19	.065								

Heat Treatment - Wärmebehandlung - Traitement Thermique

Solution annealed @ 1060 C for 5 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 % A Bruchdehnung % Allongement % Lo 5D 4D	Red of Area % Bruchreinschnurung % Striction % Z	Impact Kerbschlagzähigkeit Resilience	Hardness Harte Durete
MN8793	15"	44.8 ksi	49.3 ksi	81.8 ksi	53 %	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 - 0.5
 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 Ryall - Quality Manager

Approved signatory for
ELG Carrs Stainless Steels

