

A-1 Coil

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

1 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 5 Dated Issued: 5-10-05

OPER. #	STATION	DESCRIPTION OF PROCESS	Name	Date
10	QUALITY RELEASE	REVIEW AND APPROVE MTS. RECEIVED APPROVAL FROM EIO ON <u>5/10/05</u> FROM <u>[Signature]</u> SIGNED QUALITY MANAGER	<u>[Signature]</u>	<u>5/12/05</u>
15	PATTERN NFA1 SOP 0100REV2	APPLY APPROPRIATE PART NUMBER, SERIAL NUMBER, AND FOUNDRY MARK, TO THE PATTERN. CAST ON BARS REQUIRED. Place numbers on the bars as to their location.	<u>[Signature]</u>	<u>5/12/05</u>
20	COREMAKE CORE SOP 0100 REV 6 CALIBRATION PER CORE SOP 0200R4/0300R6	MAKE CORES IN SAND MIXTURES AS DESCRIBED BY METALTEK ENGINEERING AND VERIFIED IN MODELING TRIALS. METALTEK CORE SOP 0100 REV 6) CORE WASH WITH ZIRCONIUM CORE WASH. (CALIBRATION OF EQUIPMENT REQUIRED PER CORE SOP 0200,R4 / 0300,R6)	<u>[Signature]</u>	<u>5/24/05</u>
30	MOLD MOLD SOP 0400 REV 8 CALIBRATION PER MOLD SOP 0900 REV 5 PREPARATION PER MOLD SOP 1100R2/1200R2/13 00R1 SAND TESTING PER MOLD SOP 1400R2/1500R3/16 00R2	MOLD PER WORK INSTRUCTIONS IN MAPICS ROUTING AND SOPS REFERENCED. ENGINEER OF RECORD - ROGER BROMAN, CONSULT ON MOLD-RELATED CONCERNS. MOLD MATERIALS REQUIRED PER MAPICS BOM. NOTIFY ENGINEER OF ANY SUBSTITUTIONS.	<u>[Signature]</u>	<u>5-24-05</u>
40	POUR MELT SOP 0100R5 MELT SOP 0700R2 MELT SOP 0600R2	METAL MUST BE AOD REFINED OR AOD INGOT. VIRGIN METAL ADDITIONS ALLOWED. RECORD POURING TEMPERATURE: <u>2950</u> CASTING POURED AT: _____ DATE: <u>5/25/05</u> HEAT #'s: <u>29516</u> , <u>29517</u> , <u>29518</u> , <u>29519</u> , <u>29520</u> ELAPSED POUR TIME: <u>1:25</u> KEEL BLOCKS POURED: <u>3A Cast on bars</u> <u>3 Ladles</u> Sample from ladle to be analyzed for final chemical analysis and reported on material certifications. Sample Taken by: <u>SR</u> Analyzed: <u>G. Hurt</u> Date: <u>5-25-05</u>	<u>[Signature]</u> <u>[Signature]</u>	<u>5-25-05</u>

[Handwritten Signature]

25

to Rev

6.

[Handwritten Signature]

A-1 Coil

Energy Industries of Ohio

2 OF 11 Manufacturing and Test Sequence (MTS) Serial Number A-1  
 CO# 40851 Dated 3-9-05 Revision: Rev 6 Dated Issued: 5-29-05

