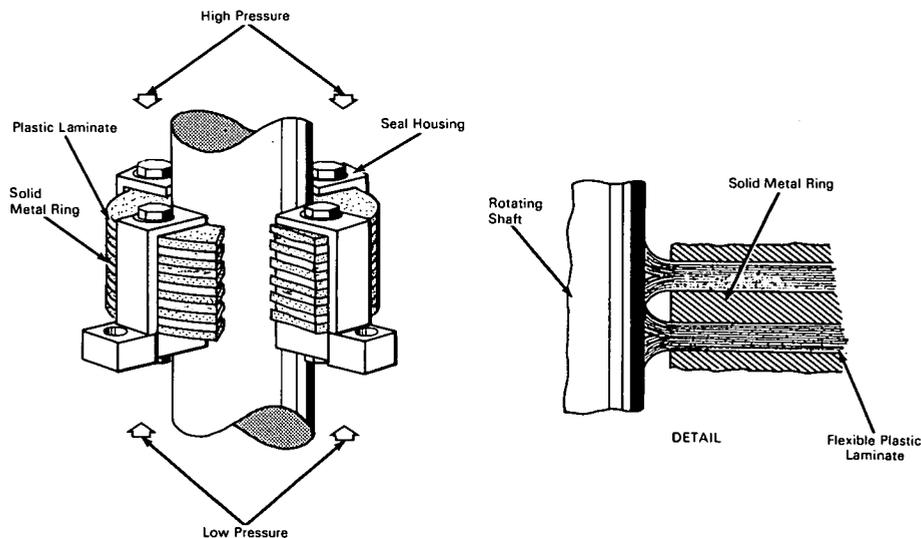


NASA TECH BRIEF



NASA Tech Briefs are issued by the Technology Utilization Division to summarize specific technical innovations derived from the space program. Copies are available to the public from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia, 22151.

Flexible Plastic Ring Assembly Makes Durable Shaft Seal



The problem: To design a durable seal ring for rotating shafts used in vacuum or pressure pumps. Ordinarily, seal rings are made of a rigid material which is prone to fracture, especially at cryogenic temperatures.

The solution: A laminated seal assembly of stacked flexible plastic rings interleaved with solid metal rings of smaller width.

How it's done: The flexible plastic rings, which may vary in thickness, are stacked on the metal rings, and the assembly is bolted into the housing. The tightening torque applied to the assembly bolts depends on the operating temperature, pressure difference, and shaft speed. Sealing is effected by contact

spreading of the flexible plastic rings on the surface of the rotating shaft.

Note: Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Western Operations Office
150 Pico Boulevard
Santa Monica, California, 90406
Reference: B65-10367

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated by NASA.

Source: North American Aviation, Inc. under contract to Western Operations Office (WOO-227)

Category 05