

Green Manufacturing Methods-A Review

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Abstract : This focus on the ecological design of the environment for the eco-friendly manufacturing system, the conservation of energy and product development while reducing paper waste also highlights the use of green manufacturing to form a sustainable product, reusing the product and a shorter life cycle. Previous research has suggested relationships between these two areas, suggesting that "it leans green." The spontaneous slogan of waste reduction and "doing more with less" is immediately manifested as an achievement of environmental benefits and has been the basis of previous research. All the research that relates fat-free processes to sustainability problems has focused exclusively on the environmental impact. The main objective of the green industry is to save the environment and reduce the cost of the product.

Keywords: - Lean Manufacturing , Green Manufacturing , Sustainability , Environment.

1. INTRODUCTION

The environment is critical and climate change at any point leads to land imbalance. ISO has proposed a new quality management system for products and even an environmental management system. The main era is to reduce environmental damage due to industries. There is a need for a new manufacturing process, ie green manufacturing, which is suitable for sustainable development strategy. The cost of energy and resources is constantly increasing due to increasing demand and limited supply. In addition, price trends can not be predicted, so companies aim to successfully produce a large range of energy prices and resources. One strategy to adjust to price fluctuations is to pass customer margins. However, price increases may require improvements in the product. Sustainability in manufacturing has received special attention from many researchers, and many research has been published in this new field of science. Sustainability, however, is a widely accepted idea with little guidance on its practical implementation and its impact on the company's performance. Manufacturing is part of global consumption of resources and waste generation. However, they have the potential to become the driving force for creating a sustainable society. They can design and implement sustainable integrated practices and develop products and services that contribute to improved environmental performance. The long-term sustainability of the company depends to a large extent on how to maintain its competitiveness and at the same time maintain a sustainable environment. In recent years, many organizations have implemented environmental sustainability programs in their organizations; however, it is difficult to find details on their implementation.

1.1 Green Manufacturing: Green manufacturing (GM) is defined in most generic manner as "manufacturing practices that do not harm the environment during any of its journey phases" It includes the ecological design of the products, the use of ecological raw materials, the ecological packaging, the distribution and the reuse after the useful life of the product. Delay the depletion of natural resources and reduce

waste. Emphasis is placed on the reduction of parts, the rationalization of materials and the reuse of components. It covers a series of manufacturing problems, including 6R, ie, reduction, reuse, recycling, recovery, redesign and recycling, waste management, environmental protection, regulatory compliance, pollution control and other related requirements.

Green manufacturing practices: Green related developments evolved hand in hand with manufacturing management practices. Previous studies have reported that environmental problems will be crucial to manufacturing companies in Asia over decades (Diabat and Govindan, 2011; Chu et al., 2005). Teles et al. (2015) limit the reduction of natural resource consumption and waste treatment, because environmental practices are very popular among Brazilian companies with the best results in GM practice. Similarly, in China, environmental problems became more pronounced (Chu et al., 2005. Similarly, the communication capabilities of GSCM and empirically examined the relationship between green integration, reducing the costs and competitiveness of green enterprises from the perspective of suppliers in the Korean context). Rahman and Sharivastava (2013) revealed that most Indian companies revealed that most Indian companies do not have enough knowledge about GM, there are many gaps and confusion regarding GM implementation, the study also confirmed that there will be a need to make greater effort to establish the concepts of the mechanism Global. Seth et al. (2008) discussed the various wastes in the supply chain of the edible oils industry and highlighted the need to rely on green. Given relatively less experimental research studies of the GM in the contexts of developing countries, many managers see it as an obstacle rather than as a potential opportunity for improvement. The sustainability strategy of the Indian company influences the design and deployment of GSCM strategies. The Indian petrochemical industry has ample scope to improve organizational efficiency through a green innovation approach that includes the use of environmentally friendly products and processes, and reduced resources and waste. Researchers examined the

impact of GSCM CSFs in India's automotive industry and identified internal organization, management and competitiveness as critical factors.

2. ADDRESSING FULL SUSTAINABILITY

2.1 Green Manufacturing: In today's world, electronic waste is the main problem, green technology is the application of one or more environmental sciences, green chemistry, environmental monitoring and electronic devices to control, develop and maintain the environment and natural resources, reduce negative effects of human participation. The term is also used to describe sustainable energy generation technologies, such as portraits, wind turbines, bioreactors, bioremediation, desalination, etc. We do not always have time, or we need time, to learn more, read fine impressions, decode complex components and look for alternatives. The word "natural" has become excessive and inaccurate.