50	MELT SOP 0800R2	SHAKEOUT				
60	ARC RISE SOP 0100R1	REMOVE RISERS AS DIRECTED BY SUPERVISOR.				
70	HEAT TREAT HEAT SOP 0103R5	SOLUTION ANNEAL. MAKE SURE TO BLOCK ALL FLANGES OF FORM AND RACETRACK TO MINIMIZE CREEP DISTORTION. Soak Temp: 2050F, Soak Time: 4HR + 1/2 HR/LIN, Quench Type: Air Cool				
75	PHYSICAL TESTING	OBTAIN TEST SPECIMENS AND SUBMIT FOR PHYSICAL TESTING. REPORT RESULTS AS PART OF STEP 510.				
NOTE		THE ORDER OF CLEANING PROCESSES MAY BE ALTERED DUE TO CAPACITY CONSTRAINTS. HOLD POINTS AND COMPLIANCE WILL NOT BE COMPROMISED. EIO WILL BE ADVISED OF ALL CHANGES THAT MAY RESULT IN A REQUEST FOR DEVIATION FROM REQUIREMENTS.				
80	GRIND GWSA SOP 0100R3	SWING GRIND TO REMOVE RISER REMAINS AND FLASH IF REQUIRED.	AB			6-6-05
85	GRIND GCHI SOP 0100R2	CHIP AND HAD GRIND SURFACE OF PART AS REQUIRED FOR CONTOUR.	CS			6-10-05
90	SAND BLAST BLAS SOP 0100R6	SANDBLAST (REMOVE ALL BLAST MATERIAL FROM CASTING) SANDBLASTING WILL BE DONE USING RECYCLED SHARP ANGULAR AGGREGATE.	MTW			6-10-05
NOTICE	WITNESS NOTIFICATION <b>HOLD FOR EIO APPROVAL</b>	PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF LAYOUT. EIO NOTIFIED ON <u>6/3/05 per DCMA</u> NOTIFIED ON <u>6/3/05 per</u> APPROVAL RECEIVED ON <u>6/7/05 per</u>	Q ENG OR QA MGR			RS
100	LAYOUT SOP LAYOUT 0100	INSPECT CASTING TO VERIFY DIMENSIONS. THIS STEP MAY BE DELAYED. DIMENSIONED <u>6/7</u> DATE _____ RELEASED <u>RB</u> (ENGINEER ONLY) NOTE: THE FIRST PART PRODUCED OF EACH TYPE A, B AND C WILL BE DIMENSIONED BY LAWTON PATTERN. IF DIMENSIONED BY LAWTON IT WILL BE DOCUMENTED HERE. Subsequent casting done internally per Romer Arm.	Lawton Pattern			6/7



Reps 5  
 Stan  
 Lawton

6/7/05

A-1 Coil

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

3 OF 11

CO# 40851

Dated 3-9-05

Revision: Rev 6

Dated Issued: 5-29-05

110	VISUAL INSPECTION CQP-500 REV 4	VISUALLY INSPECT 100% OF COMPONENT ACCORDING TO ASTM A802 LEVEL 3 ALL CONDITIONS. IF OK CHECK HERE _____ IF REJECTED CHECK HERE _____ MARK AND REPAIR AT STEP 120.	VT - LEVEL II	<i>Supervisor to P</i>
NOTICE	WITNESS NOTIFICATION	PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF LP STEP. EIO NOTIFIED ON <u>3/9/05</u> DCMA NOTIFIED ON <u>3/17/05</u>	Q ENG OR QA MGR	<i>build</i> <i>midburn</i> <i>before</i> <i>not done</i> <i>Chen</i>
115	100% L.P. CQP 0300 REV 10	L.P. 100% OF COMPONENT. ACCEPTANCE PER ASTM A903. ACCEPTANCE CRITERIA- LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE _____ IF REJECTED CHECK HERE _____ MARK AND REPAIR AT STEP 120.	LP - LEVEL II	
120	WELD SOP 0100 REV 7	EXCAVATE ANY DEFECTS FOUND DURING 100% VISUAL AND LP INSPECTION.		
125	GRIND GCHI SOP 0100R2	CHIP AND HAND GRIND EXCAVATION AS REQUIRED.		
130	L.P. EXCAVATION CQP-300 REV 10	L.P. ALL EXCAVATIONS PRIOR TO WELDING TO ENSURE REMOVAL OF DEFECT. ACCEPTANCE PER A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE _____ IF REJECTED SEND BACK TO STEP 125.	LP - LEVEL II	
165	SAND BLAST BLAS SOP 0100R6	SANDBLAST (REMOVE ALL BLAST MATERIAL FROM CASTING) SANDBLASTING WILL BE DONE USING RECYCLED SHARP ANGULAR AGGREGATE.		
170	HOLD POINT WELD MAP	MAP ALL WELDS WITH DIGITAL PHOTO/MAPS INDICATING LOCATION. SERIALIZE DEFECTS ON CASTING, USE SCALE IN PHOTOS AND DOCUMENT SIZE. THIS IS TO BE PERFORMED BY SUPERVISOR, INSPECTION LEAD MAN OR THEIR DESIGNEE, FILE WITH QA. USE YELLOW MARKER. MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER. DEFECTS > 10% YES _____, REPORT SENT BY _____ DATE _____ DEFECTS < 10% _____ SIGN BY QA ENG. _____		
NOTICE	WITNESS NOTIFICATION	MAJOR WELD REPAIRS MAY NOT PROCEED UNTIL INFORMATION IS SUBMITTED. PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF X-RAY AND DIMENSIONAL STEPS EIO NOTIFIED ON <u>3/9</u> DCMA NOTIFIED ON <u>3/9</u>	Q ENG OR QA MGR	<i>RS</i>

