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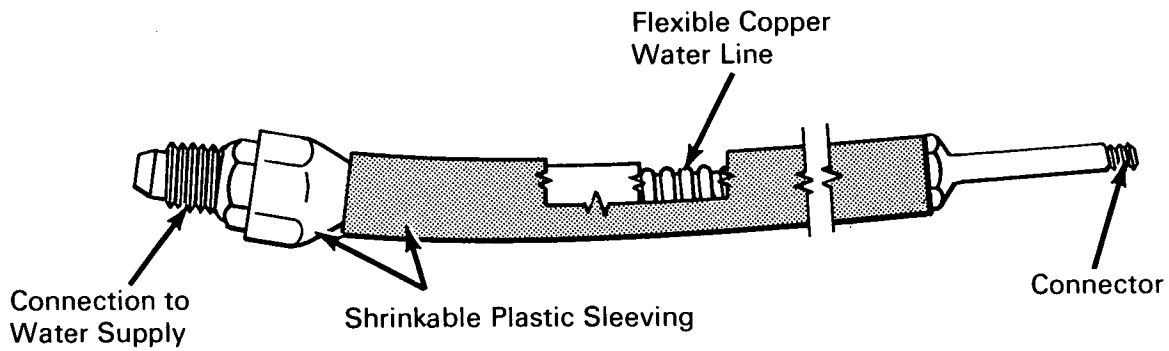
NASA TECH BRIEF

Plastic Tubing Protects Flexible Copper Hose



The problem:

To protect flexible copper purge and coolant hoses which are subject to severe vibration during rocket engine tests.

The solution:

Reinforce the entire hose assembly with a covering of high-temperature shrinkable plastic.

How it's done:

Insert the flexible copper hose into a slightly oversize plastic tube. Apply sufficient heat to shrink the plastic until it assumes the contour of the hose. The plastic covering permits the copper hose to take a radial bend without kinking, yet prevents it from taking a permanent bend. The joint between hose and fitting is also reinforced by the plastic covering.

Notes:

1. This type of tubing is being used on all flexible water tubes used in F-1 engine tests at Edwards Air Force Base.
2. Inquiries concerning this innovation may be directed to:

   Technology Utilization Officer
   Marshall Space Flight Center
   Huntsville, Alabama 35812
   Reference: B66-10588

Patent status:

No patent action is contemplated by NASA.

Source: B. E. Mellgren
of North American Aviation, Inc.
under contract to
Marshall Space Flight Center
(M-FS-772)

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