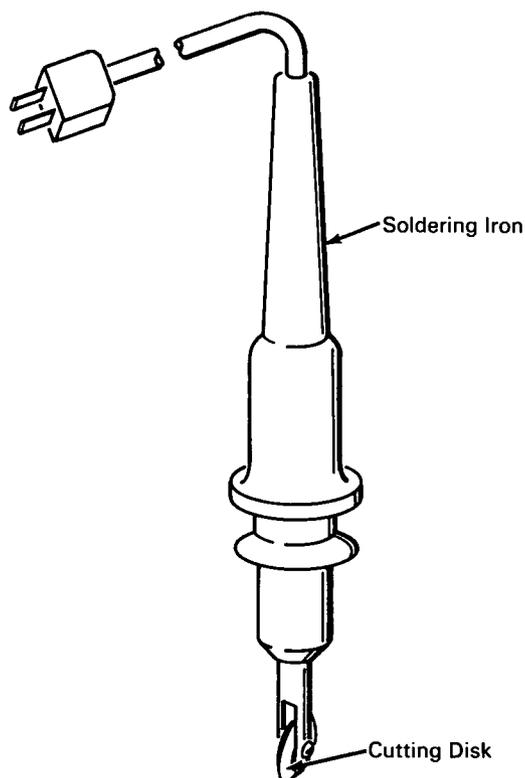


NASA TECH BRIEF



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Modified Soldering Iron Speeds Cutting of Synthetic Materials



The problem:

To cut large lots of synthetic materials economically without leaving frayed or jagged edges. A prior method used a conventional knife blade that was usually heated by an external source as frequently as clean, unfrayed cutting required. This was time-consuming when cutting large lots and placed a premium on operator skill.

The solution:

A modified soldering iron that features a constant heat source in intimate contact with a cutting blade.

How it's done:

A pencil-type soldering iron is modified by machining an axial slot in its tip and drilling holes through the two sides forming the slot. A stainless steel rotary

(continued overleaf)

cutting disk is mounted on a pintle that rides in a rapid heat transfer bushing through the two holes.

With power on to the soldering iron, the rotary disk is pressed into the material and moved to cut the desired configuration. Constant heat at the cutting edge permits clean, unfrayed cutting on a continuous basis.

Notes:

1. This device should find application where large quantities of synthetic fabrics must be cut in various shapes.
2. An alternate design has an axially threaded bore in the heating element tip to permit the use of various shapes of cutting blades, held in a threaded shank.

3. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama, 35812
Reference: B66-10246

Patent status:

No patent action is contemplated by NASA.

Source: William G. Schafer, Jr.
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