**A-1 Coil**

Energy Industries of Ohio

4 OF 11 Manufacturing and Test Sequence (MTS) Serial Number A-1  
 CO# 40851 Dated 3-9-05 Revision: Rev 6 Dated Issued: 5-29-05

190	X-RAY AT MQS MQS PROCEDURE 20.H.010 REV 0	X-RAY PER TECHNIQUE # 12726 USE CALIBRATED DENSITOMETER FOR DENSITY VERIFICATION. WHEN MARKING USE BLACK MARKERS. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET.	RT- LEVEL II	
210	X-RAY CQP 401 REV 5	X-RAY INTERPRETATION. ACCEPTANCE MSS SP 54. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET. IF OK CHECK HERE _____ AND SEND TO STEP 340. REJECTED CHECK HERE _____ MARK UP DEFECTS AND SEND THE CASTING TO STEP 220.	RT- LEVEL II	
220	WELD SOP 0100 REV 7	EXCAVATE ANY DEFECTS FOUND DURING RADIOGRAPHY.		
225	GRIND GCHI SOP 0100R2	CHIP AND HAND GRIND EXCAVATION AS REQUIRED.		
230	L.P. EXCAVATION CQP-300 REV 10	L.P. ALL EXCAVATIONS PRIOR TO WELDING TO ENSURE REMOVAL OF DEFECT. ACCEPTANCE PER A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE _____ IF REJECTED SEND BACK TO STEP 225.	LP- LEVEL II	
240	<b>HOLD POINT</b> WELD MAP	MAP ALL WELDS WITH DIGITAL PHOTOMAPS INDICATING LOCATION. SERIALIZE DEFECTS ON CASTING, USE SCALE IN PHOTOS AND DOCUMENT SIZE. THIS IS TO BE PERFORMED BY SUPERVISOR, INSPECTION LEAD MAN OR THEIR DESIGNEE, FILE WITH QA. MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER. DEFECTS > 10% YES _____, REPORT SENT BY _____ DATE _____ DEFECTS < 10% _____ SIGN BY QA ENG. _____ <b>MAJOR WELD REPAIRS MAY NOT PROCEED UNTIL INFORMATION IS SUBMITTED.</b> MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER PRIOR TO REPAIR. ONCE THE REPORT IS SENT, WELDING MAY START. PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF WELD STEP. EIO NOTIFIED ON _____ DCMA NOTIFIED ON _____	Q ENG OR QA MGR	
260	QA APPROVAL HOLD POINT	QA TO APPROVE ELECTRODE PRIOR TO USE. PROCEDURE USED: _____ MATERIAL/LOT USED: _____ QUALITY ENG. Name: _____ Date: _____		
270	WELD SOP 0100 REV 7	WELD REPAIR DEFECTS AS MARKED. FOR WELDS < 2" - WPS 10-SMAW-CF8MMN MOD REV 1 FOR WELDS < 8" - WPS 15-GMAW-CF8MMN MOD REV 2		

*PS 4/2/05 to Red*

A-1 Coil

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1  
 4 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

