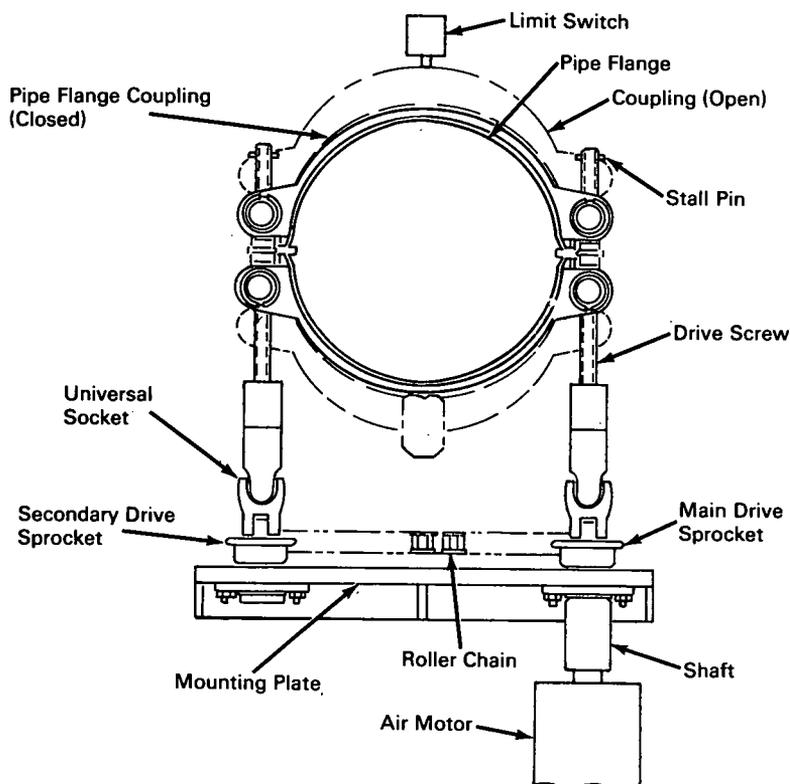


NASA TECH BRIEF



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Remotely Controlled System Couples and Decouples Large Diameter Pipes



The problem:

To devise a remotely controlled system for coupling or decoupling large diameter, high pressure fluid lines. The pipes are joined by means of a parallel drive screw-type flange coupling located in a hazardous environment.

The solution:

An air-motor driven, chain-drive system designed to engage or disengage the flange coupling.

How it's done:

Both drivescrews are driven simultaneously by a roller chain to prevent the screws from becoming jammed. The main drive sprocket, connected directly to the air-motor shaft, drives the secondary drive sprocket by means of the roller chain. A universal socket, pinned to each drive sprocket, is used to compensate for minor misalignment when engaging the drivescrews. A limit switch, which stops the air

(continued overleaf)

motor, is used to prevent overdrive of the screws. Stall pins are provided to prevent disassembly of the coupling in the event that the limit switch fails to operate.

Note:

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: B66-10276

Patent status:

No patent action is contemplated by NASA.

Source: P. A. Griffin
of Aerojet-General Corporation
under contract to
Space Nuclear Propulsion Office
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