

Sustainability of Green Supply Chain for a Steel Industry Using Mixed Linear Programming Model

Authors : Ameen Alawneh

Abstract : The cost of material management across the supply chain represents a major contributor to the overall cost of goods in many companies both manufacturing and service sectors. This fact combined with the fierce competition make supply chains more efficient and cost effective. It also requires the companies to improve the quality of the products and services, increase the effectiveness of supply chain operations, focus on customer needs, reduce wastes and costs across the supply chain. As a heavy industry, steel manufacturing companies in particular are nowadays required to be more environmentally conscious due to their contribution to air, soil, and water pollution that results from emissions and wastes across their supply chains. Steel companies are increasingly looking for methods to reduce or cost cut in the operations and provide extra value to their customers to stay competitive under the current low margins. In this research we develop a green framework model for the sustainability of a steel company supply chain using Mixed integer Linear programming.

Keywords : Supply chain, Mixed Integer linear programming, heavy industry, water pollution

Conference Title : ICAM 2015 : International Conference on Applied Mathematics

Conference Location : Istanbul, Türkiye

Conference Dates : January 26-27, 2015