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NASA TECH BRIEF

Sealing a Rubber Bladder Between Two Sections of an Accumulator

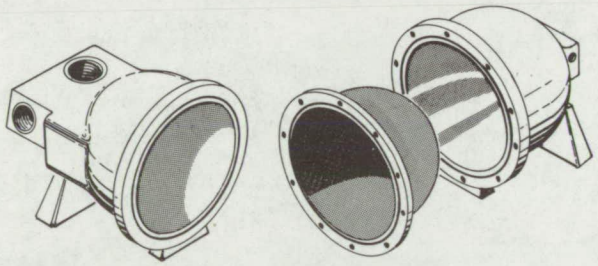

Fig. 1. Bladder Between Two Sections of Accumulator

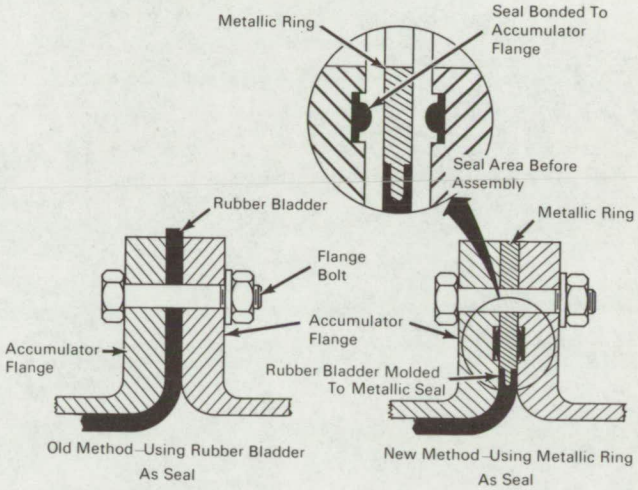

Fig. 2. Assembly of Flanges

The problem:

To develop a means for leak-free clamping of a rubber bladder between the flanges of a two-section accumulator, and maintenance of constant torque on the clamping bolts.

The solution:

A flat metallic ring molded peripherally to the rubber flange of the bladder, and an inset rubber seal bonded to the face of the flange of each section.

How it's done:

A groove is machined in the face of each flange of the accumulator, and a rubber seal is bonded in each groove (figs. 1 and 2). A flat metallic ring is bonded peripherally to the rubber flange of the bladder. Assembly of the three components leads to metal-to-metal interfaces between the bladder and the two sections, with the ring compressing the opposed rubber seals in the grooves. There is no relaxation in or leakage from the joint, and the bolts retain their original torque.

Note:

No further documentation is available. Inquiries may be directed to:

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Patent status:

No patent action is contemplated by NASA.

Source: G. M. Schartau of
International Business Machines, Incorporated
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Category 05