

Abstract

The final dimensions of flow formed thin-wall tube were numerically approximated by numerical analysis method. AISI 4130 alloyed steel was selected for this investigation containing chromium and molybdenum to improve strength and fracture toughness. The commercial software, FORGE NxT 1.0 was utilized for this investigation and validation of numerical results was performed by actual final dimension measurement of flow formed tube according to each forming parameters. The results of numerical analysis are good agreement with experimental results and it is concluded that numerical analysis is an efficient tool for dimension estimation of flow formed thin-wall tube.

*Keyword* - Flow formed thin-wall tube, AISI4130, Dimension estimation