

Abstract

Flow forming machine is very useful for producing of rocket motor tube, primarily because tensile strength of materials can be improved. Compared to the others, the process is also lower cost and use less time for operation. On the contrary the investment of flow forming machine is costly. By limitation of existing machine specification, the new product cannot be developed. So the consideration to buying new machine or improvement of machine and process will be discussed. The company should study many factors such as payback period, the space for installation and budget, etc. Thus, the first thing to consider was how to improve the machine to reduce the cost and use less time. For this experiment, improvement of flow forming process from 2 rollers to 4 rollers are developed by design new rollers which suitable with the former machine. The new process design can produce the outside diameter of tube about 120-122 mm. And it can keep the quality of tube such as roundness, size and mechanical properties according to the product design.

Keywords: Flow forming, four rollers, cold work