

MATERIAL TEST REPORT

Product:	CA 5.500 0.304 17.00 P110HC LTC R3 SMLS CENT PRIME		
Heat:	YD03522	Lot:	YD03522-422
		Specification:	API 5CT Latest Edition

Sales Order: SO0001414

Purchase Order: SBB-0062

-----Sold To -----

SB NAVITAS
480, 435 - 4TH AVE SW
CALGARY AB
Calgary , CA

CHEMICAL ANALYSIS

	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	AL	V	B	Cb	Ti	Ca	N	O	CEQ	DI	PrM
HEAT	0.25	1.4	0.011	0.004	0.21	0.06	0.04	0.38	0.01		0.032	0.005	0.0017		0.033				0.569		
CHECK	0.254	1.357	0.011	0.003	0.200	0.053	0.031	0.373	0.009	0.003	0.031	0.006	0.0010		0.042	0.0013			0.563		
CHECK	0.254	1.374	0.009	0.001	0.202	0.053	0.031	0.374	0.009	0.003	0.032	0.006	0.0012		0.041	0.0008			0.566		


MECHANICAL PROPERTIES

<u>Test</u>	<u>Type</u>	<u>Size</u>	<u>Orient</u>	<u>Yield KSI</u>	<u>Tensile KSI</u>	<u>Elong in 2"</u>	<u>Y/T Ratio</u>	Collapse, PSI	12200	Hydrotest, PSI	11600
4L010382	Strip	1"	Long.	122.22	131.31	25.05	0.9308	Flattening	OK	Hold Time:	5 SEC

	Impact Tests	Hardness			
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Test	Loc	Size	Temp	Notch	Energy (AVG)	%Shear	Scale	Lat Exp.	I.D.	M.W.	O.D.	Mean #	Scale	I.D.	M.W.	O.D.	Mean #
	L	3/4	32		67	90		HRC				29.14					

Inspections Performed	Remarks	From the office of:
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<u>Test</u>	<u>Type</u>	<u>Pass</u>	<u>Cal.</u>	<u>Test</u>	<u>Type</u>	<u>Pass</u>	Release #	SO0001414	
							Processor:	BMG	
							W/O #:	4611-010	
							Rolled material supplied by:	BMG	<p>This is to certify that the product described with was manufactured, supplied, tested, and/or inspected in accordance with the specification and the order, and fullfills the requirements in such respect.</p>