



430 Hamilton Rd Bossier City, LA 71111

MATERIAL TEST REPORT

| | | | | | |
|---------------------------------------|---|--------------|-------------|-----------------|-----------|
| Product: | CA 5.500 0.304 17.00 P110HC LTC R3 SMLS CENT PRIME | Thread Type: | LTC | Sales Order: | SO0001414 |
| Heat: | YD03297 | Lot: | YD03297-460 | Purchase Order: | SBB-0062 |
| Specification: API 5CT Latest Edition | | | | | |

-----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 | 1.41 | 0.013 | 0.005 | 0.23 | 0.10 | 0.06 | 0.40 | 0.02 | | 0.029 | 0.006 | 0.0016 | | 0.029 | | | | 0.581 | | |
| CHECK | 0.257 | 1.404 | 0.011 | 0.003 | 0.225 | 0.089 | 0.056 | 0.395 | 0.019 | 0.005 | 0.033 | 0.008 | 0.0015 | | 0.043 | 0.0004 | | | 0.585 | | |
| CHECK | 0.253 | 1.401 | 0.011 | 0.003 | 0.224 | 0.090 | 0.057 | 0.394 | 0.019 | 0.005 | 0.032 | 0.008 | 0.0015 | | 0.041 | 0.0001 | | | 0.580 | | |


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 | | | | | | |
| 4L09418 | Strip | 1" | Long. | 124.07 | 132.48 | 22.4 | 0.9365 | Flattening | OK | Hold Time: | 5 SEC | | | | | | |
| | | | | Impact Tests | | | Hardness | | | | | | | | | | |
| <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> |
| | | | | | | | | HRC | | | | 29.41 | | | | | |

Inspections Performed

Remarks

From the office of:

| | | | | | | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------------|-----------|--|--|--|
| <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. | | |