

SUMMARY

An investigation on a Rotary extrusion for the production of Rod, Wire and Tube has been initiated. A rig to assist in this study has been designed and built. Preliminary testing has indicated that more developmental work on this rig must be undertaken before conclusive results are obtained.

The principle investigated, utilizes torque from a multispeed lathe and axial pressure from a hydraulic cylinder and pump arrangement to provide the work of deformation. The torque is transmitted positively to the deforming zone by a rotating die, while the pressure is applied axially to the billet, through a centre plate arrangement which slides along four tie bars.

This report outlines the approach used to synthesise the design of the mechanism as well as problems encountered in construction. Several conclusions have been drawn concerning the performance of the machine, and recommendations for further development have been made.