MetalTek INTERNATIONAL

Carondelet Division

8600 Commercial Blvd. - Pevely, MO 63070 USA
Phone: 636-479-4499 - Fax: 636-479-3399

Material Test Report

ENERGY INDUSTRIES OF OHIO

Purchase Order Number PPPL-FP-LTS-2 Heat Number 29198 Pour Date 4/28/2005

Pattern Number SE-141-073 COIL C SHIM (-3 thru -6 Parts) Cert Number S73220-2 and S/N 5
SE-141-033 COIL A SHIM (-1 thru -6 Parts) Cert Number S76220-1

CAF Metal Designation CF8MNMnMod

Material Spec CF8MNMN MOD

Revised 9/24/05

Element	Min	Actual	Max
C	0.040	0.070	0.070
CR	18.000	18.100	18.500
MN	2.300	2.970	2.800
MO	2.100	2.450	2.500
N	0.240	0.255	0.280
NI	13.000	13.120	13.500
P*	0.000	0.013	0.035
S*	0.000	0.010	0.025
SI	0.000	0.700	0.700

MN & SI previously reported on CA 1308 and were accepted.

*P & S taken from test from heat parts were poured from and analyzed by wet chemistry, ASTM E1019-03 for sulfur and Gravimetric for phosphorous.

This report covers the eleven castings poured from heat 29198. Only parts listed above however will be shipped for this order. Each casting has a unique number stamped in the part adjacent to the pattern number to differentiate the part and subsequent reporting that will be traced to the casting.

Specification limits have been updated to latest specification.

Respectfully Submitted,
Charles A. Ruud
Quality Assurance Manager

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Final Inspection Report

Customer ENERGY INDUSTRIES OF OHIO

Pattern: SE-141-073 COIL C SHIM

S/N 5

Order PPPL-FP-LTS-2

ASTM Metal CF8MNMN MOD

Date 10/28/2005

Type Description	Cert Number	Procedure	Acceptance Criteria	Actual
Liquid Penetrant	S73220-2	CQP - 300 Rev 9	ASTM A903 Level II	Acceptable
Mag Perm	S73220-2	SOP Mag Perm 100 Rev 1	<1.02	Acceptable
Radiographic	S73220-2	Technique # 12726	MSS SP 54	Acceptable
Visual	S73220-2	CQP - 500 REV 4	ASTM A802 LEVEL 2	Acceptable

Liquid Penetrant
Technician: Jim Shanahan
ASNT Level II

Visual
Technician: Jason Rees
ASNT Level II

Respectfully Submitted,
Charles A. Ruud
Quality Assurance Manager

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Certificate of Conformance

ENERGY INDUSTRIES OF OHIO

Order Number PPPL-FP-LTS-2
Pattern SE-141-073 COIL C SHIM S/N 5
ASTM CF8MNMN MOD Date 10/28/2005

Cert Number
S73220-2

C shim for C-5 coil was poured from heat number 29198. No weld repairs were necessary.

We certify that we have complied in accordance with the drawings(s) and specifications(s) listed on the above purchase order. The articles furnished were made and/or processed from parts and/or materials in accordance with all applicable drawings(s) and specifications(s) pursuant to the afore mention purchase order.

Respectfully Submitted,
Charles A. Ruud
Quality Assurance Manager

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RADIOGRAPHIC INTERPRETATION REPORT

CUSTOMER	PURCHASE ORDER NUMBER	DATE	CONTROL NO.	PAGE
E.I.O.	PPPL-FP-LTS-2	11-8-05	40851	1 of 1

PART NO.	SPECIFICATION	CLASS	TOTAL PIECES	PIECES ACCEPTED
SE-141-073-5	E186	See Spec	1	1

RADIOGRAPHED BY:	INTERPRETED BY:	ASNT LEVEL
Kelley	Kelley	II

FILM TYPE	MATERIAL	ISOTOPE	CODE
80	CFBMNMN MOD	IRIDIUM 192 COBALT 60 ✓	ASTM E94 ✓ ASME MIL-STD-453

	VIEW	PENE	ACCEPT	REJECT	SHRINK	INCLUSION	POROSITY	LINEAR	SURFACE	LOF/LOP	COMMENTS
NS73220-2											
Shim 5	A	50	✓						✓		
	B	↓	✓		1	1			✓		
	C		✓								
	D		✓			1					

