

The Response of Tube Splitting on Circular Tubes by Using Various Types of Semi-Angles Dies and Slits

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ABSTRACT

This paper investigates the axial splitting and curling behavior of aluminium circular metal tubes which was compressed axially under static loading. An experimental investigation was carried out by using three types of dies with different semi-angles, α which was 45° , 60° and 75° . To ease the splitting process, the tube was introduced with 4 and 6 slits with the length of 5 mm at the leading edge of the tube. The slit prevents the tubes from buckling and establishes the split and curl mode during the compression process. The effects depending on the number of slits and the different semi-angles, a employed are presented in this paper.

Keywords: *Axial loading, curling, semi-angles, slits*