



# ASCOMETAL

TEST CERTIFICATE

Usine des Dunes  
Boite postale 41  
59114 Dourlemont Cedex 2

GRUPE LUCCHINI

CERTIFICATE Nr 1/55201	CUSTOMER AM CASTLE AND COMPANY CANADA VRS-1471 VRS-1470 VRS-1472 VRS-1469	CUSTOMER Nr 41-5-12973
WORKS Nr 216/3240 /05-01		HEAT Nr B3955
DESCRIPTION SIZES WEIGHTS	2 BARS 10"625 x20'11"/21'01" = 5.893 MT	A.M. CASTLE & CO. (CANADA) INC.
GRADE AISI4130 / G41300-100/10	DATE RECD 05/18/01	RECD FROM Lucchini USA

CHEMICAL COMPOSITION APPROVED BY JR RD 3270

C	Mn	Si	S	P	Ni	Cr	Mo	Al	Va	Cu
0.319	0.543	0.271	0.007	0.012	0.176	1.087	0.240	0.015	0.003	0.137

MECHANICAL PROPERTIES

* TC PR	HEAT TREATMENT	* Y S L T	UTS .2% PSI	E % IN 2"	R.A. %	* Temp. L T	IMPACT CVN* F FT.LBF	HARDNESS HRC
TC PR	4"x43X8" L Heat treated	L	81055	101935	24.0	51.0	- 75 50.2- 49.8- 49.6 + 32 35.1- 31.0- 28.6 CVN	18,1/19,3 20,5/21,7

CRC WELLHEAD SUPPLY LTD.  
Q.A. APPROVAL  
July 13/01

\* CHECKED ON => TC=TEST COUPON PR=PRODUCT AS DELIVERED L=LONGITUD. T=TRANSVER.

OTHER RESULTS

Grain size = 6/7M-Quaid - W0 #33520  
 Electric furnace - Vacuum degassed W014228  
 Reduction ratio : 4.67  
 Ingot cast  
 Heat treatment : on bars  
 Normalized 1650F 5.50hrs  
 Water quenched 1600F 5.50hrs  
 Tempered (1190/1300) 1238F 11.50hrs  
 Starting and ending water quench temperatures do not exceed 100°F  
 Mils lateral expansion 27 - 23 - 22 (>15)  
 Percent shear ~~80 - 50 - 50~~  
 Ultrasonic testing satisfactory per ASTM A 388-95  
 Access code : 44742  
 Conforms to API 6A-75K Classification K-PSLi-3 -  
 API 16A-NACE MR01-75-97- ASTM A 322-91-ASTM A29-93a  
 Conforms to SPEC G41300-100

USED FOR: P.O. # 09-21-57

	HRC	J	HRC
01	52.1	18	31.3
02	51.2	20	30.7
03	50.5	24	29.3
04	49.5	28	26.7
05	47.1	32	24.6
06	45.1		
08	40.5		
10	37.9		
12	34.5		
14	33.5		
16	31.9		

SIGNED J. Essai Jominy  
 Norm. : 1650°F  
 Aust. : 1600°F

Acteur exempt de radioactivité anormale - Steel free from abnormal radioactivity - Stahl frei von anormaler Radioaktivität

WE HEREBY CERTIFY THAT THE ABOVE-MENTIONED PRODUCTS COMPLY WITH THE ORDER REQUIREMENTS	DATE 22/03/01	STAMP OF INSPECTION SUPERVISOR G. GIROUD <u>[Signature]</u> GG
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MS / 055