Date: 12/28/2015

Sold To: PLESA STEEL INC

SUITE 200

307,127

413

Sales Order #: C001523986

MTR #:

PO #:

Heat Code: 59675

5100 WESTHEIMER ROAD

Certified Material Test Report

HOUSTON TX 77056



Manufacturer of Piping and Pressure Vessel Components

4404 Haygood St - Houston, TX 77022 Phone: 713-695-3633 Fax: 713-695-3528 A Bonney Forge Company

This product has not come in direct contact with mercury or any of its compounds, nor with any mercury-containing device employing a single boundary of containment. No welding performed.

We certify that the contents of this report are correct and accurate, and that all test results and operations performed by WFI or its subcontractors are in compliance with the material specification and requirements of the referenced code or standard, and that the material conforms to the dimensional requirements of the order. This document is in accordance with EN10204 3.1.

Material: A/SA105 13

Item

7

Quantity

Description

2 X2 X 3/4 6M TEE S

A/SA105

Chemical Composition

Ladle

0.2100

0.022

0.06 SI

v 0.00 0.210

CU

0.12

Carbon Equivalency:

Ladle

0.40

Product

Tensile PSI 79,557 Yield PSI 51,244 Elong % 33.85

0.010

RA % 55.73

0.013

Hardness 141 BHN

0.050

0.008

147 BHN

MILL/COUNTRY OF ORIGIN: ARCELORMITTAL (CANADA) - HEAT #C111757/BONNEY FORGE (USA) - LOT#59675

1.010

AS FORGED



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Material:

A/SA105 13

Item

Quantity Description 2 3M 90EL S 100

A/SA105

Chemical Composition

Ladle

0.2000 0.06 SI S

0.018 Carbon Equivalency:

Ladle

78,010

0.230

0.00 0.39

CU

v

0.10

Tensile PSI Product

Yield PSI 51,060 Elong % 32.20

0.010

1.010

RA % 56.09

0.011

Hardness 139 BHN

0.050

141 BHN

0.006

AS FORGED

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5100 WESTHEIMER ROAD

SUITE 200

HOUSTON TX 77056

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Material: A/SA105 13

Item Quantity Description

5 20 2 3000 HOT-DIP TEE T

A/SA105

Chemical Composition

Ladle C CR CU MN MO NB NI P 0.2100 0.05 0.11 0.990 0.007 0.014 0.030 0.007

S SI V 0.021 0.220 0.00

Carbon Equivalency: Ladle 0.40

Tensile PSI Yield PSI Elong % RA % Hardness

Product 74,974 48,643 31.80 62.51 135 BHN 135 BHN

AS FORGED

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5100 WESTHEIMER ROAD

SUITE 200

HOUSTON TX 77056

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Date: 12/28/2015

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A Bonney Forge Company

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Material: A/SA105 13

Item 3

Quantity

Description 2 3M 45EL S

A/SA105

Chemical Composition

Ladle

Product

0.2000

0.03 SI

0.07 v 0.00 0.200

0.019 Carbon Equivalency:

Ladle

0.39

Tensile PSI 77,405

Yield PSI 48,934 Elong % 34.20

0.006

RA % 62.43

0.014

Hardness 144 BHN

0.005

0.020

144 BHN

MILL/COUNTRY OF ORIGIN: ARCELORMITTAL (CANADA) - HEAT #C112707 / BONNEY FORGE (USA) - LOT #59757

1.040

AS FORGED

Marie Dehmer Quality Assurance Representative

HOUSTON TX 77056

5100 WESTHEIMER ROAD

MTR #:

307,127

Sold To: PLESA STEEL INC

SUITE 200

PO #: 413

Sales Order #: C001523986

Date: 12/28/2015

Certified Material Test Report



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Material: A/SA105 13

Item Quantity Description

6 10 2 X2 X 1 6M TEE S

A/SA105

Chemical Composition

С Ladle CR CII MN MO NB NT 0.1900 0.04 1.050 0.004 0.014 0.020 0.006 0.04

S SI V 0.020 0.210 0.00

Carbon Equivalency: Ladle 0.38

Tensile PSI Yield PSI Elong % RA % Hardness

Product 77,509 48,598 34.45 62.41 137 BHN 141 BHN

MILL/COUNTRY OF ORIGIN: ARCELORMITTAL, CANADA-HEAT C112713/BONNEY FORGE (USA) - LOT #59779

AS FORGED

5100 WESTHEIMER ROAD

SUITE 200

HOUSTON TX 77056

MTR #: 307,127

PO #: 413

Sales Order #: C001523986

Date: 12/28/2015

Certified Material Test Report



4404 Haygood St - Houston, TX 77022 Phone: 713-695-3633 Fax: 713-695-3528 A Bonney Forge Company

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Material: A/SA105 13

Item Quantity Description 4 50 1 6M 90EL S

A/SA105

Chemical Composition

Ladle C CR CU MN MO NB NI P
0.2100 0.03 0.04 1.030 0.004 0.013 0.200 0.006

S SI V 0.018 0.170 0.00

Carbon Equivalency: Ladle 0.41

Tensile PSI Yield PSI Elong % RA % Hardness

Product 74,773 48,076 35.45 59.94 135 BHN 137 BHN

MILL COUNTRY OF ORIGIN: CANADA; MANUFACTURED IN USA

AS FORGED

Sold To: PLESA STEEL INC

5100 WESTHEIMER ROAD

SUITE 200

HOUSTON TX 77056

MTR #: 307,127

PO #: 413

Sales Order #: C001523986

Date: 12/28/2015

Certified Material Test Report



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Material: A/SA105 13

Item

Quantity Description 3/4 3M 90EL S 50

A/SA105

Chemical Composition

Ladle

Ç CR 0.2100 0.07 S

SI V 0.020 0.190 0.00

Carbon Equivalency:

Ladle

0.41

CU

0.12

Product

Yield PSI

52,688

MN

1.040

Elong % 32.60

MO

0.008

RA % 62.56

NB

0.011

Hardness 147 BHN

0.009

147 BHN

COUNTRY OF ORIGIN: CANADA

Tensile PSI

80,546

AS FORGED

Sold To: PLESA STEEL INC

5100 WESTHEIMER ROAD

SUITE 200

HOUSTON TX 77056

MTR #:

307,127

PO #: 413

Sales Order #: C001523986

Date: 12/28/2015

Certified Material Test Report

Heat Code: 59893

NI

0.040