

Evaluation of approaches to safety in lean manufacturing and safety management systems and clarification of the relationship between them

ABSTRACT

This paper discusses the relationship between Lean Manufacturing environments and Safety Management Systems. The creation of a Lean environment in a workplace requires employee motivation and good management. All the different levels of an organization need to put forth their best efforts on a day-to-day basis and work together toward achieving improved performance and reducing waste. 5S (Sort, Set in order, Sweep, Standardize, Sustain) is one of the most effective tools of Lean manufacturing because it is the basis for an effective Lean implementation. Recently 5S was changed to 6S (5S+Safety). In this paper, approaches to Lean Manufacturing, workplace organization (in terms of 5S and 6S), Environmental Management Systems, Environmental Health and Safety and Safety Management Systems are described and their relationship is discussed. It was demonstrated that 6S is the foundation for all improvement programs: waste reduction, cleaner and safer work environment, reduction in non-value added time, effective work and visual workplace vision. So 6S can be used instead of a Safety Management System in organizations and be considered as one of the Lean tools and techniques.

Keyword: Lean manufacturing; Safety management systems; 5S; 6S; Workplace organization; Environmental management systems; Environmental health and safety