Research & Reviews: Journal of Material Sciences e-ISSN: 2321-6212

A Note on Industrial Engineering

Christiansen*

Department of Applied Physics, University of Eastern Finland, Kuopio, Finland

Perspective

Received: 06-Jan-2022, Manuscript No. JOMS-22-52331; **Editor assigned:** 08-Jan-2022, PreQC No. JOMS -22-52331(PQ); **Reviewed:** 20-Jan-2022, QC No. JOMS -22-52331; **Revised:** 22-Jan-2022, Manuscript No. JOMS -22-52331(R); **Published:** 2□Jan-2022, DOI: 10.4172/2321-6212.10.1.001

***For Correspondence:**

Christiansen, Department of Applied Physics, University of Eastern, Finland, Kuopio, Finland.

E-mail: jchristiansen@gmail.com

INTRODUCTION

Industrial engineering is a branch of engineering concerned with the development, improvement, and implementation of integrated systems of people, money, knowledge, information, and equipment in order to optimise complex processes, systems, or organisations. Manufacturing activities rely heavily on industrial engineering. Industrial engineers specify, forecast, and assess the outcomes of systems and processes using specific knowledge and skills from the mathematical, physical, and social sciences, as well as engineering analysis and design principles and methods. Several industrial engineering principles are used in the manufacturing business to ensure that systems, processes, and activities run smoothly.

DESCRIPTION

Lean Manufacturing, Six Sigma, Information Systems, Process Capability, and DMAIC are all examples of this. These concepts enable the development of novel systems, processes, or circumstances for the efficient coordination of labour, materials, and machines, as well as the enhancement of the quality and productivity of physical and social systems. Industrial engineering may overlap with operations research, systems engineering, manufacturing engineering, production engineering, supply chain engineering, management science, management engineering, financial engineering, ergonomics or human factors engineering, safety engineering, logistics engineering, or other sub-specialties, depending on the user's viewpoint or motives.

Historians agree that the roots of the industrial engineering profession may be traced back to the industrial revolution. The flying shuttle, the spinning jenny, and, perhaps most critically, the steam engine helped mechanise conventional manual operations in the textile industry, resulting in economies of scale that made mass production in centralised areas attractive for the first time. The factories built by these developments gave birth to the concept of the production system. It has also been stated that Leonardo da Vinci was the first Industrial Engineer, because there is evidence that, he applied science to the examination of human activity around the year 1500, when he looked at the rate at which a man could shovel soil. Others claim that, Charles Babbage's research of manufacturing operations, notably his work on the creation of straight pins in 1832, spawned the IE profession. However, it has been widely argued that, while valuable, these early efforts were purely observational and did not attempt to engineer the jobs under study or increase overall output. Many of the industrial revolution's