

C108880



# CARRS STAINLESS STEELS

A Division of ELG Haniel Metals Ltd.  
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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 reception:	DIN 50049 3.1 EN 10204	Cert No: Zeugnis Nr: Cert No:	139190	Date: Datum: Date:	08/07/14
	Customer Order No: Kundenbestellnummer: No. de Commande Client:	P032403	Product Description - Beschreibung des Erzeugnisses - Description du Produit: 23.5in Dia. x 10430 lbs Electric Melt & Vacuum Degassed Stainless Steel Solution Annealed Forged 316/316L - ASA - MS2 rev A ASTM A182-14, A276:13a, A479:13b - F316/F316L 316/316L ASME SA182-LE, SA479-LE - F316/F316L 316/316L NACE MR0175-09/ISO 15156 API 6A / ISO 10423 ED20			
	Our Order No: Unsere Auftr.-Nr: notre Comm. No:	52363  W143021/00	12125 LB 5500 Kgs.			

## Chemical Analysis - Chemische Analyse - Analyse Chimique

Cast No. Schmelznummer No. de Goutte	C	SI	Mn	P	S	Cr	Mo	Ni	Cu	Co	N									
CD24082	.025	.41	1.25	.035	.009	17.02	2.10	10.12	.41	.21	.052									

Heat Treatment - Wärmebehandlung - Traitement Thermique

Solution annealed @ 1060 C for 6 hours 30 minutes & Water Quenched

## Mechanical Properties - Mechanische Eigenschaften - Caracteristiques Mechanique

Test No. Prob. No. No. d'Essai	Test dimension Probabmessung Dimension	Proof Stress Streckgrenze Limite d'Elasticite	Rp 1.0%	Tensile strength Zugfestigkeit Resistencia a la traction	Rm	Elong % Bruchdehnung % Allongement %	A 1g 6D 4D	Red of Area % Bruchdehnung % Striction %	Z	Impact Kerbschlagzähigkeit Resilience	Hardness Härte Durete
MN2308	23.5" L	39 ksi		76.7 ksi		58 %		70 %			143 HB

Remarks - Bemerkungen - Remarques

Ultrasonically tested to ASTM A388 and found satisfactory  
 Inter-crystalline corrosion test to ASTM A262:E satisfactory  
 Grain Size to ASTM E112 - 0  
 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 Byall - Quality Manager

Approved signatory for  
ELG Carrs Stainless Steels