190	X-RAY AT MOS PROCEDURE 20.H.010 REV 0	X-RAY PER TECHNIQUE # 12726 USE CALIBRATED DENSITOMETER FOR DENSITY VERIFICATION. WHEN MARKING USE BLACK MARKERS. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET.	RT - LEVEL II	RS/6/17/05
210	X-RAY COP 401 REV 5	X-RAY INTERPRETATION. ACCEPTANCE MSS SP-54. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET. IF OK CHECK HERE AND SEND TO STEP 340. REJECTED CHECK HERE MARK UP DEFECTS AND SEND THE CASTING TO STEP 220.	RT - LEVEL II	6/22
220	WELD SOP 0100 REV 7	EXCAVATE ANY DEFECTS FOUND DURING RADIOGRAPHY.	BM	6/23
225	GRIND GCHI SOP 0100R2	CHIP AND HAND GRIND EXCAVATION AS REQUIRED.	BM	8-23
230	L.P. EXCAVATION COP-300 REV 10	L.P. ALL EXCAVATIONS PRIOR TO WELDING TO ENSURE REMOVAL OF DEFECT. ACCEPTANCE PER A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE IF REJECTED SEND BACK TO STEP 225.	LP-CC LEVEL II	6-26
240	HOLD POINT WELD MAP	MAP ALL WELDS WITH DIGITAL PHOTO/MAPS INDICATING LOCATION. SERIALIZE DEFECTS ON CASTING, USE SCALE IN PHOTOS AND DOCUMENT SIZE. THIS IS TO BE PERFORMED BY SUPERVISOR, INSPECTION LEAD MAN OR THEIR DESIGNEE, FILE WITH QA.	CC	6-27
NOTICE	WITNESS NOTIFICATION	MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER. DEFECTS > 10% YES <input checked="" type="checkbox"/> REPORT SENT BY <u>John</u> DATE <u>7/18/05</u> DEFECTS < 10% <input type="checkbox"/> SIGN BY QA ENG. DATE <u>John</u> <u>7/18</u>	Q ENG OR QA MGR	John
260	QA APPROVAL HOLD POINT	MAJOR WELD REPAIRS MAY NOT PROCEED UNTIL INFORMATION IS SUBMITTED. MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER PRIOR TO REPAIR. ONCE THE REPORT IS SENT, WELDING MAY START. PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF WELD STEP. EIO NOTIFIED ON <u>7/10</u> DCMA NOTIFIED ON <u>7/10</u>	QA TO APPROVE ELECTRODE PRIOR TO USE. PROCEDURE USED: <u>WPS-6MAW-C6810/M</u> MATERIAL/LOT USED: <u>316M/VNF/78309</u> QUALITY ENG. Name: <u>Eric</u> Date: <u>7/12/05</u>	30189226
270	WELD SOP 0100 REV 7	WELD REPAIR DEFECTS AS MARKED.	WPS 10-SMAW-CF8MNMN MOD REV 1 FOR WELDS < 2" - WPS 15-GMAW-CF8MNMN MOD REV 2 FOR WELDS < 8" - WPS 15-GMAW-CF8MNMN MOD REV 2	TLSS 8/12

A-1 Coil

Energy Industries of Ohio  
 Manufacturing and Test Sequence (MTS) Serial Number A-1  
 5 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

