

ISO 14001 practices in Indian Manufacturing Organizations: A Review

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ABSTRACT

Manufacturing industries plays a vital role in economic growth of any developing or developed country. They are the lifeline of any country development. As per ISO 9000 standards these organisations maintain their quality standards and this success of these firms gave an idea to International Organization of Standardisation to develop new standards related to environment. Thus, they came up with the idea of ISO14000 series related to Environmental Management System (EMS). In this paper, the authors are going to discuss about some barriers in the implementation of EMS so that every organisation consider these factors before its implementation.

Keywords: Environment, EMS, ISO 14001

I. INTRODUCTION

ISO characterized the environment as the surroundings in which an association works including air, water, arrive, normal assets, verdure fauna, people and their interrelation (ISO, 1996). Environmental Management (EM) is defined as the management of an organization's or company's impact on the environment. The ISO 14001 standard defines EMS as that part of the organization's management system which comprises of the structure of organization, activities planning, responsibilities, practices, procedures, processes and resources for development, implementation, achievement, review and maintenance of the environmental policy (ISO, 1996 & Chavan and Nail, 2012). Environmental management systems are intended to formalize procedures for managing and reducing environmental impacts. ISO 14001 is applicable to any organization regardless of size, sector or geographical location. While the standard sets out a best practice framework for environmental management, it is written in a way which gives you the flexibility to adapt it to meet your individual business objectives.

The Plan-Do-Check-Act (PDCA) cycle is the working guideline of all ISO administration framework models, including ISO 14001. By following this cycle, association can successfully oversee and constantly enhance viability. Regardless of whether the overseeing chief setting the heading of the business, or an individual concentrating on a particular errand, the PDCA cycle is exceptionally valuable in accomplishing ceaseless change.

Any organisation adopting for ISO 14001 Environmental Management System has financial benefit (positive impact on bottom line), managerial benefit (improved company performance, protected and enhanced company reputation), marketing & sales benefit (improved market access and sales), operations and facilities related benefits (effective operational controls to manage impacts), product development benefit and the most important one is legal benefit (reduced risk of litigation and fines).

II. LITERATURE REVIEW

Basu et al; (2013) performed the study on the improvement of Environmental Management System in an Indian Pharmaceutical Industry through usage of ISO 14001:2004 rules. The primary concentration of this paper is the assessment of accomplishment in squander administration through execution of ISO14001:2004. Barve and Muduli, (2011) analysed that a high environmental cost which has been related with years of unregulated mining and mineral-handling action made it understood to strike a harmony between mineral improvements from one viewpoint and the greening the earth on the other. Endeavor has been made in this paper to recognize these difficulties with regards to Indian mining enterprises.

Jain and Pant, (2010) broke down Environmental Management System for educational organizations. The creator completed Initial Environmental Review (IER) and Strengths, Weakness, Opportunities and Threats (SWOT) examination to recognize the major natural worries in college. Chavan and Nail, (2012) examined the examination and

usage of Environmental Management System. In this examination, it can be infer that ISO 14001 EMS execution has a positive and critical association with Enterprises execution (i.e. operation execution and business execution) and partners. Haslinda et al; (2010) contemplated the execution of ISO14001 Environmental Management System in assembling firms in Malaysia. In this investigation, the advantages of executing ISO 14001 Environmental Management System (EMS), workers' reactions towards the usage of EMS, the explanations behind opposing the execution and the difficulties experienced by top administration in actualizing EMS were investigated. Hessami et al; (2012) considered that natural issues have earned high need in a developing number of organizations because of market weights and ecological controls and green generation has turned out to be vital issue to makers like concrete businesses. Goh Yen Nee, (2011) planned to discover the deciding elements for ISO 14001 EMS execution among SMEs in Malaysia from the Resource based view. A cross-sectional approach utilizing study was directed. Voukkali et al; (2017) analysed that EMS (Environmental Management System) is thought to be an instrument so as to give direction and down to earth answers for any sort of associations to enhance their execution on environmental perspectives. The motivation behind this paper is to dissect the boundaries that emerge amid the usage of an EMS in Cyprus food industry (acting in bakery and confectionary items) in the structure of the worldwide standard of ISO 14001.

