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Pressure-Control Purge Panel for Automatic Butt Welding

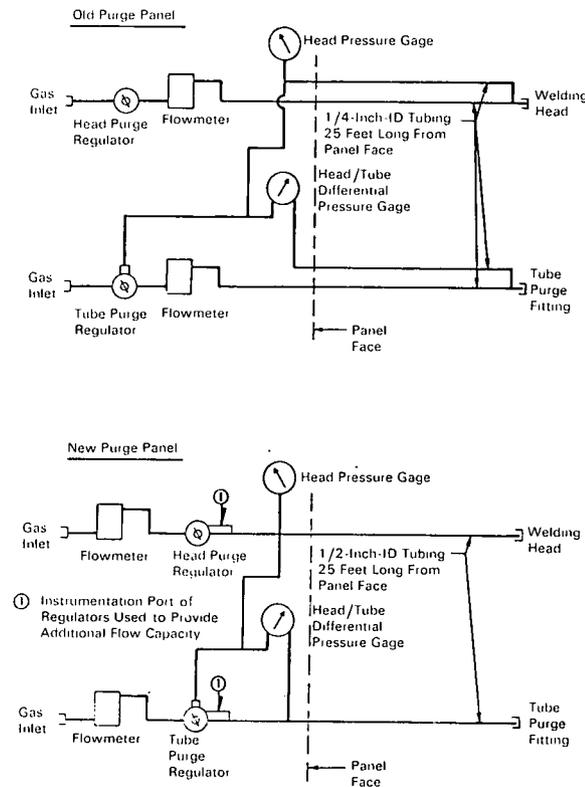


Fig 1 Schematics of Purge Panels

The problem:

To convert a conventional pressure-control purge panel for use in automatic butt welding instead of burn-through welds. The conventional purge panel (Fig. 1) was designed for burn-through welds of sleeve-tube combinations; when it is used for automatic butt welding, the difference in pressure between head and tube must be maintained manually. Factors affecting butt welding, such as fit up, end gap, and

preparation of the ends of the tubes, do not apply to sleeve-type welds.

The solution:

A new modification of the purge panel (Fig. 1) reduces the drop in pressure between the regulators and the weld head and tube-purge fitting. The regulators now sense very small changes in pressure (as

(continued overleaf)

low as 0.1 inch of water) and can maintain automatically the preset difference in pressure between tube and head.

The more stable and constant purge flow under all conditions results in elimination of manual control and in better welds. The invention may interest those concerned with air-regulators for plants and regulating circuits for pneumatic valves, as well as operators of automatic welding machines.

Note:

No further documentation is available. Inquiries may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B69-10403

Patent status:

Inquiries about obtaining rights for the commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

Source: E. J. Lang and B. H. VanWagner of
North American Rockwell Corporation
under contract to
Marshall Space Flight Center
(MFS-18465)