

BAYOU STEEL GROUP

BAYOU STEEL GROUP
(LAPLACE)
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Laplace LOUISIANA 70068
Telephone (985) 652-4900

DELTA STEEL LP
HOUSTON, TX
7355 Roundhouse Lane
HOUSTON TX 77078
USA

MATERIAL CERTIFICATION REPORT

DELTA STEEL INC. - HOUSTON, TX
ATTN: ACCOUNTS PAYABLE
7355 Roundhouse Lane
HOUSTON TX 77078-4528

Tested in Accordance
With: ASTM A6

Sales Order 180414-1 Date 11/30/2017 PO: DHO-153338
Product Unequal Angles Cust 40006010 Ref. 80996381
Heat NO. L106203 Grade A36S2950 Pieces 14
Cust.Mat. Length 40' 00" Weight 10976
Size U8X41/2X19.6 * LP

| CHEMICAL ANALYSIS | TEST 1 IMPERIAL | TEST 1 METRIC | TEST 2 IMPERIAL | TEST 2 METRIC | TEST 3 IMPERIAL | TEST 3 METRIC |
|-------------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| C | 0.12 | | | | | |
| Mn | 0.91 | | | | | |
| P | 0.008 | | | | | |
| S | 0.024 | | | | | |
| Si | 0.18 | | | | | |
| Cu | 0.34 | | | | | |
| Ni | 0.09 | | | | | |
| Cr | 0.17 | | | | | |
| Mo | 0.027 | | | | | |
| Cb | 0.020 | | | | | |
| V | 0 | | | | | |
| B | | | | | | |
| Al | | | | | | |
| Sn | 0.006 | | | | | |
| N | | | | | | |
| Ti | | | | | | |
| Ci | 5.7 | | | | | |
| CE | 0.33 | | | | | |

| MECHANICAL PROPERTIES | TEST 1 IMPERIAL | TEST 1 METRIC | TEST 2 IMPERIAL | TEST 2 METRIC | TEST 3 IMPERIAL | TEST 3 METRIC |
|-------------------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| YIELD STRENGTH | 56700 PSI | 391 MPa | 56000 PSI | 386 MPa | | |
| TENSILE STRENGTH | 75000 PSI | 517 MPa | 74100 PSI | 511 MPa | | |
| ELONGATION | 31 % | 31 % | 26 % | 26 % | | |
| GAUGE LENGTH | 8 IN | 203 mm | 8 IN | 203 mm | | |
| BEND TEST DIAMETER | | | | | | |
| BEND TEST RESULTS | | | | | | |
| SPECIMEN AREA | | | | | | |
| REDUCTION OF AREA | | | | | | |
| IMPACT STRENGTH | | | | | | |
| IMPACT STRENGTH AVERAGE | | | | | | |
| TEST TEMP ORIENTATION | | | | | | |
| INTERNAL CLEANLINESS | | | | | | |
| SEVERITY | | | | | | |
| FREQUENCY RATING | | | | | | |
| GRAIN SIZE | | | | | | |
| HARDNESS | | | | | | |
| GRAIN PRACTICE | | | | | | |
| REDUCTION RATIO | | | | | | |

This heat makes the following grades: A36-14, A52950-14, G40.21-CSA50W, CSA44W, A70936-13a, ASME SA36-2010, A57250-12a, A70950-13a, and the following AASHTO M270 Grades: 36, 50, and 345. Heat is free of Mercury contamination in the process. This material is Hot Rolled Carbon Steel.EN10204-3.1B.

I hereby certify that the material test results presented here are from the reported heat and are correct. All tests were performed in accordance to the specification reported above. All steel is electric arc furnace melted (billets), manufactured, processed, tested in the U.S.A with satisfactory results. No weld repair was performed on this heat.

Notarized upon request: Mark Edwards Signed MARK EDWARDS, QUALITY ASSURANCE SUPERVISOR
Sworn to and subscribed before me on this 30th day of November, 2017

Notary Public Parish/County Direct any questions or necessary clarifications concerning this report to the Sales Department 1-800-535-7692 (USA)