

# Oregon OSHA Worksite Redesign Grant Final Quarterly and Project Report

Company: **Luhr Jensen & Sons Inc.**  
Contract Number: **#99/01-31**  
Project Name: **Weld Ring Form/Weld Station**

Date: 5/10/02

## *Project accomplishments and effectiveness:*

The original objectives of this project, as outlined in the grant application, were to:

- a. Hold or grip the left side of the weld ring, thus eliminating manual gripping (no pliers needed).
- b. Extend/Retract grip on right side of machine. Retract mode will allow access for lure loading.
- c. Extend & grip on right side of machine to twist ring closed and position for welding, thus eliminating manual gripping and twisting (no pliers needed).
- d. Extend/Retract plasma welding head to weld ring while held in grippers. (No need to transfer to secondary welding station.)
- e. Combine Operations 1 & 2.
- f. Provide a more consistent weld since eyestrain, fumes and the static posture of holding the torch can contribute to inconsistent welding.

The final ergonomic and hygienist reports indicate that all of the above objectives have been accomplished in addition to providing further ergonomic benefits in areas not previously targeted (mainly via the provision of an ergonomically adjustable operator's chair). Some operator's have noted occasion shoulder strain, which can be corrected by adjusting the chair in a more forward position. However, the condition would be addressed in a newer design, as it would be alleviated if the loading point were closer to the operator.

It should also be noted that all grant responsibilities and project steps as outlined in contract #99/01-31 have been completed.

## *Project evaluation data:*

The post ergonomic and hygienist report has been provided as part of the dissemination package and illustrates that all targeted conditions have been either improved or eliminated.

## *A synopsis of the project evaluation:*

A one-page "executive overview" of the project has been included with the dissemination package.

*A plan to continue evaluating the project:*

Dave Lind, Engineering Supervisor at Luhr Jensen, will continue to provide internal assistance to his company and staff for this new machine.

*How have other employers been informed of the results of the project?*

A dissemination article was written and submitted for publication in the Hood River News and the Columbia Gorge Regional News.

*List of deliverables supplied for posting to the Oregon OSHA website:*

The list agreed to in project close meetings has been supplied below. This has been supplied in electronic format, and includes:

1. VRML Solid Model.  
Included.
2. Solid Model CAD File:
  - A. Original CAD File Format from creation (AutoCAD).
  - B. AutoCAD part and schematic drawings with BOM information.
3. One page executive overview with digital photo of device.  
Microsoft Word
4. Vendor list with cross ref. code.  
Excel
5. Bill of material with vendor cross ref. code and estimated costs.  
Excel
6. Published article.  
Microsoft Word
7. Ergonomic and Industrial Hygienist Original and Final reports.  
Microsoft Word

Additionally, a VHS Video of the device has been supplied as outlined in the contract.

*Cost of project:*

The Or-OSHA dollars spent on this project total \$109,696.86, close to the budgeted amount of \$109,845. A request for the final disbursement for the amount of the \$10,827.86 is included in the attached Exhibit C, which is \$156.14 less than the maximum allowed final disbursement.

*Customer match overview:*

Luhr Jensen provided in-kind labor and material in the amount of \$12,945 against a required amount of \$12,240.

Additional notes:

The completed Exhibit C Quarterly Report Expenditure Worksheet has been included with this report which outlines the use of the budget.

An additional financial form has been included from Barb Forni, OMEP's Financial Manager, which shows where all fees were expended. Please note that OMEP billed this grant for \$18,186 for all the various consultative services that we outlined in the original application process except those completed by Luhr Jensen.

The uniqueness of this machine presented several challenges which were complicated by the myriad of parts (different types, weights, sizes) processed on it. Despite this, the project is considered to be highly successful and has been fully integrated into Luhr Jensen's manufacturing process. From operator to company president, they are highly satisfied with the outcome.

Sincerely,

Mark Biederbeck  
OMEP Manufacturing Consultant  
and Project Manager for Luhr Jensen & Sons.