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RADIOGRAPHIC STANDARD SHOOTING SKETCH

Customer E.J.O.	Pattern Number MCWF-C5
Material CF8MNMN MOD	Traceability Number
Film Manufactuer FUJI	Source Number CO60 22.7 CI
IQI LEVEL 2-2T From CQP 401 X Other (Specify, E.G. 2-4T, 2-1T) N/A	

Exposures (views)	83-84	103-104	104-105	109-110	H-I	X-Y							
Thickness (IN.)	1½ → 3"	2 3/4"	→	→	3" → 6"	→							
S/F Distance (IN.)	20"	→	→	→	→	→							
Penetrameter	30 40 60	50 x2	→	→	60x2 120x2	→							
Time (MIN.)	15 min	8 min 30 sec	→	11 min	1 hr 45 min	→							
Focal Spot (IN.)	.125	→	→	→	→	→							
Film Size (IN.)	14X17	→	→	→	→	→							
Screen Size (Pb) Front/Back	.01	→	→	→	→	→							
S.W.E./D.W.E.	SWE	→	→	→	→	→							
S.W.V/D.W.V.	SWV	→	→	→	→	→							
Film Type	29 59 80	80x2	→	59/80	29x2 59 80	→							
Acceptance Standard	MSS-SP-54	→	→	→	→	→							
Severity Level	See SPEC.	→	→	→	→	→							

Shooting Sketch (Use Additional Pages as Needed)

Technique Prepared By: RonKelley Level: II Date: 11-7-05

Technique Approved By: _____ Level: _____ Date: _____

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RADIOGRAPHIC STANDARD SHOOTING SKETCH

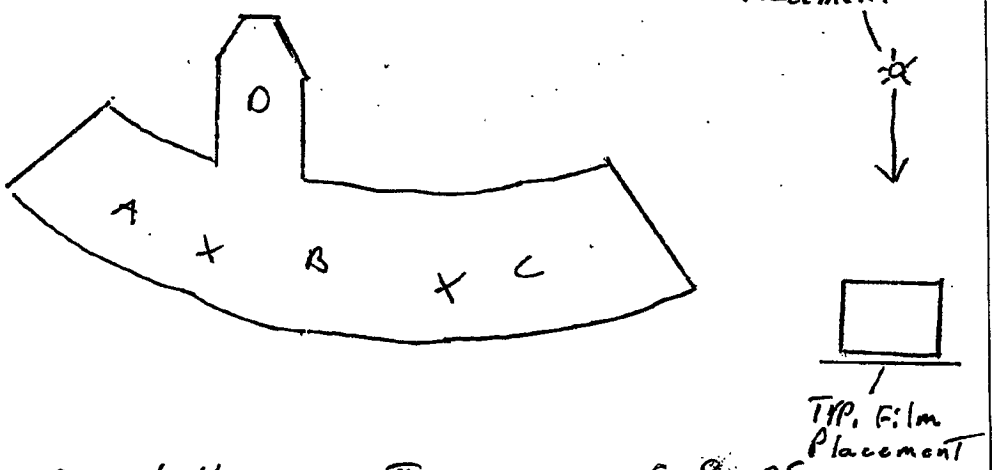
Customer	Energy Industries of Ohio	Pattern Number	SE-141-073 c shim
Material	CF8MNMN-MOD	Traceability Number	
Film Manufactuer	Fuji	Source Number	Co60 24.7 ci

