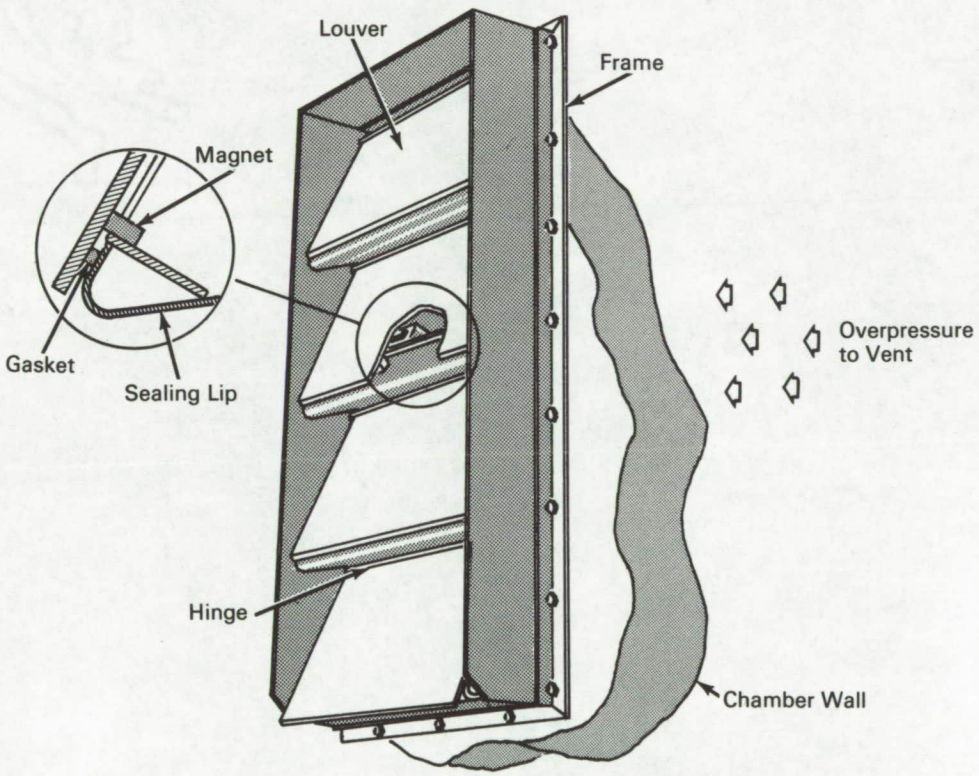
June 1966 Brief 66-10279

NASA TECH BRIEF

Magnetic Latches Provide Positive Overpressure Control



The problem:

In rooms or chambers where explosion hazards exist, overpressure safety venting techniques are required. It is desirable to have the vents reseal automatically when overpressurization has been relieved.

The solution:

Louvers with individually hinged closures that are held in locked position by commercially available magnets that quickly release them in an overpressure condition.

How it's done:

Magnets are attached to the fixed sealing lips of the louver assembly. When room pressure exceeds the holding power of the magnets, the hinged louvers swing open until the overpressure has been dissipated. Gravity returns the louvers to the proximity of their

(continued overleaf)

magnets, which then snap-lock them in the closed position.

Notes:

1. In one application, 96-lb louvers were successfully operated to an overpressure of 3.5" of water using one 30-lb pull magnet per louver.
2. In high humidity environments, a light coating of petroleum jelly will prevent rust-lock between magnet and louver.
3. Inquiries concerning this innovation may be directed to:

   Technology Utilization Officer
   AEC-NASA Space Nuclear Propulsion Office
   U. S. Atomic Energy Commission
   Washington, D.C. 20545
   Reference: B66-10279

Patent status:

No patent action is contemplated by NASA.

Source: J. L. Loy
of Westinghouse Astronuclear Laboratory
under contract to
Space Nuclear Propulsion Office
(NU-0057)