

CERTIFIED MILL TEST REPORT



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LOG NO. F0000000061320 Page 1 of 8

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: WFI INTERNATIONAL, INC.

DATE 08/01/2014

CUSTOMER
ORDER NO.: BD00070548

BONNEY ORDER NO. B000171302

SHIP TO: AMERICA DISPATCH
302 QUIVIRA DRIVE
LAREDO TX 78045
United States

PO# 259
C1411075

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
1	20	59006	3/4 3000 HOT-DIP 45EL T SA/A105 Al 0.023 C 0.200 Co 0.003 Cr 0.040 Cu 0.070 Mn 1.050 Mo 0.005 N 0.004 Nb 0.012 Ni 0.020 P 0.009 S 0.019 Si 0.200 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 72,000 Y/S(PSI) 46,300 EL(%) 30.00 RA(%) 65.00 Brinell 137 BHN 140 BHN
2	50	59357	1/2 3000 HOT-DIP 90EL T SA/A105 Al 0.035 C 0.200 Co 0.005 Cr 0.040 Cu 0.130 Mn 1.010 Mo 0.007 N 0.003 Nb 0.013 Ni 0.020 P 0.006 S 0.020 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 75,952 Y/S(PSI) 50,898 EL(%) 35.60 RA(%) 58.18 Brinell 137 BHN 137 BHN
3	100	59381	2 3000 HOT-DIP 90EL T SA/A105 C 0.210 Cb 0.000 Co 0.003 Cr 0.040 Cu 0.050 Mn 1.020 Mo 0.014 Ni 0.020 P 0.005 S 0.025 Si 0.180 V 0.001 CE(Long Formula) = 0.40 T/S(PSI) 78,972 Y/S(PSI) 50,362 EL(%) 34.10 RA(%) 60.19 Brinell 139 BHN 137 BHN
4	20	59341	2 X 2 X 1 3M HOT-DIP TEE T SA/A105 Al 0.026 C 0.200 Co 0.005 Cr 0.040 Cu 0.050 Mn 1.040 Mo 0.005 N 0.004 Nb 0.012 Ni 0.040 P 0.004 S 0.019 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 77,987 Y/S(PSI) 49,126 EL(%) 32.90 RA(%) 59.46 Brinell 139 BHN 139 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.

by Kylee Ruiz
 Kylee Ruiz
 QUALITY PROCESS MANAGER

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			CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:	
5	100	59357	1/2 3000 A105 90EL T	SA/A105
Al 0.035 C 0.200 Co 0.005 Cr 0.040 Cu 0.130 Mn 1.010 Mo 0.007 N 0.003 Nb 0.013 Ni 0.020 P 0.006 S 0.020 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 75,952 Y/S(PSI) 50,898 EL(%) 35.60 RA(%) 58.18 Brinell 137 BHN 137 BHN				
6	100	59465	3/4 3000 A105 90EL T	SA/A105
Al 0.024 C 0.200 Co 0.003 Cr 0.050 Cu 0.080 Mn 1.060 Mo 0.006 N 0.003 Nb 0.012 Ni 0.030 P 0.008 S 0.017 Si 0.220 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 74,552 Y/S(PSI) 50,393 EL(%) 31.80 RA(%) 61.53 Brinell 141 BHN 141 BHN				
7	20	59439	3/8 3000 A105 90EL T	SA/A105
Al 0.032 C 0.200 Co 0.004 Cr 0.040 Cu 0.070 Mn 1.040 Mo 0.005 N 0.004 Nb 0.012 Ni 0.020 P 0.006 S 0.020 Si 0.190 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 77,552 Y/S(PSI) 51,249 EL(%) 33.65 RA(%) 61.92 Brinell 144 BHN 144 BHN				
8	500	59326	1 3000 A105 90EL S	SA/A105
Al 0.028 C 0.200 Co 0.005 Cr 0.050 Cu 0.090 Mn 1.000 Mo 0.006 N 0.003 Nb 0.012 Ni 0.030 P 0.010 S 0.019 Si 0.220 V 0.003 CE(Long Formula) = 0.39 T/S(PSI) 74,612 Y/S(PSI) 50,149 EL(%) 34.20 RA(%) 60.97 Brinell 135 BHN 137 BHN				