		ADD WPS FOR VERTICAL WELDS.			
280	GRIND GCHI SOP 0100R2	HAND GRIND WELDS.		N/A	8/12
290	L.P. WELD COP 0300 REV 10	L.P. WELD REPAIRS ACCEPTANCE PER ASTM A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE <input checked="" type="checkbox"/> WASH AND SEND TO STEP 300. IF REJECTED CHECK HERE _____		LP - LEVEL II CC	8/12
	REPEAT	REPEAT STEPS 220 TO 290 AS REQUIRED TILL CLEAR THROUGH VISUAL INSPECTION & PENETRANT INSPECTION. DOCUMENT REWORK ON STEPS S220 TO S290 ON LAST PAGE OF MTS. IF OK CHECK HERE _____ AND PROCEED TO STEP 295.		N/A	
295	TEST MAG PERM SOP MAG PERM 100, REV 1	TEST MAG PERMEABILITY REPAIR AREAS RECORD ON WELD MAP LIST. TEST AT LEAST 5 POINTS PER WELD. ACCEPTANCE 1.02. IF OK CHECK HERE <input checked="" type="checkbox"/> AND GO TO STEP 300. IF REJECTED CHECK HERE _____		QA	8/12
296	GRIND GCHI SOP 0100R2	GRIND AREAS OF NON COMPLIANCE AND RETURN TO STEP 295. REPEAT UNTIL COMPLIANCE IS ACHIEVED.		N/A	
300	X-RAY (NOTE)	IF RADIO GRAPHED AREAS ARE GREATER THAN FOUR TO FIVE INCHES THE CASTING WILL BE SENT TO MQS. SEND TO MQS CHECK HERE _____ RADIOGRAPH AT CAF CHECK HERE <input checked="" type="checkbox"/>		QA ENGINE ER RSK	8-21-05
310 A	MQS X-RAY DEFECTS REPAIRED BY WELDING	X-RAY PER TECHNIQUE # 12726 USE CALIBRATED DENSITOMETER FOR DENSITY VERIFICATION. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET.		LEVEL II N/A	
310 B	CAF X-RAY DEFECTS REPAIRED BY WELDING COP 401 REV 5	X-RAY PER TECHNIQUE # 12726 USE CALIBRATED DENSITOMETER FOR DENSITY VERIFICATION. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET.		RT - LEVEL II RBL	8-21-05

A-1 Coil

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

6 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

320	X-RAY COP 401 REV 5	RT - LEVEL II	ABK 8-21-05
	REPEAT X-RAY INTERPRETATION. ACCEPTANCE MSS SP 54. ATTACH TECHNIQUE, READER SHEET FOR ALL RADIOGRAPHS. MUST INDICATE RADIOGRAPHER AND ASNT CERTIFICATION LEVEL ON READER SHEET. IF OK CHECK HERE _____ AND SEND TO STEP 340. REJECTED CHECK HERE <input checked="" type="checkbox"/> MARK UP DEFECTS AND SEND THE CASTING TO STEP 220. REPEAT STEPS 220 TO 220 AS REQUIRED TILL WELDS CLEAR X-RAY. DOCUMENT REWORK ON A SUPPLEMENTAL MTS	QA ENG. BS	
340	SAND BLAST BLAS SOP 0100R6	MW	8/31/05
NOTICE	WITNESS NOTIFICATION PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF VISUAL AND LP STEPS. EIO NOTIFIED ON <u>8/21</u> DCMA NOTIFIED ON <u>8/21</u>	Q ENG OR QA MGR	CJ
350	FINAL VISUAL INSPECTION COP-500 REV 4	VT - LEVEL II	KRF 8-31-05
360	FINAL L.P. COP 0300 REV 10	LP - LEVEL II	I.C. 8-31-05
380	WELD SOP 0100 REV 7	N/A	RTG 8-31-05
385	GRIND GCHI SOP 0100R2	LP - LEVEL II	DIVF 8-31-05
390	L.P. EXCAVATION COP-300 REV 10	LP - LEVEL II	KRF 8-31-05

