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Abstrak

ABSTRAK

All processes, after sufficient time, are visited by a new generation of workers that contemplates process merits and demerits for specific applications. The process that is presently being revisited by academics and industry together is explosive forming. For over 100 years, it has been recognized that explosives can be used in a controlled way in the manufacture of profiled metal components. The required profile results from the explosive force that directly or indirectly deforms the metal. Explosive forming is a broad term covering many process variations. Early patents relating to explosive forming appeared at the end of the 19th and at the beginning of the 20th century. An increasing number of economically successful applications were being seen in the early 1970s, with the manufacture of large aluminium and high strength steel parts. The work presented in this paper results from a global review of activities undertaken in the area of explosive forming, explains the reason for the work, examines explosive forming applications, the associated metallurgy and reviews manufacturing requirements.