March 1968 Brief 68-10072

# NASA TECH BRIEF



## Clamp for Detonating Fuze

**The problem:**

To provide physical support for closely confined detonating fuze in an application requiring removal and replacement at frequent intervals during test. The support must be of minimum size, weight, and cost while giving a high degree of reliability. Clamps previously used incorporated hinged covers retained by springs, the hinged covers causing a space problem and spring tension variations frequently causing difficulty in securing the covers.

**The solution:**

A quick acting clamp type support that can be designed with a base of any required strength and configuration to permit the insertion of an object.

**How it's done:**

Velcro pile material is bonded to one side of the base and a flexible tab is bonded to the other. The surface of the free end of the flexible tab consists of Velcro hook material. The tab is positioned to close the opening in the base by engagement of the tab hooks with the pile on the base. This effectively retains the object supported by the base. Strength of the clamp is increased by increasing the thickness of the base or tab and by increasing the engagement of the hook and pile material.

**Notes:**

1. While previously used clamps cost $8.01 each, this clamp's average cost is only $0.75 each.
2. In this configuration, retaining loads on the tab are transmitted to use the bonding material and hook-pile material in shear, the direction of maximum strength. No peel forces (against the direction of minimum strength) are induced into the materials.
3. Inquiries concerning this invention may be directed to:

   Technology Utilization Officer
   Marshall Space Flight Center
   Huntsville, Alabama 35812
   Reference: B68-10072

**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: Edmond J. Holderman
of Douglas Aircraft Company
under contract to
Marshall Space Flight Center
(MFS-13399)

Category 05