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**A-1 Coil**

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

7 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

400	<b>HOLD POINT</b> WELD MAP	<p>MAP ALL WELDS WITH DIGITAL PHOTO/MAPS INDICATING LOCATION. SERIALIZE DEFECTS ON CASTING. USE SCALE IN PHOTOS AND DOCUMENT SIZE. THIS IS TO BE PERFORMED BY SUPERVISOR, INSPECTION LEAD MAN OR THEIR DESIGNEE. FILE WITH QA. MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER. DEFECTS &gt;10% YES _____, REPORT SENT BY _____ DATE _____</p> <p>DEFECTS &lt; 10% _____ SIGN BY QA ENG.</p> <p><b>MAJOR WELD REPAIRS MAY NOT PROCEED UNTIL INFORMATION IS SUBMITTED.</b> MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER PRIOR TO REPAIR. ONCE THE REPORT IS SENT, WELDING MAY START.</p>	N/A
420	QA APPROVAL HOLD POINT	<p>QA TO APPROVE ELECTRODE PRIOR TO USE. PROCEDURE USED: _____ MATERIAL/LOT USED: _____ QUALITY ENG. Name: _____ Date: _____</p>	
430	WELD SOP 0100 REV 7	<p>WELD REPAIR DEFECTS AS MARKED. FOR WELDS &lt;2" - WPS 10-SMAW-CF8MMN MOD REV 1 FOR WELDS &lt;8" - WPS 15-GMAW-CF8MMN MOD REV 2 <b>ADD WPS FOR VERTICAL WELDS.</b></p>	
440	GRIND GCHI SOP 0100 REV 2	<p>HAND GRIND WELDS.</p>	
450	L.P. WELDS COP 0300 REV 10	<p>L.P. WELD REPAIRS ACCEPTANCE PER ASTM A903. IF OK CHECK HERE _____ WASH AND SEND TO STEP 460. IF REJECTED CHECK HERE _____ AND RETURN TO STEP 440.</p>	LP - LEVEL II N/A
	REPEAT	<p>REPEAT STEPS 350 TO 450 AS REQUIRED TILL WELDS CLEAR FINAL LIQUID PENETRANT INSPECTION. DOCUMENT REWORK ON A SUPPLEMENTAL MTS</p>	QA ENG. N/A
NOTICE	WITNESS NOTIFICATION	<p>PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF VISUAL AND LP STEPS. EIO NOTIFIED ON 8/21 DCMA NOTIFIED ON 8/21</p>	Q ENG OR QA MGR [Signature]
460	FINAL VISUAL INSPECTION COP-500 REV 4	<p>VISUALLY INSPECT 100% of COMPONENT ACCORDING TO ASTM A802 LEVEL 2 ALL CONDITIONS. IF OK CHECK HERE [checkmark] IF REJECTED CHECK HERE _____ MARK AND REPAIR AT STEP 390. MUST BE PERFORMED BY LEVEL II in VT. GRIND ONLY</p>	VT - LEVEL II [Signature] 8/31/05



A-1 Coil

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

8 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

470	FINAL L.P. CQP 0300 REV 10	FINAL L.P. 100% OF COMPONENT. ACCEPTANCE PER ASTM A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE <u>W</u> WASH AND SEND TO STEP 455. IF REJECTED CHECK HERE _____	LP - LEVEL II	<u>KLH</u>	<u>8/31</u>
480	TEST MAG PERM SOP MAG PERM 100, REV 1	TEST MAG PERMEABILITY REPAIR AREAS. RECORD ON WELD MAP LIST. TEST AT LEAST 5 POINTS PER WELD. ACCEPTANCE 1.02. IF OK CHECK HERE _____ AND GO TO STEP 430. IF REJECTED CHECK HERE _____		<u>JK</u>	
490	GRIND GCHI SOP 0100R2	GRIND AREAS OF NON COMPLIANCE AND RETURN TO STEP 451. REPEAT UNTIL COMPLIANCE IS ACHIEVED.			
NOTICE	WITNESS NOTIFICATION	PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF MAG PERM STEPS. EIO NOTIFIED ON <u>8/21</u> DCMA NOTIFIED ON <u>8/21</u>	Q ENG OR QA MGR		
500	FINAL MAG PERM INSPECTION SOP MAG PERM 100, REV 1	PERFORM MAG PERM TESTING WITH SEVRIN GAUGE. ACCEPTANCE 1.02. CHECK THE ENTIRE SURFACE ON A 6"BY6" GRID. REPORT RESULTS. USE A 6" SQUARE BLOCK TO INDICATE TEST LOCATIONS AND RECORD RESULTS. COMPLIANT AREAS WILL NOT BE MARKED. MARK NONCOMPLIANT AREAS WITH AN "X" FOR REPAIR. OK CHECK HERE <u>✓</u> AND GO TO STEP 530. IF REJECTED CHECK HERE _____		<u>JK</u>	<u>8/31</u>
510	GRIND GCHI SOP 0100 REV 2	HAND GRIND WITH SUITABLE CONE OR OTHER SIMILAR GRINDER AS REQUIRED TO ENSURE REMOVAL OF MATERIAL TO ACHIEVE MAG PERM REQUIREMENT. CIRCLE AREA REMEDIATE FOR RETEST.		<u>JK</u>	
520	RETEST MAG PERM SOP MAG PERM 100, REV 1	RETEST MAG PERMEABILITY AT FAILED TEST POINTS. MARK NONCOMPLIANT AREAS WITH AN "X" FOR REPAIR. ACCEPTANCE 1.02. IF OK CHECK HERE _____ IF REJECTED CHECK HERE _____ RETURN TO STEP 510.		<u>JK</u>	
530	DOC. REVIEW	REVIEW DOCUMENTS AS REQUIRED IN CAF CHECKLIST. ALL DOCUMENTS NOTED TO BE ACCESSIBLE FOR AUDITING. (SHIPPER, C OF G, M.T.R., M.T.S, INSPECTION REPORT, X-RAY READER SHEETS AND HEAT TREAT CHARTS)		<u>JK</u>	<u>8/30</u>
NOTICE	RELEASE FROM EIO	PROVIDE DOCUMENTS TO EIO. SENT ON <u>9/30</u> BY <u>JK</u> . RECEIVED RELEASE FROM EIO ON _____	Q ENG OR QA MGR	<u>JK</u>	
540	PACK AND SHIP	PACKAGE AND SHIP TO MAJOR TOOL.			
1000	REVISION HISTORY	ORIGINAL 12-14-04. Approved 12-14-04. Revision level 1 - Revised 1-26-05 new page 8, correct High stress areas, Revision level 2 3-16-05, delete LO step 455. Revision 3 3-28-05 Added note regarding	CARUUD		