IQI LEVEL 2-2T From CQP 401 X Other (Specify, E.G. 2-4T, 2-1T) N/A

Exposures (views)	A	B	C	D
Thickness (IN.)	3 7/8"	→	→	→
S/F Distance (IN.)	24"	→	→	→
Penetrameter	50	→	→	→
Time (MIN.)	22min	→	→	→
Focal Spot (IN.)	.1	→	→	→
Film Size (IN.)	14X17	→	→	→
Screen Size (Pb) Front/Back	.01	→	→	→
S.W.E./D.W.E.	SWE	→	→	→
S.W.V/D.W.V.	SWV	→	→	→
Film Type	80	→	→	→
Acceptance Standard	E186	→	→	→
Severity Level	III	→	→	→

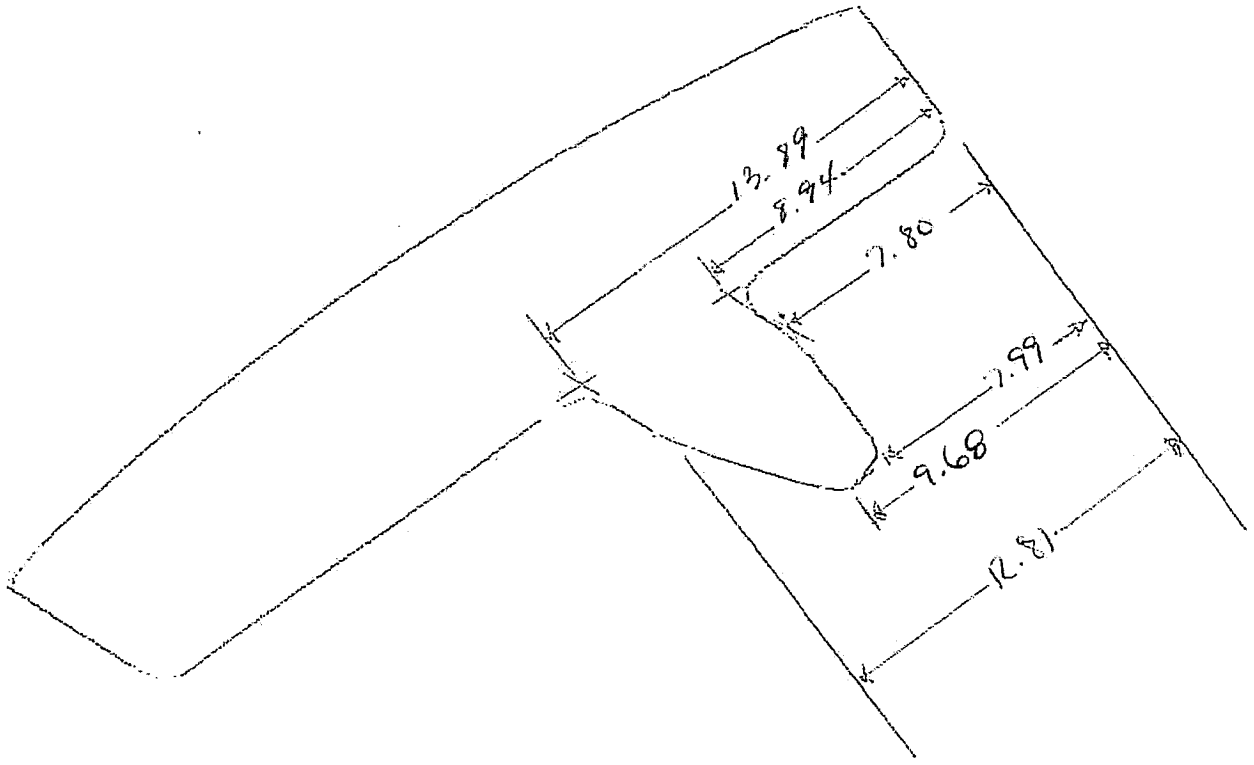
Shooting Sketch (Use Additional Pages as Needed)