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9	200	59253	11/2 3000 A105 90EL S	SA/A105 Al 0.026 C 0.200 Co 0.005 Cr 0.030 Cu 0.070 Mn 1.010 Mo 0.006 N 0.003 Nb 0.014 Ni 0.030 P 0.006 S 0.018 Si 0.220 V 0.004 CE(Long Formula) = 0.38 T/S(PSI) 78,698 Y/S(PSI) 48,725 EL(%) 32.75 RA(%) 59.69 Brinell 150 BHN 150 BHN
		59075	11/2 3000 A105 90EL S	SA/A105 Al 0.028 C 0.190 Co 0.002 Cr 0.040 Cu 0.050 Mn 1.030 Mo 0.010 N 0.003 Nb 0.015 Ni 0.030 P 0.007 S 0.016 Si 0.220 V 0.003 CE(Long Formula) = 0.38 T/S(PSI) 76,505 Y/S(PSI) 49,960 EL(%) 30.00 RA(%) 61.83 Brinell 144 BHN 144 BHN
10	300	59512	2 3000 A105 90EL S	SA/A105 Al 0.026 C 0.200 Co 0.003 Cr 0.050 Cu 0.070 Mn 1.020 Mo 0.006 N 0.004 Nb 0.012 Ni 0.030 P 0.007 S 0.018 Si 0.220 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 75,787 Y/S(PSI) 51,197 EL(%) 36.80 RA(%) 59.18 Brinell 135 BHN 135 BHN
11	100	59329	3/4 3000 A105 90EL S	SA/A105 Al 0.033 C 0.210 Co 0.004 Cr 0.030 Cu 0.070 Mn 1.040 Mo 0.005 N 0.003 Nb 0.012 Ni 0.020 P 0.005 S 0.016 Si 0.220 V 0.003 CE(Long Formula) = 0.40 T/S(PSI) 75,756 Y/S(PSI) 49,570 EL(%) 33.30 RA(%) 62.21 Brinell 139 BHN 139 BHN

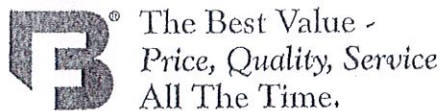
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by Kylee Ruiz

Kylee Ruiz
QUALITY PROCESS MANAGER

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ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
		59357	3/4 3000 A105 90EL S	SA/A105 Al 0.035 C 0.200 Co 0.005 Cr 0.040 Cu 0.130 Mn 1.010 Mo 0.007 N 0.003 Nb 0.013 Ni 0.020 P 0.006 S 0.020 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 75,952 Y/S(PSI) 50,898 EL(%) 35.60 RA(%) 58.18 Brinell 137 BHN 137 BHN
12	50	59408	1 3000 A105 45EL S	SA/A105 Al 0.028 C 0.200 Co 0.004 Cr 0.030 Cu 0.060 Mn 1.030 Mo 0.007 N 0.004 Nb 0.014 Ni 0.030 P 0.006 S 0.018 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 77,835 Y/S(PSI) 52,207 EL(%) 33.90 RA(%) 62.41 Brinell 144 BHN 141 BHN
13	50	59428	2 3000 A105 45EL S	SA/A105 Al 0.030 C 0.200 Co 0.005 Cr 0.040 Cu 0.040 Mn 1.180 Mo 0.006 N 0.004 Nb 0.013 Ni 0.020 P 0.005 S 0.018 Si 0.190 V 0.004 CE(Long Formula) = 0.41 T/S(PSI) 78,300 Y/S(PSI) 49,109 EL(%) 33.80 RA(%) 61.19 Brinell 139 BHN 139 BHN
14	150	59327	3/4 6000 A105 90EL S	SA/A105 Al 0.030 C 0.200 Co 0.005 Cr 0.050 Cu 0.080 Mn 0.990 Mo 0.006 N 0.003 Nb 0.011 Ni 0.030 P 0.007 S 0.016 Si 0.190 V 0.003 CE(Long Formula) = 0.38 T/S(PSI) 77,121 Y/S(PSI) 49,334 EL(%) 34.25 RA(%) 60.72 Brinell 135 BHN 137 BHN

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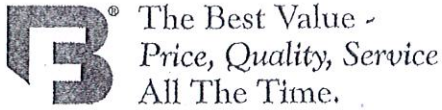
ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
15	100	59508	1/2 3000 A105 TBE T SA/A105 Al 0.026 C 0.200 Co 0.004 Cr 0.040 Cu 0.070 Mn 0.980 Mo 0.007 N 0.005 Nb 0.013 Ni 0.030 P 0.007 S 0.020 Si 0.200 V 0.004 CE(Long Formula) = 0.38 T/S(PSI) 74,329 Y/S(PSI) 50,269 EL(%) 35.55 RA(%) 59.78 Brinell 135 BHN 137 BHN
		58431	1/2 3000 A105 TBE T SA/A105 C 0.210 Cb 0.000 Co 0.003 Cr 0.030 Cu 0.090 Mn 1.010 Mo 0.010 Nb 0.014 Ni 0.060 P 0.008 S 0.020 Si 0.220 V 0.003 CE(Long Formula) = 0.40 T/S(PSI) 78,750 Y/S(PSI) 51,500 EL(%) 30.15 RA(%) 62.30 Brinell 144 BHN 139 BHN
16	30	59396	11/2X11/2X 3/4 3M A105 TBE T SA/A105 Al 0.030 C 0.210 Co 0.003 Cr 0.030 Cu 0.070 Mn 1.030 Mo 0.015 N 0.003 Nb 0.014 Ni 0.020 P 0.005 S 0.022 Si 0.210 V 0.001 CE(Long Formula) = 0.40 T/S(PSI) 80,652 Y/S(PSI) 50,669 EL(%) 31.70 RA(%) 60.44 Brinell 141 BHN 141 BHN
17	30	59488	1 X1 X 1/2 3000 A105 TBE T SA/A105 Al 0.024 C 0.200 Co 0.003 Cr 0.050 Cu 0.080 Mn 1.060 Mo 0.006 N 0.003 Nb 0.012 Ni 0.030 P 0.008 S 0.017 Si 0.220 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 74,552 Y/S(PSI) 50,393 EL(%) 31.80 RA(%) 61.53 Brinell 141 BHN 141 BHN