**A-1 Coil**

Energy Industries of Ohio

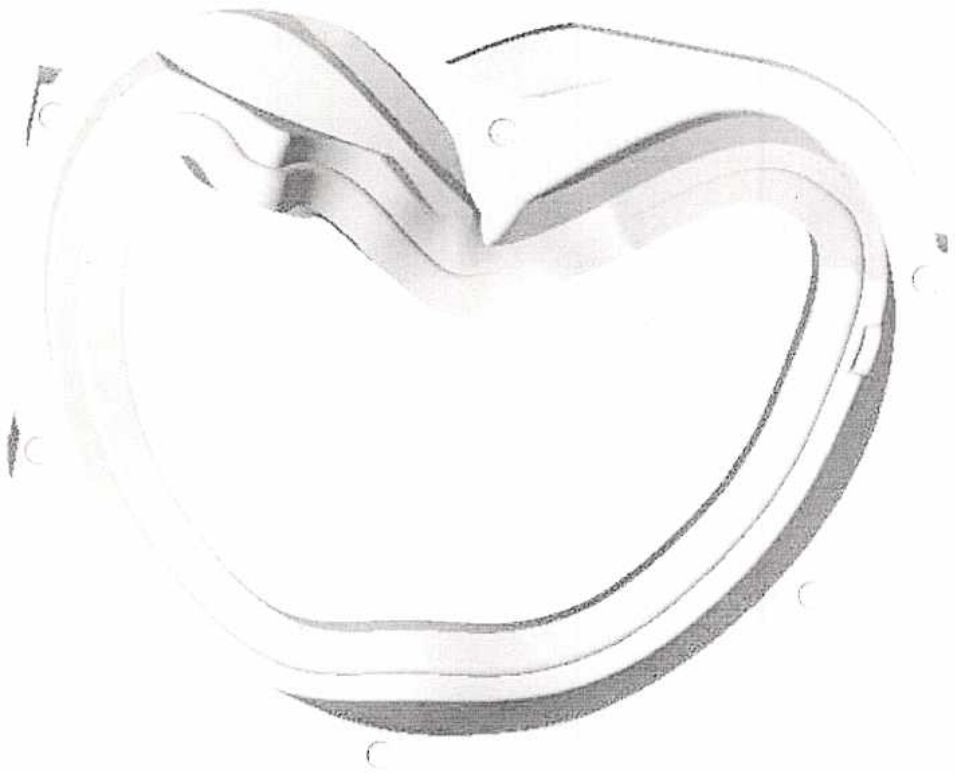
Manufacturing and Test Sequence (MTS) Serial Number A-1

9 OF 11

CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

hold point at weld step 400. Revision level 4 written for C-2 casting 4-18-05. Rev 5 added Layout SOP# and note regarding first casting layout responsibility. 5-10-05. Rev 6 5-29-05 added "LOT" to weld material steps. Rev 7 6-14-05 added "LOT" to supplement page weld step.

