



Carondelet Division

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Material Test Report

ENERGY INDUSTRIES OF OHIO

Purchase Order Number PPPL-FP-LTS-2

Pattern Number MCWF-A2

CAF Metal Designation CF8MNMnMod

Material Spec CF8MNMnMOD

Weighted average of 3 heats - 31032(42%),31042(22%),31045(36%) Total Weight 31570 lbs.

Date: 12/13/05

Cert Number 175410-1

Pour Date 9/26/2005

Element	Min	Actual	Max
C	0.04	0.04	0.07
MN*	2.3	2.9	2.8
SI	0.0	0.4	0.7
CR	18.0	18.3	18.5
NI	13.0	13.1	13.5
MO	2.1	2.3	2.5
P	0.0	0.034	0.035
S	0.0	0.012	0.025
N	0.24	0.25	0.28

*Over specification, see CA 1323.

PRODUCT ANALYSIS

Results of spectrometer analysis of cast on test bar after spectrometer preventive maintenance performed and at Wisconsin Centrifugal.

Element	CAF after PM			WC Analysis		
	Z1	Z2	Z3	Z1	Z2	Z3
SI	0.4	0.6	0.4	0.4	0.6	0.4
MN	2.7	2.5	2.7	2.5	2.3	2.5
CR	18.2	18.3	18.1	18.0	18.2	18.1
NI	13.0	13.1	13.0	13.2	13.3	13.2
MO	2.3	2.3	2.3	2.3	2.3	2.3
P	0.035	0.032	0.036	0.034	0.030	0.036
S	0.012	0.012	0.012	0.026	0.024	0.029

Respectfully Submitted,
Charles A. Ruud
Quality Assurance Manager

Superior Quality Engineered Metal Products

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