Optimization of Resources in the Supply Chain through Additive Manufacturing

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Abstract: The purpose of this research is to analyze the adoption of additive manufacturing in the different sectors of the industry regardless of its size, the changes it can generate within the supply chain and the logistics transformation. Additive manufacturing or 3D printing is a disruptive technology that has been gaining strength in recent years within industries worldwide. Since the first industrial revolution has sought to optimize resources within the production processes for this reason has been implemented technologies that ensure flexible and efficient processes. All industry is small or large, depends on the management of its supply chain, poor management means unnecessary expenses in the production process reflected in the price of the product, on the other hand, proper management leads to the optimization of resources and competitiveness in the market. The resources that are optimized with 3D printing in the supply chain are analyzed according to the state of the art and are divided into: Human resources: decrease in logistics personnel. Economic resource: manufacture of customized products without raising production costs. Resource time: reduction of waiting times for a product to come onto the market, small batches of personalized mass production. The adoption of additive manufacturing in industries generates a redefinition of the current supply chain through additive manufacturing.

Keywords: Additive manufacturing, 3D printing, logistics, supply chain, customized production, industry 4.0.