



MILL TEST / QUALITY CERTIFICATE

GERDAU AÇOMINAS S.A.
 ROD MG 443 KM 7 SN FAZENDA DO CADETE
 OURO BRANCO MG
 36420-000 BRAZIL

CUSTOMER FAF PRODUTOS SIDERURGICOS S A		CUSTOMER ORDER FAF 19-05-2017		SALES ORDER 5193632-000010		DIMENSIONS 20.000mm x 2000mm x 12000mm		PAGE 1 / 1
PRODUCT Plate			EDGE TYPE Cut edge			DELIVERY CONDITION Normalizing Rolling		DATE 11.17.2017
SPECIFICATION EN 10025-2:2004 - S355J2+N								DOCUMENT NUMBER 0004888E17

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
3705897601	3.768	27093746	27093746005	3705897602 (*)	3.768	27093746	27093746016	3705897102 (*)	3.768	28092739	28092739019
3705897602 (*)	3.768	27093746	27093746005	3705897101	3.768	28092739	28092739019	3705897103	3.768	28092739	28092739019

CHEMICAL COMPOSITION

HEAT	C(%)	Mn(%)	Si(%)	P(%)	S(%)	Al T(%)	Cr(%)	Cu(%)	Ti(%)	Mo(%)	Nb(%)	Ni(%)	V(%)	B(%)	Ca(%)	N(%)
27093746	0.16	1.38	0.22	0.013	0.007	0.035	0.02	0.01	0.014	0.01	0.035	0.01	0.044	0.0005	0.0000	0.0067
28092739	0.15	1.43	0.23	0.021	0.007	0.034	0.01	0.01	0.015	0.01	0.031	0.01	0.045	0.0004	0.0002	0.0032

TENSILE TEST

SAMPLE	DIRECTION	POSITION	YS(RE)(MPa)	TS(RT)(MPa)	YS/TS
27093746005	Transversal	1/4 Width / Ancho	379	538	0.70
28092739019	Transversal	1/4 Width / Ancho	401	550	0.73

CHARPY IMPACT TEST

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)
29.0	27093746005	Longitudinal	1/4 Width / Ancho	-20	26	51	31	56
28.0	27093746016	Longitudinal	1/4 Width / Ancho	-20	28	42	109	60
	28092739019	Longitudinal	1/4 Width / Ancho	-20	84	89	58	77

TENSILE TEST

GAUGE LENGTH/LONGITUD DE REFERENCIA:
 L₀: 5.65 x (S₀)^{0.5}

CHARPY IMPACT TEST

SPEC SIZE/DIM MUESTRA: 10X10mm - V 2mm

ABBREVIATIONS

(*)	Matriz Placa	YS/RE	Yield Point	TS/RT	Tensile Strength	YS/TS	Elastic Ratio	ELONG/ALARG	Elongation	TEMP/TEMP	Temperatura
IND EN/EN IND	Individual Energy	AVG EN/EN MD	Average Energy								

UT 18.L.01055
 GR26652(199)
ONIRAM, LDA
 DEP. QUALIDADE
 RECEPÇÃO

DATA
20/12/2016

RUBRICA
[Signature]

REMARKS

CEQ2 = C+Mn/B+(Cr+Mo+V)/S-(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, regulating substance - No Performance Determined
 Intended Uses: Building Construction or Civil Engineering
 Tolerances 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 B - Subclass 3.
 Mill Test Certificate according to EN 10204-3.1
 Ultrasonic testing according to EN 10160 Class S1E1

FAF - Produtos Siderúrgicos, S.A.
 Departamento de Qualidade



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QUALITY ASSURANCE

KENJI CAMEY
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SURVEYOR