



**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI  
SHORT ABSTRACT OF THESIS**

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Programme of Study : Ph. D.

Thesis Title: Application of Electromagnetics in Forming of Tubes and Perforation of Sheets

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**SHORT ABSTRACT**

Electromagnetic forming (EMF) is a high strain rate forming process that utilizes high strength electromagnetic pressure to form tubes and sheets in the desired shape. High strain rate forming process successfully addresses the problems faced in conventional forming techniques such as springback, wrinkling and formability. It can be effectively used for forming metals with low formability like aluminium alloys. It can be instrumental in the manufacturing of lighter vehicles with higher fuel efficiency. In the present study, the emphasis is on the study of the electromagnetic forming of tubes and sheets with application to simultaneous electromagnetic forming and perforation of sheets.