use spec. MSS-SP-54



Technique Prepared By: RON Kelley Level: II Date: 9-9-05

Technique Approved By: RS Level: III Date: 9/10/05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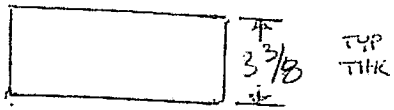
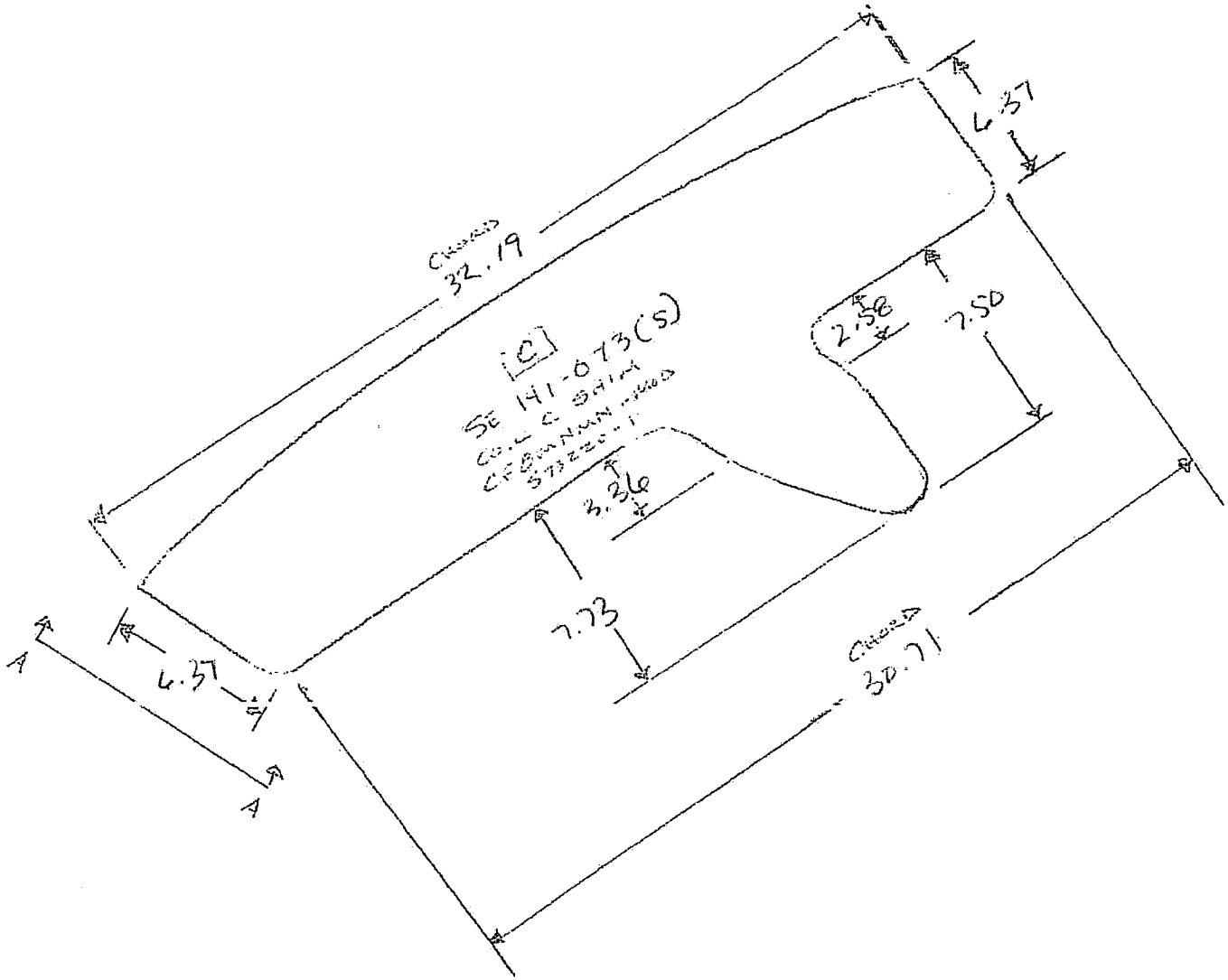


SECT A-A



HIM SE 141-073
SKETCH 9/12/05

A + C Shims CAL