

BETA LAB NO.M10198- CS4-02	TESORO REFINING AND MARKETING COMPANY ANACORTES REFINERY 10200 W. MARCH POINT ROAD T91WA4428 ANACORTES, WA 98221	CUSTOMER P.O. NO.: 4501667904
PART: 6600-E HEAT EXCHANGER CS4 PART 19 & 20		DATE: AUGUST 5, 2010
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**LABORATORY REPORT-CS4**  
**Attachment 3 TEAM Industrial Service NDE Report**

**TEAM**® Industrial Services, Inc.

Providing Quality NDE and Heat Treating Services to Industries Worldwide

5901 Harper Road  
Solon, OH 44139  
(440) 498-9494

PT-FORM-08 Lab and Field Technique Sheet Rev 1

**LIQUID PENETRANT EXAMINATION TECHNIQUE SHEET**

Client: <u>FIRST ENERGY</u>	Technician: <u>MICHAEL BUCKLEY</u>
Facility: <u>6670 BETA DRIVE, MAYFIELD VILLAGE OHIO</u>	Date: <u>6-15-10</u>
Client PO#: <u>45342412</u>	Technique #: <u>1</u>
Project Description: <u>LIQUID PENETRANT TESTING ON WELDS</u>	Job #: <u>13103168</u>

<b>Item Data</b>					
<input checked="" type="checkbox"/> Weld	<input type="checkbox"/> Non-Weld	<input type="checkbox"/> Structural	<input checked="" type="checkbox"/> Initial Inspection	<input type="checkbox"/> Repair	<input type="checkbox"/> Final Inspection
<input type="checkbox"/> Other: _____					
# of Parts: <u>3</u>	Base Metal: <u>S/A</u>	Filler Metal: <u>S/A</u>			
Part Description: <u>WELDS ON PLATES ON PIPES</u>					

<b>Inspection Data</b>					
Method: <input type="checkbox"/> Visible Color Contrast	<input checked="" type="checkbox"/> Fluorescent	<input type="checkbox"/> Solvent Removable	<input checked="" type="checkbox"/> Water Wash	<input type="checkbox"/> Post Emulsifiable	Surface Temp: <u>70°</u>
Pre Inspection Cleaning Method: <u>SKC-5</u>	Batch #: <u>09M11K</u>	Cleaner: <u>WIPE</u>	Application Method: <u>BRUSH</u>		
Penetrant: <u>Z6-G7</u>   <u>15 MIN</u> Dwell Time	Batch #: <u>10A069</u>	Application Method: <u>N/A</u>	Application Method: <u>SPRAY</u>		
Emulsifier: <u>N/A</u>   <u>N/A</u> Emulsification Time	Batch #: <u>N/A</u>	Application Method: <u>N/A</u>	Application Method: <u>PUFFER BALL</u>		
Remover: <u>WATER</u>   <u>10 MIN</u> Drying Time	Batch #: <u>N/A</u>	Application Method: <u>SPRAY</u>	Application Method: <u>PUFFER BALL</u>		
Developer: <u>ZP-4B</u>   <u>15 MIN</u> Developing Time	Batch #: <u>086072</u>	Application Method: <u>SPRAY</u>	Application Method: <u>PUFFER BALL</u>		
Post Inspection Cleaning Method: <u>SPRAY</u>	Batch #: <u>09M11K</u>	Cleaner: <u>SKC-5</u>			
Black Light S/N: <u>1693129</u>	Intensity: <u>N/A</u> <small>per 7 cm<sup>2</sup></small>	Light Meter: <u>N/A</u> / <u>N/A</u>	Type: <u>N/A</u>	Serial No.:	<u>N/A</u>

<b>Inspection Results</b>	
Procedure: <u>PT-ASME.N2</u> Rev: _____	Acceptance Criteria: <u>ASME SECTION III</u>
Inspection Results Summary: <u>INSPECTED TWO PLATE PIECES PARTS NUMBERS CS4-02 EAST AND CS4-02 WEST. 1 DEEP PART NUMBER (BELLIOUS ON END PIECE) ALL 3 PIECES WERE FOUND TO BE CONFORMING.</u>	
<input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject <input type="checkbox"/> See Attachments	

Reported by: [Signature]      Reviewed by: \_\_\_\_\_  
 Supervisor: \_\_\_\_\_      Contact: \_\_\_\_\_

NOTICE: This examination report reflects the actual NDT procedure which was conducted by TEAM personnel. Submission of this report is for informational purposes and does not reflect any guarantee of the part, inspection procedures, or standards and is subject to the limitations of each.