

## Integrating Best Practices for Construction Waste in Quality Management Systems

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**Abstract :** The Spanish construction industry generates large volumes of waste. However, despite the legislative improvements introduced for construction and demolition waste (CDW), construction waste recycling rate remains well below other European countries and also below the target set for 2020. This situation can be due to many difficulties. i.e.: The difficulty of onsite segregation or the estimation in advance of the total amount generated. Despite these difficulties, the proper management of CDW must be one of the main aspects to be considered by the construction companies. In this sense, some large national companies are implementing Integrated Management Systems (IMS) including not only quality and safety aspects, but also environment issues. However, although this fact is a reality for large construction companies still the vast majority of companies need to adopt this trend. In short, it is common to find in small and medium enterprises a decentralized management system: A single system of quality management, another for system safety management and a third one for environmental management system (EMS). In addition, the EMSs currently used address CDW superficially and are mainly focus on other environmental concerns such as carbon emissions. Therefore, this research determines and implements a specific best practice management system for CDW based on eight procedures in a Spanish Construction company. The main advantages and drawbacks of its implementation are highlighted. Results of this study show that establishing and implementing a CDW management system in building works, improve CDW quantification as the company obtains their own CDW generation ratio. This helps construction stakeholders when developing CDW Management Plans and also helps to achieve a higher adjustment of CDW management costs. Finally, integrating this CDW system with the EMS of the company favors the cohesion of the construction process organization at all stages, establishing responsibilities in the field of waste and providing a greater control over the process.

**Keywords :** construction and demolition waste, waste management, best practices, waste minimization, building, quality management systems

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