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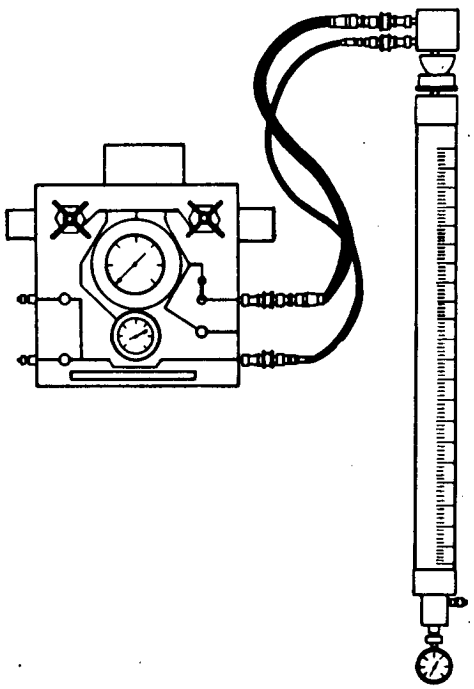
Brief 70-10502

NASA TECH BRIEF

Volume-Checking Tool

The amount of fluid in a closed system of known or unknown volume can be determined with a novel volume-checking tool. Similarly the amount of gas entrained by fluid in a closed system, the amount of



fluid remaining in a dried system of known volume, or the volume of a container of unknown size can be determined.

The tool was developed for checking the contents of a closed-circuit, pressurized loop containing a coolant mixture of water and methanol. During operation a certain amount of fluid leaked from the system, and small amounts of gas were generated by galvanic action within it. Since the volume of entrained gas could not exceed the allowable amount it was necessary to determine accurately (1) the original and final (after operation) fluid contents on which the leakage rate could be based, and (2) the rate of gas generation.

The tool consists of two modules (see fig.): a standpipe or graduated storage vessel, and a control panel. Its accuracy is limited to that of the off-the-shelf instruments incorporated. In one variation or another the tool is potentially widely applicable.

Note:

Requests for further information may be directed to:

Technology Utilization Officer
Kennedy Space Center
Code AD-PAT
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Reference: TSP70-10502

Patent status:

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

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Category 07