

FAX COVER PAGE

CALIFORNIA INSTITUTE OF TECHNOLOGY

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TO:	Ron Johnson
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DATE:	9/3/96

FROM:	Larry Jones
ORGANIZATION:	LIGO Project
FAX NUMBER:	(818) 304-9834
VOICE NUMBER:	(818) 395-2970
REFER TO:	LIGO-T960098-00-B, LIGO E960089-00-B
SUBJECT:	Baffle weld procedure, memo
NUMBER OF PAGES FAXED INCLUDING THIS COVER SHEET:	3

NOTE: additional copies, per your request

Dec

FAX COVER PAGE

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TO:	Paul McGrath
ORGANIZATION:	JPL
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DATE:	5/31/96

FROM:	Larry Jones
ORGANIZATION:	LIGO Project
FAX NUMBER:	(818) 304-9834
VOICE NUMBER:	(818) 395-2970
REFER TO:	LIGO-E960089-00-B
SUBJECT:	Spot weld procedure

NUMBER OF PAGES FAXED INCLUDING THIS COVER SHEET:	2
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NOTE:

- a. I believe that this represents the procedure as we discussed on about 5/10. Please review and give me a call.
- b. I'll be going to the WA site again on 6/18, and would like to take the two sample boards with me. When do you expect that they would be ready? Bill Tyler could probably pick them up on one of his Lab trips.

## **Welding Procedure for Resistance Spot Welding of LIGO Beam Tube Baffles**

### Base material:

- Type: A240 Type 304L stainless, with oxidized surface
- Thickness: 20 ga., 2 layers
- Preparation: confirm no glass coating on the weld tabs

### Weld equipment:

- Welder: Miller MSW-41T Portable Spot Welder with timer, 115 VAC
- Tongs: 6" or shorter, offset for baffle access
- Tips: standard/flat combination, stock number 040 212

### Weld settings:

- Timer: 0.5 second
- Tip pressured: adjust camlock for maximum practical force; this will cause noticeable tong deflection

### Daily maintenance:

- Tip dressing: file or sand as required to provide even contact with work surface; maintain tip diameter. Replace tips every 100 welds, or as needed.
- Tong alignment: check to confirm centered within 0.10"
- Timer setting: check to confirm 0.5 second
- Tip pressure: check to confirm maximum practical force
- Spot weld and test three specimens as described in Periodic Checks, below

### Periodic Checks (perform after thirty welds in any day):

- Spot weld three specimens (same as base material, suggested size, 1" x 3") and twist apart. Weld zone should show evidence of parent material tearing, of 0.10" minimum diameter; compare with sample board to confirm acceptable appearance.

LIGO-E960089-00-B

Paul McGrath

May 10, 1996

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