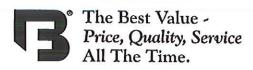
## **CERTIFIED MILL TEST REPORT**



LOG NO. F00000000057916

**BONNEY FORGE CORPORATION** 

P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330 (814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906

www.bonneyforge.com

**CUSTOMER: MRC CANADA ULC** 

**DATE 05/19/2014** 

**CUSTOMER** 

ORDER NO.: \$759259189

BONNEY ORDER NO. B000166557

SHIP TO: MRC CANADA ULC - BRCH 759

**502-25 AVENUE** NISKU AB T9E 0K6

Canada

# 59366 P.O. # 133291

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
156	50	59366	11/2-11/4X1/2 3M A105N THRD T SA/A105N
18C13234			Al 0.026 C 0.200 Co 0.005 Cr 0.050 Cu 0.070 Mn 1.030 Mo 0.007 N 0.005 Nb 0.013 Ni 0.030 P 0.005 S 0.018 Si 0.290 V 0.003 CE(Long Formula) = 0.39 T/S(PSI) 75,500 Y/S(PSI) 50,500 EL(%) 34.00 RA(%) 68.00
			Brinell 143 BHN 143 BHN
157	75	59366	36-10 X 1/2 3M A105N THRD T SA/A105N
18C13240			Al 0.026 C 0.200 Co 0.005 Cr 0.050 Cu 0.070 Mn 1.030 Mo 0.007 N 0.005 Nb 0.013 Ni 0.030 P 0.005 S 0.018 Si 0.290 V 0.003 CE(Long Formula) = 0.39
			T/S(PSI) 75,500 Y/S(PSI) 50,500 EL(%) 34.00 RA(%) 68.00 Brinell 143 BHN 143 BHN
158	325	59366	8 -3 X 1/2 3000 A105N THRD T SA/A105N
18C13243			Al 0.026 C 0.200 Co 0.005 Cr 0.050 Cu 0.070 Mn 1.030 Mo 0.007 N 0.005 Nb 0.013 Ni 0.030 P 0.005 S 0.018 Si 0.290 V 0.003 CE(Long Formula) = 0.39 T/S(PSI) 75,500 Y/S(PSI) 50,500 EL(%) 34.00 RA(%) 68.00 Brinell 143 BHN 143 BHN
159	100	59000	12 -6 X 3/4 3000 A105N THRD T SA/A105N
18C13261			Al 0.030 C 0.200 Co 0.003 Cr 0.030 Cu 0.100 Mn 1.020 Mo 0.007 N 0.004 Nb 0.016 Ni 0.030 P 0.007 S 0.015 Si 0.220 V 0.003 CE(Long Formula) = 0.39 T/S(PSI) 71,500 Y/S(PSI) 46,900 EL(%) 31.00 RA(%) 66.00 Brinell 137 BHN 137 BHN

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

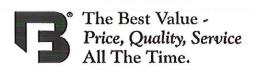
Meloney Specht

Meloney

**QUALITY PROCESS MANAGER** 

CMTR: REV2

## CERTIFIED MILL TEST REPORT



LOG NO. F0000000057916

**BONNEY FORGE CORPORATION** 

P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330

(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906

www.bonneyforge.com

**CUSTOMER: MRC CANADA ULC** 

**DATE 05/19/2014** 

CUSTOMER

ORDER NO.: \$759259189

BONNEY ORDER NO. B000166557

SHIP TO: MRC CANADA ULC - BRCH 759

**502-25 AVENUE** NISKU AB T9E 0K6

Canada

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

- 1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
- 2. CERTIFYING TO ASTM A350 LF2 07 REVISION.
- 3. THE MATERIAL SUPPLIED IDENTIFIED AS A 105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
- 4. THE MATERIAL SUPPLIED AS A 105N MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2007 AND NACE MR0175/ISO 15156-2.
- 5. CERTIFYING ASTM A105-13 / ASME SA105-10 EDITION.
- 6. THE MATERIAL OF THE FITTINGS SUPPLIED IS ASTM A350-LF2 BUT MEETS THE REQUIREMENTS OF ASME SA350-LF2.
- 7. THE CHARPY V-NOTCH IMPACT TEST WAS PERFORMED AT -50 DEGREES FAHRENHEIT IN ACCORDANCE WITH A350-LF2.
- 8. THE MATERIAL SUPPLIED AS A350 LF2 CL1 MEETS THE REQUIREMENTS OF BOTH NACE MRO103-2007 AND NACE MRO175/ISO 15156-2.
- 9. THE MATERIAL SUPPLIED WAS NORMALIZED IN ACCORDANCE WITH ASTM A350 HEAT TREATING REQUIREMENTS.
- THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT, (EUROPEAN STANDARD)
- 11. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE REPORTED IN PSI.
- 12. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

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Meloney Specht

Meloney

**QUALITY PROCESS MANAGER** 

CMTR: REV2