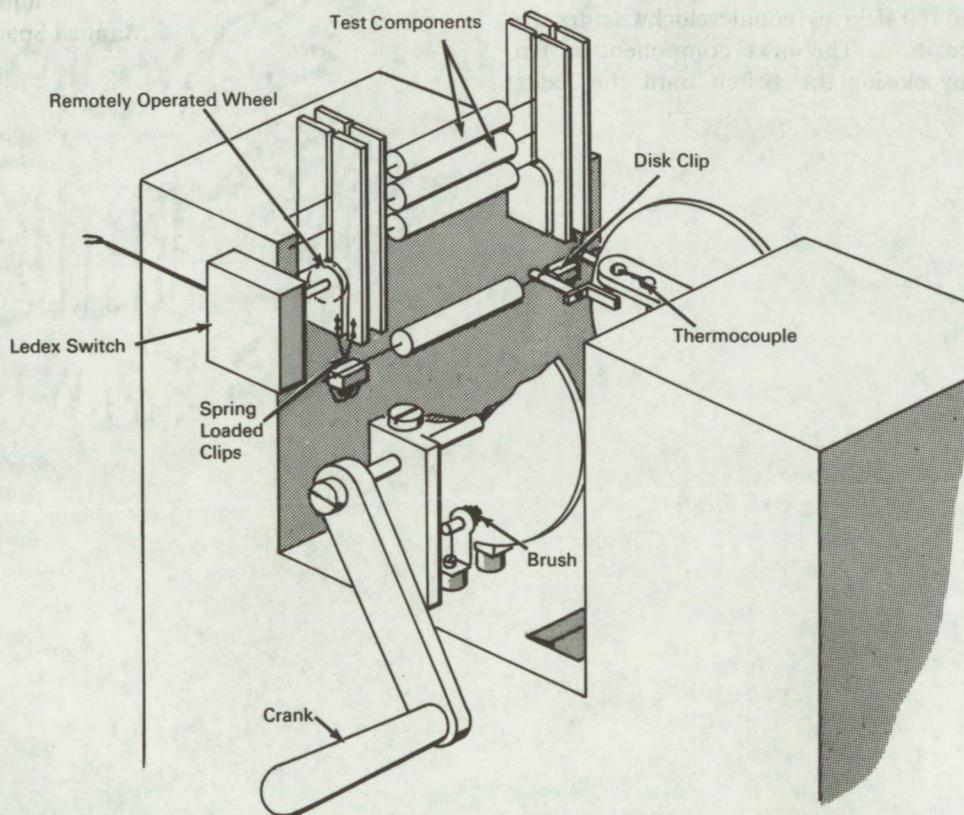


NASA TECH BRIEF



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Semiautomatic Device Tests Components with Biaxial Leads



The problem:

To devise a semiautomatic method of testing quantities of components having biaxial leads.

The solution:

A semiautomatic device that includes a four-terminal network for testing components in different environments.

How it's done:

The components to be tested are loaded in a slotted clip. A remotely operated wheel with two notches on the perimeter, 180 degrees apart, feeds the components one at a time into the four clips in the load station. The load station consists of four spring loaded clips mounted on two dual-sided copper clad

(continued overleaf)

revolving discs. This supplies the four required terminals that are open to receive the component leads with the disk clips in the load position. These clips close on the component leads when the disks are rotated 90 degrees clockwise by the hand crank to the measuring station position. The component surface temperature is measured by the thermocouple. The tested component is electrically connected to the outside of the chamber by leads from the spring loaded metal brushes riding on the copper-clad disks. Only two leads are required for bridge measurements. However, for measurements by the voltage-current method, two additional leads are required for applying power.

After the component is tested, the crank is turned an additional 90 degrees clockwise to the release station which opens the clips. The tested component slides down a ramp to a storage compartment. The crank is turned 180 degrees counterclockwise to the load station position. The next component is fed into position by closing the switch until the ledex

switch closes. This rotates the wheel to release the next component into the load station.

Notes:

1. This device can be easily modified for complete automatic operation.
2. A related innovation is described in NASA Tech Brief B65-10243, August 1965. Inquiries may also be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: B66-10337

Patent status:

No patent action is contemplated by NASA.

Source: Thomas C. Marshall
of North American Aviation, Inc.
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