NASA TECH BRIEF

Closed Circuit TV System Monitors Welding Operations

A TV camera system incorporating a special vidicon tube with a gradient density filter has been devised for use in remote monitoring of TIG (tungsten-inert gas) welding of stainless steel. The welding operations involve complex assembly welding tools and welding skates in areas of limited accessibility. The welding skates include servo motors for feeding and positioning the filler wire, torch positioning, arc length control, and skate drive control. The camera is positioned so that the weld puddle, the filler wire feeding into the puddle, the torch, and the seam to be welded are in full view of the camera. This system enables the operator to make remote precision adjustments while viewing the actual welding operation on the TV screen. A permanent record of the welding process can be recorded on tape for later study.

Note:

Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: B67-10162

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: M. Gilman, et al
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Category 01