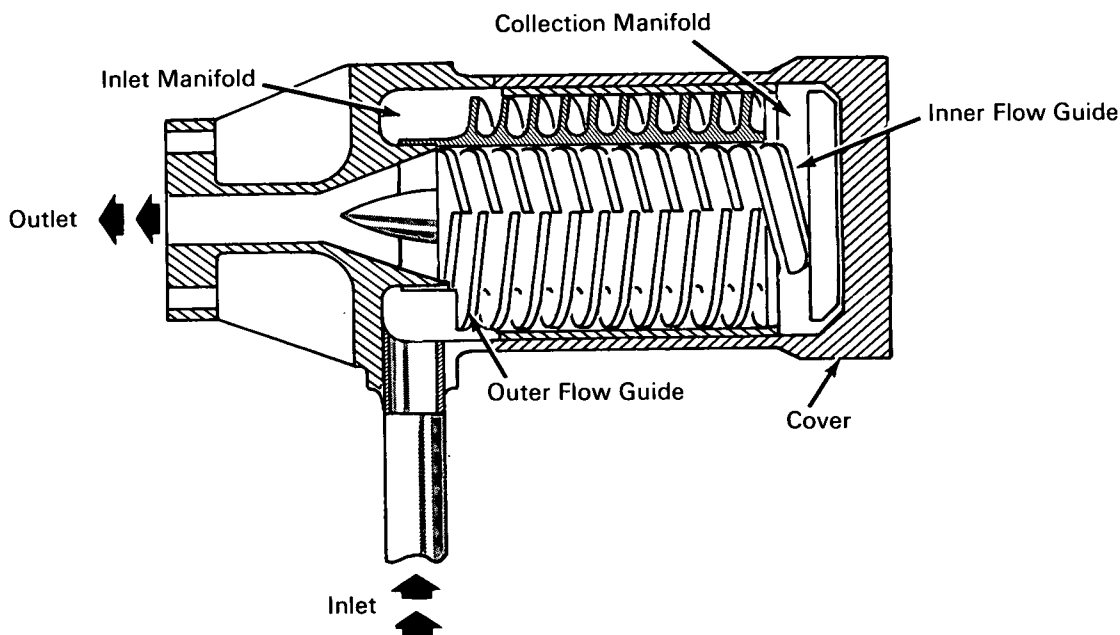


NASA TECH BRIEF



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Stationary Device Produces Homogeneous Mixture of Fluids



The problem:

To design a device, without moving parts, that will produce a homogeneous mixture of two or more one-phase or two-phase fluids.

The solution:

A device with helical passageways through which the fluids are forced into turbulent flow by the system pressure differential.

How it's done:

The device contains two concentric flow guides with helical passageways. The fluids to be mixed enter one end of the device through intake ports on an inlet manifold, and are forced through the helical passageway of the inner flow guide to a collection

manifold at the opposite end of the device. A reversal in the axial flow direction of the fluid then occurs as it passes through the helical channel of the outer flow guide. After passing through this channel, the mixture, which is now homogeneous as a result of the induced turbulence, is released through a discharge port.

Note:

Inquiries concerning this invention may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B66-10570

(continued overleaf)

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: M. P. Callison and D. I. Baker
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