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Contact-Resistance Test Probes: A Concept

The proposed designs for double-contact pin and socket test devices shown in the figure are intended for use in the inspection of contact resistance in



plated connectors after assembly into cables. The devices would permit rapid inspection of the connectors in cases where mating connectors or special apparatus are not available, and would enable the source of excessive resistance to be more exactly determined. Standard continuity checks cannot distinguish high contact resistance from problems caused by faulty cabling or connector wiring. Further, the use of standard, pointed test probes can damage highreliability plated sockets. Even testing by means of mating connectors is suspect, since the contact force may vary widely from pin to pin.

The design of the new test probes, however, would permit them to be calibrated at desired spring pressures, relative to specific, nominal pin or socket sizes. The spring pressures could be set to simulate the lowest acceptable contact force. This would assure adequate performance even when the final mating connector also has low contact force.



Note:

Requests for further information may be directed to:

Technology Utilization Officer Code A&TS-TU Marshall Space Flight Center Huntsville, Alabama 35812 Reference: B71-10471

Patent status:

No patent action is contemplated by NASA.

Source: J. H. Maxwell, R. J. McDermott, and C. H. Brooks of North American Rockwell Corp. under contract to Marshall Space Flight Center (MFS-16891)

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