

## MATERIAL TEST REPORT

Product:	CA 5.500 0.304 17.00 P110HC LTC R3		
	SMLS CENT PRIME		
Heat:	YD03514	Lot:	YD03514-412
		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	0.009	0.003	0.21	0.07	0.04	0.39	0.01		0.033	0.005	0.0018		0.030				0.572		
CHECK	0.256	1.392	0.008	0.001	0.208	0.055	0.032	0.382	0.009	0.003	0.035	0.007	0.0013		0.045	0.0004			0.573		
CHECK	0.257	1.372	0.008	0.002	0.208	0.067	0.033	0.394	0.008	0.004	0.035	0.006	0.0010		0.044	0.0011			0.573		


## 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
4L010372	Strip	1"	Long.	121.06	129.9	23.4	0.9319				
4L010383	Strip	1"	Long.	121.24	130.52	19.6	0.9289	Flattening	OK	Hold Time:	5 SEC

Impact Tests	Hardness		
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<u>Test</u>	<u>Loc</u>	<u>Size</u>	<u>Temp</u>	<u>Notch</u>	<u>Energy (AVG)</u>	<u>%Shear</u>	<u>Scale</u>	<u>Lat Exp.</u>	<u>I.D.</u>	<u>M.W.</u>	<u>O.D.</u>	<u>Mean #</u>	<u>Scale</u>	<u>I.D.</u>	<u>M.W.</u>	<u>O.D.</u>	<u>Mean #</u>
	L	3/4	32		72	90		HRC				27.8					
								HRC				28.29					

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	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 fulfills the requirements in such respect.