2.2 Environmental Management Tools include environmental management tools. The overall balance, ie, consideration of the inputs and outputs of the process and determining its effectiveness and waste. Full cost

accounting relates to costs of materials, energy, labor, waste disposal and other costs of miscellaneous items. The life cycle of the product is an important part of these tools, as the life cycle reduces the loss of the environment. The methodological engineering of the product consists of three stages: (1) conceptual design, preliminary and detailed, (2) production construction, and (3) operational use and system support. In the development of this study, cost-related functions are derived sequentially with a systematic engineering process view. The imposition of product liability on manufacturers is a means of achieving a critical impact point between the environment and business advantages. Manufacturers have the unique ability to facilitate product recovery and recycling when designing their products to facilitate the dismantling and reuse of components. By designing the value of the product life cycle, selecting the right materials and decisions (how to use recyclable materials easily and avoiding unusual substances, ingredients and unusual materials) can reduce the negative impacts on the environment Fishbein (2000); Tavell, (2002). The cost of the life cycle design of the resource components, Y (MT) is the function of MT, where T is the product life cycle. While there are many factors that affect the cost of design and component production, from the age of product design point of view, it is appropriate to take it as a function increases with the product design life

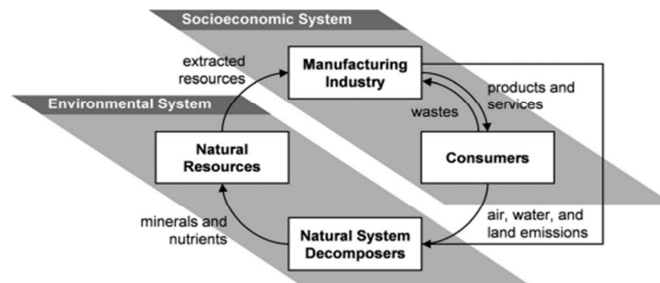


Fig. 1 The role of the manufacturing industry in a sustainable system David A. Dornfeld. Et.al. (2013).

Fig. 1 The role of the manufacturing industry in a sustainable system David

2.3 Sustainable Manufacturing The concept of sustainability emerged from a series of meetings and reports in the 1970s and 1980s, largely driven by environmental accidents and disasters, as well as concerns about chemical pollution and resource depletion. As noted in the 1987 Brundtland Report, our common future is David A. Downfield. Et.al., (2013). The term "sustainable industrialization" is sometimes used carelessly to describe procedures for characterizing and reducing the environmental impacts of industrialization. However, sustainability implies much of the simple act of analyzing and modifying the environmental performance of manufacturing processes and systems.

2.4 The environment issues: Relating to the impact on the natural environment of commercial operations, which include pollution, emissions from production and materials used in products, energy use, transport emissions and the use of recycled materials for the production and recycling of

post-consumer products. A series of environmental benefits derived from modified production has already been identified. The main premise is that producing the same output through fewer resources (materials, energy and capital) is good for the environment while minimizing the operating costs of the company. Similarly, through quality improvement (a primary objective), there are fewer production constraints and resulting waste / rework, which reduces costs and environmental impact.

2.5 Workforce issues: In relation to the way in which the Organization treated its personnel. Four sub-dimensions were identified: operational problems in the workplace (providing a safe work environment with good working conditions), compensation (wages and fair payments), problems of diversity (non-discrimination in employment) and union relations (recognition). The research has already identified a positive relationship between worker participation / participation and environmental performance. The best working conditions are a common goal of weak operations and sustainability. (3) Problems of the supply

chain This is about how an organization supervises and responds to the behavior of external organizations that are foreign to its property. This includes labor practices (recognition of human rights, such as avoiding exploitation or forced labor / child labor), the treatment of suppliers by the organization (for example, timely payments, open and honest transactions) and fair commercial issues. / ethics (positive support behavior of the provider). The strategy of the low supply chain focuses on creating close and long-term relationships with high levels of transparency of information with suppliers to reduce costs and improve quality. (4) Community contributions: This is related to the positive impact of the organization in the community in which it operates, for example, through charitable donations and community support.

2.6 Supply chain issues: Concerned about how to monitor an organization and respond to the behavior of third party organizations outside their property. This includes labor practices (recognition of human rights, such as avoidance of workshops or forced labor / child labor), treatment of suppliers by the organization (eg prompt payment, open and honest treatment) and fair trade / supply issues. Moral (positive behavior to support providers).). The supply chain strategy focuses on building close and long-term relationships with high levels of information transparency with suppliers in order to reduce costs and improve quality. (4) Contributions from this community are linked to the positive impact of the organization in the community in which it operates, for example, through charitable donations and community support.