III. BARRIERS

Factors developing roadblock for EMS implementation are termed as barriers. Some of the barriers which are reviewed from literature are discussed below:

- a) Financial constraints (Massoud et al; 2010): No doubt the cost of ISO 14001 implementation is very high. For small firms to manage large amount for this certification is a tedious task.
- b) Commitment of management: The managers at top level must be committed for its certification. They must take initiative for the implementation.
- c) Commitment of employee (Haslinda et al; 2010): The employee of an organisation is the pillars of their success. They should understand their duties and responsibilities towards environmental related issues.
- d) Lack of awareness (Sharifabadi et al; 2014): The lack of knowledge of environmental issues by higher management and employees lead to a greater barrier in EMS implementation.
- e) Inappropriate approach to implementation (Barve & Muduli, 2011): Many enterprises mistakenly begin implementation immediately following an initial environmental diagnosis without critically reviewing objectives and policies. Short term focus is another contributing factor in failing to achieve the desired environmental culture.
- f) Lack of motivation: Like quality awards, for ISO 14001 certified organizations awards must be granted for the motivation of other industries which motivates them for EMS implementation.

CONCLUSION

Any EMS needs particular necessities which an organization needs to execute to decrease its environmental effect. The recognizable proof of key barriers and inspirations of organizations in the manufacturing area may enable researchers and business people to build their consciousness of the gains and difficulties with the goal that they can accomplish an intensive comprehension of Systemic Management Systems, particularly the Environmental Management of these associations. These boundaries incorporate the high costs that appear to be a typical trouble in embracing EMSs in many enterprises. One of the factor to get free off is to actualize propel adaptation of the EMS when the progressions has been issued by ISO. Near future, industries must change to ISO 14001:2015 adaptation.

REFERENCES

- [1]. **Barve, A., & Muduli, K. (2011, September).** Challenges to environmental management practices in Indian mining industries. In International Conference on Innovation, Management and Service IPEDR (Vol. 14, pp. 297-301).
- [2]. **Basu, S., Mukhopadhyay, S., Gangopadhyay, A., Dastidar, S. (2013).** Study on the Development of Environment Management System in an Indian Pharmaceutical Industry through Implementation of ISO 14001:2004 Guidelines. Research Journal of Pharmaceutical Science, 2(3), 12-16.
- [3]. **Boiral, O., Guillaumie, L., Heras-Saizarbitoria, I., & Tayo Tene, C. V. (2017).** Adoption and outcomes of ISO 14001: a systematic review. International Journal of Management Reviews.
- [4]. **Campos, L. M., Trierweiler, A. C., Spenassato, D. C., Bornia, A. C., & Šelih, J. (2014).** Barriers for Implementation of EMS: A study in the Construction Industry of Brazil and Slovenia. In Production and operations management society. POMS 25th annual conference.
- [5]. **Chavan, G. R., & Naik, N. (2012).** The Study and implementation of environmental management system. International Journal of Engineering Research & Technology, 2278-0181.

- [6]. **Doody, H. (2010).** What are the barriers to implementing environmental practices in the Irish hospitality industry? In Tourism and Hospitality Research in Ireland Conference (THRIC).
- [7]. **Haslinda, A., & Chan, F. C. (2010).** The Implementation of ISO 14001 Environmental Management System. Asian Social Science, 6(3), 100.
- [8]. **Hessami, H. Z., Golsefid-Alavi, M., Shekaf, S. M., & Mavi, R. K. (2012).** Evaluation of success factors of ISO 14001-Based EMS implementation and ranking the cement industry using the TOPSIS method. Journal of Applied Environmental Biological Science, 2(10), 523-530
- [9]. **Jain, S., & Pant, P. (2010).** Environmental management systems for educational institutions: A case study of TERI University, New Delhi. International Journal of Sustainability in Higher Education, 11(3), 236-249.
- [10]. **Kumar, A., Ranjan, D., Jana, A., Kumar, A. (2008).** Environmental Management System (E M S) and Sustainable Development. Arab Research Institute in Sciences & Engineering, 195-204 .
- [11]. **Massoud, M. A., Fayad, R., El-Fadel, M., & Kamleh, R. (2010).** Drivers, barriers and incentives to implementing environmental management systems in the food industry: A case of Lebanon. Journal of Cleaner Production, 18(3), 200-209.
- [12]. **Quazi, H. A. (1999).** Implementation of an environmental management system: the experience of companies operating in Singapore. Industrial Management & Data Systems, 99(7), 302-311.
- [13]. **Nee, G. Y. (2011).** Determining factors for ISO14001 EMS implementation among SMEs in Malaysia: a resource based view. World Academy of Science, Engineering and Technology, 59(1). 1497-1502.
- [14]. **Turki, M., Medhioub, E., & Kallel, M. (2017).** Effectiveness of EMS in Tunisian companies: framework and implementation process based on ISO 14001 standard. Environment, Development and Sustainability, 19(2), 479-495.
- [15]. **Voukkali, I., Loizia, P., Pociovalisteanu, D. M., & Zorpas, A. A. (2017).** Barriers and Difficulties Concerning the Implementation of an Environmental Management System in a Bakery-Confectionary Industry in Cyprus for 8 Years. Environmental Processes, 1-13.