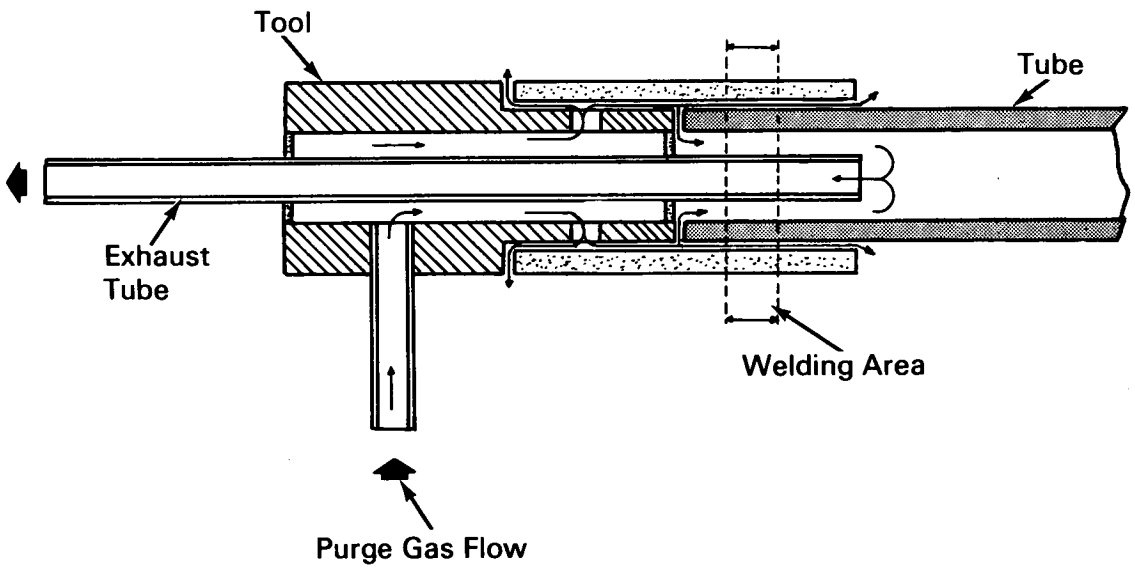
March 1966 Brief 66-10093

NASA TECH BRIEF

Tool Provides Constant Purge During Tube Welding



The problem:

During in-place welding of tubular components, contamination and oxidation control is normally dependent upon individual operator technique.

The solution:

A tool that provides a constant purge of inert gas in the weld area to prevent contamination and oxidation.

How it's done:

The tool is designed with an inlet for the purge gas and an exhaust tube to carry it away. The tool permits self-jigging of the tube and sleeve to be welded. It positions these parts prior to welding by insertion of the small exhaust tube of the tool into the tube to be welded. The larger diameter section of the tool then engages the sleeve to orient the tool, sleeve, and tube for the welding operation. The purge gas enters the weld area between sleeve and tube by way of ports in the tool near the sealed end of the tube and within the sleeve. These ports maintain the adjacent area of the sleeve free from contamination and oxidation for the following weld to join another tube.

Note:

Inquiries concerning this innovation may be made to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama, 35812
Reference: B66-10093

(continued overleaf)

Patent status:

No patent action is contemplated by NASA.

Source: E. R. Lang
of North American Aviation, Inc.,
under contract to
Marshall Space Flight Center
(MFS-547)