3. LITERATURE

Currently, environmental results are strategically necessary for commercial operations to reduce costs and develop high quality Atasu products. , (2008); Kleindorfer et al., (2005). The range of ecological processes (GO) extends from product development to the management of the entire product life cycle that involves environmental practices such as environmental design, cleaner production, recycling and reuse, with a focus on reducing the costs associated with the manufacture, distribution, use and disposal of products (Lai Wong, 2012, Van Wassenhove, 2001, Kleiner (1991).) According to the literature on Environmental Management, Joe is concerned about environmental practices oriented towards the product and Ferguson and Toktay (2006), Gilley et al., 2000, Rogers and Tibben-Lembke (2001) to reduce the damage to the product and processes of the natural resources supply chain Altman (1994), Porter and van der Linde (1995a, 1995b) In product management, GO guarantees compliance with quality and the environment, which avoids a negative corporate reputation through products that are not taken into account in the environment. In operations management, GO focuses on closed loop processes that include practices such as recovery and recycling in order to reduce waste, retain the remaining value of products (Rogers and Tibben-Lembke (2006), and the diffusion of environmental technology and cleaner transportation). Final supply of pollution prevention.

These two different elements of GO help companies comply with environmental regulations, reduce the risk of legal fees, liability costs and fines (Hunt and Auster, 1990). By adopting GO, companies will make financial gains by obtaining residual values for their products and encouraging product innovation by analyzing returned products to improve the potential design (Rogers and Tibben-Lembke, 2001). Previous research on GO is limited to identifying precedents (eg, institutional pressures, regulations, client requirements) and their implications for the implementation of Lai et al. , 2011; Zhu et al. (2011), and the commercial and environmental values of GO King (2007); Min and Galle (2001); Rothenberg et al. (2001); There is a general belief in the regulatory capacity of successful environmental practices and sustainable processes. Bowen et al. (2001); Christmann (2000); Handfield et al. (1997); Russo and Fouts (1997); Sarkis and others. (2011), without which the performance results of Kovacs (2008), Porter and Van der Linde (1995a) can be influenced. The literature recognized the value of GO and the internal capacity of companies to succeed Corbett and Klassen (2006); Dechant and Altman (1994); Handfield et al., 1997; Lai et al. , 2010), but the complementary role of the suppliers of the initial stages of performance improvement is not yet found in the report by Pagell et al. (2007); Vachon and Klassen (2007). A recent study by Lee and Classen (2008) highlights the importance of environmental management (EMC) capabilities for suppliers, reflecting the ability of suppliers to improve their performance on environmental issues. However, the impact of this capacity on GO for the purchasing companies has not been considered.

4. GREEN APPLICATION

Fuel is the main problem in the world, and fuel used today is non-renewable and will be completed soon due to the need for new fuel. The only hope is renewable energy, ie solar, wind, tidal, biodiesel, etc., which are environmental products. Therefore, sustainable energy can be used as Zhu Qinghua fuel. , Et.al. , 2004. Water purification is another cause of human life, because water is our most important needs, but because of the population and the chemical process, water is not hygiene to drink. Solar distillation process is very useful for water purification process Qinghua Zhu. Et al. , 2004. The air can be purified, the basic green plants are common at home to keep fresh air because all plants eliminate carbon dioxide and convert it into oxygen. Because of this, air pollution will be reduced and life on Earth will get more oxygen and less carbon dioxide. Sewage treatment is theoretically similar to water purification. Sewage treatment is very important because it purifies water through pollution levels. The most polluted water is not used at all, and the less polluted water is supplied to the places where the water is used with the flow. Can lead to many other concepts of environmental protection and sustainability, etc. Solid waste management is the purification, consumption, reuse, disposal and treatment of solid waste by the government or administrative bodies of Zhou Qinghua City. Et al., 2004. Energy conservation is the use of devices that require

smaller amounts of energy to reduce electricity consumption. Reducing the use of electricity causes the burning of less fossil fuels to provide electricity Qing Zhou, Et.al. , 2004.

5. CONCLUSION

We also shed light on how sustainable practices support a range of weak transition objectives. When previous studies of ecological and deep processes limited their research to the study of environmental benefits in the workplace, this document identified strategic activities, the supply chain and the workplace. What has been done for the lean and green improvement offers improvements in sustainability explicitly or implicitly. The conceptual basis of the document explains that a wide range of potential benefits can arise from the integration of green and green applications. In addition, the green-green integration process has been integrated into a sustainable change in a theoretical model to capture the process of general change.

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