



# DECEMBER

*Part of the Month*

## More Fins than an Aquarium

This month's Featured Part is a stainless steel weldment made from a machined item and several sheet metal parts. First the main hub is machined on our CNC Lathe. Some of the features are left oversized and will be machined to the final size after welding. Concurrently with the machine shop work, the inner and outer fins, and inner disc, are being laser cut. The inner fins are formed to give them a slight radius. All items then go to the welding department. First the six inner fins get welded to the main hub. Then the inner disc is placed over top of the tabs sticking out of the inner fins to locate it accurately. The disc is plug welded to the fins. Next the hub is loaded into a fixture to locate the outer fins at the correct angle and spacing. Finally the whole weldment goes back to the machine shop to have the center hole opened to the final size, with a tolerance of  $\pm 0.0005$ ".



### Complete Assembly, Sheet Metal, Machined and Welded Components.

- > ISO 9001 certified Quality Management System.
- > Certified Welding to MIL-STD-1595a for process DTAW Group 1b, 1ia.
- > 100% in-process inspection.
- > Certified inspection reports.

#### Problem:

The average age of 10 members of a committee is the same as it was 4 years ago, because an old member has been replaced by a young member. Find out how much younger is the newest member ?

#### Quiz:

Name this holiday tune:  
My parent's mother was involved in an unexpected trampling incident with an antlered creature of the genus Rangifer.

- Please be sure to check our website for answers to all previous months Problems and Quizzes! Go to [www.metalwork.com](http://www.metalwork.com) and click on Problem of the Month link.

#### Quote:

"Christmas is a season for kindling the fire for hospitality in the hall, the genial flame of charity in the heart."  
*~ Washington Irving ~*

**All CAD Formats:**  
Solidworks (sldprt, sldasm), AutoCAD (dwg, dxf), Inventor, Pro/E, CATIA 4/5, Unigraphics, Parasolid, ACIS SAT, iges, step, ckd, prt, stl

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