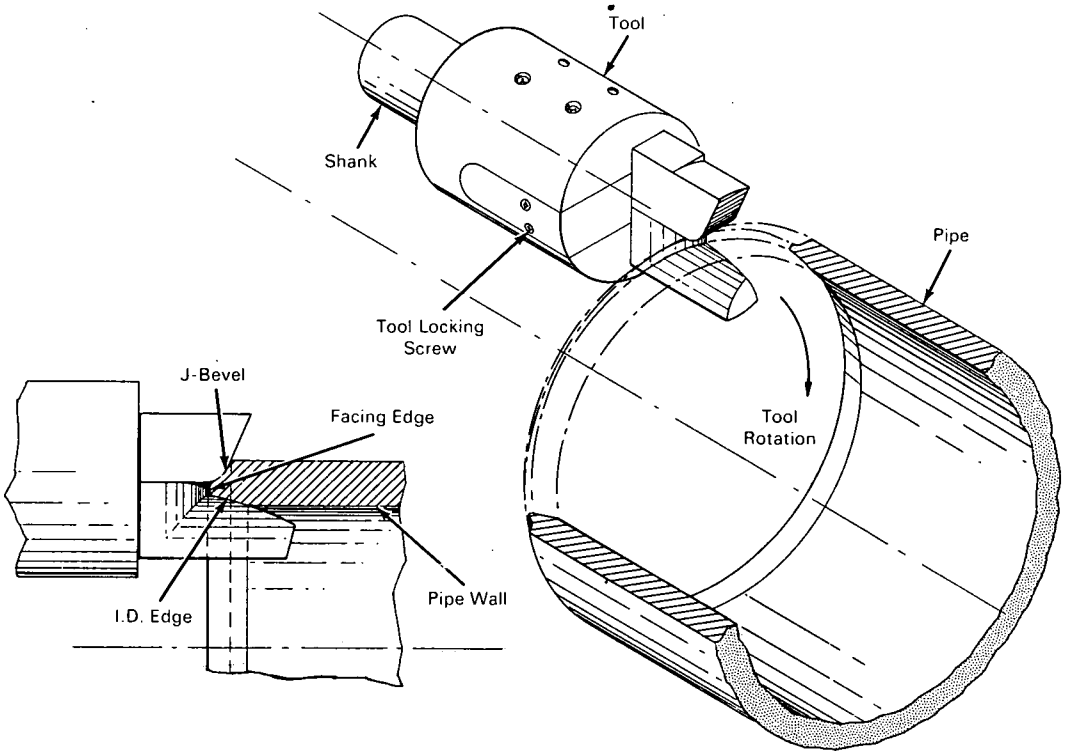
July 1969

Brief 69-10231

NASA TECH BRIEF

Tool Simplifies Machining of Pipe Ends for Precision Welding



Weld Joint Preparation Tool

The problem:

To provide a tool that will simplify the machining of J-bevels on the ends of stainless steel and aluminum alloy pipe to be joined by precision welding.

The solution:

A single tool that prepares a pipe end for precision welding by simultaneously performing internal machining, end facing, and bevel cutting to specification standards. The machining operation with this new tool, which requires only one milling machine adjustment, can be performed in about half the time required by earlier methods and, more importantly, consistently produces the high-quality pipe-end configurations required to ensure precision-welded joints.

How it's done:

The tool assembly is positioned at the proper turning diameter over the end of the pipe wall. It is then rotated and moved parallel to the wall until the innermost portion of the tool (the facing edge) is in contact with the rim of the pipe.

(continued overleaf)

Notes:

1. The assembly can readily be fitted with interchangeable tools for cutting 25°, 30°, and 37 1/2° bevels.
2. No further documentation is available. Inquiries may be directed to:
   Technology Utilization Officer
   Kennedy Space Center
   Kennedy Space Center, Florida 32899
   Reference: B69-10231

Patent status:

No patent action is contemplated by NASA.

Source: S. T. Matus of
The Bendix Corporation
under contract to
Kennedy Space Center
(KSC-10361)