

217762



GERDAU

MILL TEST / QUALITY CERTIFICATE

GACO-MG-CHPGR-CONGONHAS-
AV SABIA S/N ZONA INDUSTRIAL
CONGONHAS MG
36415-000 BRAZIL

CUSTOMER HIERROS MARCELINO FRANCO SA		CUSTOMER ORDER HMF 26-04-17		SALES ORDER 5062891-000021		DIMENSIONS 20,000mm x 2000mm x 12000mm		PAGE 1 / 1
PRODUCT Plate			EDGE TYPE Cut edge			DELIVERY CONDITION Normalizing Rolling		DATE 08.23.2017
SPECIFICATION EN 10025-2:2004 - S355J2+N							DOCUMENT NUMBER 0002879E17	

Gerdau S.A. certifies that the material herein described is in accordance with the applicable technical specifications. As mutual protection for customer and supplier, this certificate is considered as confidential and can not be transcribed or reproduced without the written authorization of Gerdau S.A.

PACKAGES	PLATE #	WEIGHT (MT)	HEAT	SAMPLE	PLATE #	WEIGHT (MT)	HEAT	SAMPLE	PLATE #	WEIGHT (MT)	HEAT	SAMPLE
	3704888101	3.768	27092237	27092237928	3705034501	3.768	28093098	28093098009	3705034702 (*)	3.768	28093098	28093098009
	3704888102 (*)	3.768	27092237	27092237928	3705034502	3.768	28093098	28093098009	3705034703	3.768	28093098	28093098009
	3704888103	3.768	27092237	27092237928	3705034701	3.768	28093098	28093098009	3705109202	3.768	28093098	28093098009

CHEMICAL COMPOSITION																	
HEAT	C(%)	Mn(%)	Si(%)	P(%)	S(%)	Al T(%)	Cr(%)	Cu(%)	Ti(%)	Mo(%)	Nb(%)	Ni(%)	V(%)	B(%)	Ca(%)	N(%)	
27092237	0.15	1.43	0.19	0.024	0.003	0.025	0.02	0.01	0.013	0.01	0.032	0.01	0.045	0.0004	0.0002	0.0055	
28093098	0.17	1.43	0.21	0.018	0.002	0.034	0.03	0.01	0.015	0.00	0.035	0.01	0.047	0.0001	0.0000	0.0071	
HEAT	CEQ2(%)																
27092237	0.40																
28093098	0.43																

TENSILE TEST						CHARPY IMPACT TEST								
SAMPLE	DIRECTION	POSITION	YS(RE)(MPa)	TS(RT)(MPa)	YS/TS	ELONG/ALARG(%)	SAMPLE	DIRECTION	POSITION	TEMP/TEMP(°C)	IND EN/EN IND(J)	IND EN/EN IND(J)	IND EN/EN IND(J)	AVG EN/EN MD(J)
27092237928	Transversal	1/4 Width / Ancho	372	551	0.68	30.0	27092237928	Longitudinal	1/4 Width / Ancho	-20	35	40	39	38
28093098009	Transversal	1/4 Width / Ancho	399	573	0.70	28.0	28093098009	Longitudinal	1/4 Width / Ancho	-20	104	141	132	126

TENSILE TEST GAUGE LENGTH/LONGITUD DE REFERENCIA: LO: 5,65 x (S0*%)
 CHARPY IMPACT TEST SPEC SIZE/DIM MUESTRA: 10X10mm - V 2mm

ABBREVIATIONS													
(*)	Mother Plate Individual Energy	YS/RE	Yield Point Average Energy	TS/RT	Tensile Strength	YS/TS	Elastic Ratio	ELONG/ALARG	Elongation	TEMP/TEMP	Temperature		
IND EN/EN IND													

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 DATA 2018 03 27
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REMARKS CEQ2 = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 Product Type: Hot Rolled Structural Steel Products EC Certificate of Conformity N°0038/CPR/20060008/A Declaration of Performance: N° G003/16 Harmonised Standard: EN 10025-1:2004 Essential Characteristics: Tensile / Yield / Impact Strengths and Weldability: S355J2, Durability, regulated substance - No Performance Determined Intended Uses: Building Construction or Civil Engineering Tolerance on Dimensions acc. to EN 10029 Tab 1 Cl B, Tab 3, Tab 4 Cl N - Type L Surface Quality according to EN 10163-2 Class A - Subclass 2. Mill Test Certificate according to EN 10204-3.1 Ultrasonic testing according to EN 10160 Class S1E1.	<p>0038</p>	QUALITY ASSURANCE Kij Cey KENJI CAMEY CREA 43236	SURVEYOR