**RED AREA INDICATES HIGH STRESSED AREA**



**A-1 Coil**

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

10 OF 11 CO# 40851 Dated 3-9-05 Revision: Rev 7 Dated Issued: 6-14-05

	REPEAT STEPS	SUPPLEMENTAL REPAIR STEPS	1 <sup>ST</sup>	2 <sup>N</sup>	3 <sup>RD</sup>	4 <sup>TH</sup>	5 <sup>T</sup>
S220	WELD SOP 0100 REV 7	EXCAVATE ANY DEFECTS FOUND DURING RADIOGRAPHY.	nc 8/21	D 8/26			H
S230	L.P. EXCAVATION CQP-300 REV 10	L.P. ALL EXCAVATIONS PRIOR TO WELDING TO ENSURE REMOVAL OF DEFECT. ACCEPTANCE PER A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING.	L.P. LEVE L II ce 8/25	8/26			
S240	WELD MAP	MAP ALL WELDS WITH DIGITAL PHOTO/MAPS INDICATING LOCATION. SERIALIZE DEFECTS ON CASTING, USE SCALE IN PHOTOS AND DOCUMENT SIZE. THIS IS TO BE PERFORMED BY SUPERVISOR, INSPECTION LEAD MAN OR THEIR DESIGNEE, FILE WITH QA. MUST SEND REPORT ON ALL WELDS OVER 10% OF NOMINAL WALL THICKNESS TO CUSTOMER. DEFECTS > 10% YES DATE <u>8/21</u> REPORT SENT BY <u>cb</u> DEFECTS < 10% <u>8/22</u> SIGN BY QA ENG. <b>REPAIRS MAY NOT PROCEED UNTIL INFORMATION IS SUBMITTED.</b>		8/21	8/26		
NOTICE	WITNESS NOTIFICATION	PROVIDE NOTICE TO EIO AND DCMA AT LEAST FIVE DAYS IN ADVANCE OF WELD STEP. EIO NOTIFIED ON <u>8/21</u> DCMA NOTIFIED ON <u>8/21</u>	Q ENG OR QA MGR				
S260	QA APPROVAL HOLD POINT	QA TO APPROVE ELECTRODE PRIOR TO USE. PROCEDURE USED: MATERIAL/LOT USED: <u>78309</u> QUALITY ENG. Name: <u>RS</u> Date: <u>8/23</u>					
S270	WELD SOP 0100 REV 7	WELD REPAIR DEFECTS AS MARKED. FOR WELDS < 2" - WPS 10-SMAW-CF8MMN MOD REV 1 FOR WELDS < 8" - WPS 15-GMAW-CF8MMN MOD REV 2 <b>ADD WPS FOR VERTICAL WELDS.</b> HAND GRIND WELDS.	TAP 8/23	TS 8/27			
S280	GRIND GCHI SOP 0100R2		AB 8/24	OFB 8/28			
S290	L.P. WELD CQP 0300 REV 10	L.P. WELD REPAIRS ACCEPTANCE PER ASTM A903. ACCEPTANCE CRITERIA-LEVEL 1 FOR HIGH STRESSED AREAS, LEVEL 2 FOR ALL OTHER AREAS. SEE LP DRAWING. IF OK CHECK HERE _____ WASH AND SEND TO STEP 300.	LP - LEVE L II cc 8/24	OK 8/28	OK	OK	OK

RT  
OK

**A-1 Coil**

Energy Industries of Ohio

Manufacturing and Test Sequence (MTS) Serial Number A-1

11 OF 11

CO# 40851

Dated 3-9-05

Revision: Rev 7

Dated Issued: 6-14-05

	IF REJECTED CHECK HERE _____ AND RETURN TO STEP 220.	RA			J
REPEAT	REPEAT STEPS S220 TO S290 AS REQUIRED TILL CLEAR THROUGH VISUAL INSPECTION & PENETRANT INSPECTION. DOCUMENT REWORK ON A SUPPLEMENTAL MIS	QA ENG 8/28			