

Fabrication of Complex Geometry using Rapid Prototyping - A Review

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***Abstract:** Now a day's 3D printing and their properties are becoming a notable topic in technological aspects. 3D printer is a device which convert any design into a product in real-life. 3D printing was discovered in the late 1970s or maybe early 1980s and it was the only technique of manufacturing process which do not include the usage of and tools, dies, fixtures, molds, etc. The name Rapid Prototyping (RP) or Additive Manufacturing itself expresses that it is the manufacturing of product with addition of material on top of the other. It saves time, cost & also reduces the material wastage. This paper mainly explains the FDM procedure of manufacturing & material used for 3D printing by FDM machine. This process is used in many different sectors like Automobile, Biomedical, Military, Agriculture, etc. There are many different methods of FDM 3D printing available in the market. In this paper the review is done on different processes, materials and type used for Rapid Prototyping. There are many different materials available for the use in Rapid Prototyping to acquire different types of properties in the product. The material could be thermoplastics, photopolymers, metal, and ceramics in the form of liquid, powder, resins, or filaments. The paper presents a review about Rapid Prototyping, different types of RP techniques, its benefits and limitations over traditional processes, different types of RP material its areas of applications and further advancements.*

Keywords: RP, 3D Printing, FDM

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