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ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
18	30	59488	1 X1 X 3/4 3000 A105 TEE T SA/A105 Al 0.024 C 0.200 Co 0.003 Cr 0.050 Cu 0.080 Mn 1.060 Mo 0.006 N 0.003 Nb 0.012 Ni 0.030 P 0.008 S 0.017 Si 0.220 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 74,552 Y/S(PSI) 50,393 EL(%) 31.80 RA(%) 61.53 Brinell 141 BHN 141 BHN
19	5	59433	1 X1 X 1/2 3000 A105 TEE S SA/A105 Al 0.029 C 0.200 Co 0.004 Cr 0.030 Cu 0.060 Mn 1.020 Mo 0.006 N 0.003 Nb 0.014 Ni 0.020 P 0.006 S 0.021 Si 0.210 V 0.004 CE(Long Formula) = 0.38 T/S(PSI) 75,760 Y/S(PSI) 50,719 EL(%) 33.60 RA(%) 55.82 Brinell 137 BHN 139 BHN
20	5	59416	2 X2 X 1 3000 A105 TEE S SA/A105 Al 0.026 C 0.200 Co 0.004 Cr 0.040 Cu 0.070 Mn 1.000 Mo 0.007 N 0.005 Nb 0.012 Ni 0.030 P 0.006 S 0.021 Si 0.240 V 0.004 CE(Long Formula) = 0.38 T/S(PSI) 77,697 Y/S(PSI) 50,493 EL(%) 33.40 RA(%) 61.19 Brinell 137 BHN 135 BHN
21	20	59256	1 6000 A105 TEE S SA/A105 Al 0.027 C 0.200 Co 0.004 Cr 0.040 Cu 0.070 Mn 1.020 Mo 0.005 N 0.004 Nb 0.013 Ni 0.020 P 0.009 S 0.019 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 76,466 Y/S(PSI) 49,672 EL(%) 34.45 RA(%) 60.44 Brinell 144 BHN 141 BHN

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ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
22	50	6706	2 3000 A105 UNAR T SA/A105
		MALE	Al 0.029 C 0.200 Co 0.004 Cr 0.040 Cu 0.070 Mn 1.080 Mo 0.007 N 0.004 Nb 0.013 Ni 0.040 P 0.006 S 0.016 Si 0.230 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 73,800 Y/S(PSI) 47,500 EL(%) 29.00 RA(%) 43.30 Brinell 156 BHN 152 BHN
		6472	2 3000 A105 UNAR T SA/A105
		MALE	Al 0.013 C 0.200 Co 0.005 Cr 0.030 Cu 0.060 Mn 1.150 Mo 0.006 N 0.002 Nb 0.014 Ni 0.030 P 0.005 S 0.018 Si 0.170 V 0.005 CE(Long Formula) = 0.41 T/S(PSI) 73,000 Y/S(PSI) 41,000 EL(%) 26.00 RA(%) 46.00 Brinell 141 BHN 141 BHN
		6676	2 3000 A105 UNAR T SA/A105
		FEMALE	Al 0.030 C 0.210 Co 0.004 Cr 0.030 Cu 0.040 Mn 1.070 Mo 0.004 N 0.004 Nb 0.013 Ni 0.020 P 0.005 S 0.022 Si 0.240 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 74,600 Y/S(PSI) 44,600 EL(%) 28.00 RA(%) 44.80 Brinell 156 BHN 156 BHN
		TIAR	2 3000 A105 UNAR T SA/A105
		NUT	Al 0.021 C 0.195 Co 0.000 Cr 0.090 Cu 0.080 Mn 1.020 Mo 0.020 N 0.007 Nb 0.000 Ni 0.080 P 0.009 S 0.021 Si 0.270 V 0.002 CE(Long Formula) = 0.40 T/S(PSI) 76,348 Y/S(PSI) 44,737 EL(%) 32.65 RA(%) 62.65 Brinell 144 BHN 144 BHN

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ITEM QUANTITY LOT NO.

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CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

1. THE MATERIAL SUPPLIED IS FREE FROM MERCURY AND RADIUM CONTAMINATION.
2. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
3. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO 15156-2.
4. CERTIFYING ASTM A105-13 / ASME SA105-10 EDITION.
5. THE FITTINGS SUPPLIED WERE NOT SUBJECTED TO ANY FORM OF WELD REPAIR.
6. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH BN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
8. THE MATERIAL SUPPLIED IS IN THE AS-ROLLED CONDITION.
9. THE MATERIAL SUPPLIED IS IN THE AS-FORGED CONDITION.

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