

August 19, 2013

LABORATORY NUMBER: 5004.9237

CUSTOMER AUTHORIZATION: Credit Card

DATE SUBMITTED: August 16, 2013

REPORT TO: Pacific Gas & Electric Co.

Attn: Redacted

375 North Wiget Lane, Ste. 250 Walnut Creek, CA 94598

SUBJECT:

One pipe section was submitted for tensile testing and metallurgical evaluation. The sample was identified as Pipe Segment from L147, 20" Diameter.

TRANSVERSE TENSILE TEST

(ASTM A370-10)

	Weld Metal	Parent Metal
Dimensions of Specimen (in.)		
Width	1.508	1.508
Thickness	0.257	0.254
Area (sq. in.)	0.388	0.383
Tensile Strength (psi)	58700	61800
Yield Strength (psi)*	42900	39300
Elongation in 2.0 Gage (%)	11	41
Fracture Location	Weld	-
Fracture Characteristic	Ductile**	-

^{*}Upper Yield Strength (formerly Y.P.) 0.5% E.U.L; **Indication observed

MACROTECH EXAMINATION

A cross section through the weld was polished and etched. Photographs of the weld are attached. The weld appears to be an A.O. Smith type weld.

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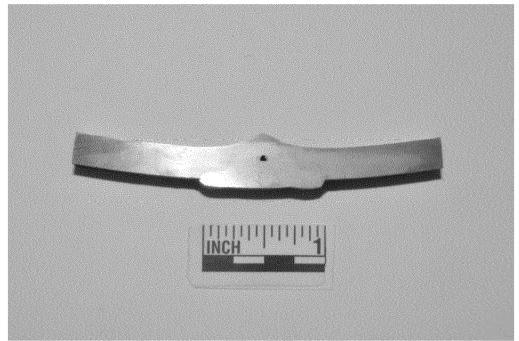


Photo #1

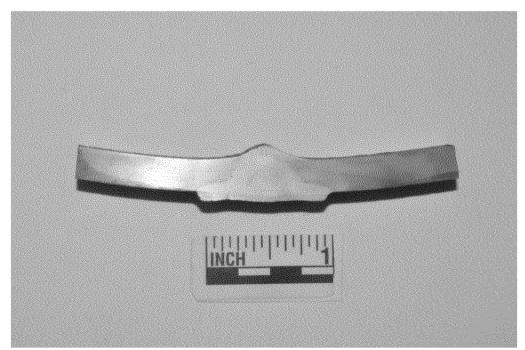


Photo #2, opposite side of Photo #1



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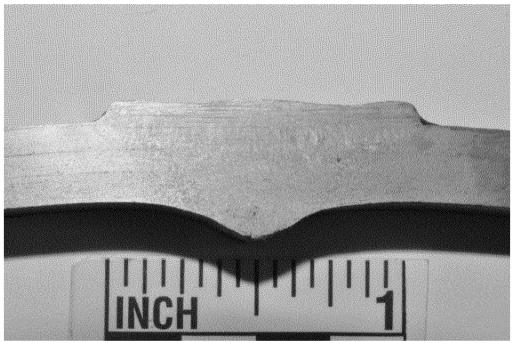


Photo #3

This testing was completed on August 19, 2013 and performed in accordance with the customer's authorization.

Submitted by:

gj

Edward A. Foreman Quality Manager