


**ACESITA S.A. ASSOCIADA À ARCELOR**

jt: Praça 1º de Maio, nº 9 - Centro - Timoteo - MG - 35180-018 - Brazil

Head Office: Av. João Pinheiro, nº 580 - Centro - Belo Horizonte - MG - 30130-180 - Brazil

**QUALITY CERTIFICATE**
**Number:** 62940  
**Invoice:** E401481  
**Date:** 15/06/2004  
**ACESITA Order:** 9599127

**Customer:**  
 DUFERCO S.A  
 VIA BAGUTTI 9  
 CH-6900 - LUGANO  
 P.O.NR.: ORDEM 2

A6398

Part Number: ASTM A 36/A 36M

**Steel grade:** ACE P016N      **Finish:** HOT ROLLED      **Product:** COIL  
**Dimensions:** 12,70 mm x 1220 mm  
**Marks:**
**Chemical composition**

Heat nr.	C %	Mn %	Si %	P %	S %	Cr %	Ni %	Mo %	Al %						DI mm
402644I	0,152	0,77	0,110	0,014	0,002	0,09	0,03	0,009	0,0461						15,05
402645F	0,151	0,73	0,110	0,014	0,004	0,11	0,03	0,008	0,0426						15,11

**Results**

Test/Variable	Unit	402644I02		402645F02		402645F03		402645F04		402645F08			
		H	T	H	T	H	T	H	T	H	T	H	T
Tensile Strength	MPA		471,00		498,00		498,00		498,00		498,00		
Yield Strength 0.2 %	MPA		328,00		357,00		357,00		357,00		357,00		
Elongation 2"	%		36,90		30,00		30,00		30,00		30,00		
Grain Size			07/08		08/08		08/08		08/08		08/08		
Hardness	HRB	082	082	080	080	080	080	080	080	080	080		
Structure		FERRITE-PEARLITE		FERRITE-PEARLITE		FERRITE-PEARLITE		FERRITE-PEARLITE		FERRITE-PEARLITE			
Crown	mm	-0,005		-0,006		-0,009		-0,01		-0,02			
Wedge	mm	0,033		0,021		0,021		-0,006		-0,02			
Std. Deviation	mm	0,05		0,03		0,04		0,11		0,04			
Width	mm	1243,50		1241,70		1243,40		1245,20		1243,40			
Net Weight	MT	19,320		19,690		19,670		19,830		19,630			
Gross Weight	MT	19,320		19,690		19,670		19,830		19,630			

**Heat & Lot identification:** Ok  
**Surface quality / dimensions:** Ok

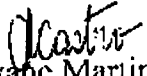
**Remarks:** ASTM A 36/A 36M.

Free from mercury contamination.

Certify that the results above are correct and in acc. with the specifications or accepted concession.

Quality management system certified ABS QE no. 30071 acc to AD2000 W2/W10; ISO 9001:2000.

Environmental management system certified ABS QE no. 65989 acc to ISO 14001.

  
 Geovane Martins Castro  
 Qualified Inspector  
 ACESITA S.A.