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**CONSTRUCTION PATHOLOGY, REHABILITATION TECHNOLOGY AND
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(10th REHABEND Congress)

Gijón (Spain), May 7th-10th, 2024

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REHABEND 2024**

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e-mail: mr.ahmdmissa13@gmail.com; isabreu@ipb.pt; roliveira@ipb.pt**KEYWORDS:** LEAN construction; LEAN solutions; Residential projects; Building refurbishment; Management.**ABSTRACT**

The construction industry has long faced challenges of low productivity, high costs, and substantial waste. In recent years, Lean Construction has emerged as a promising solution to address these issues. This scientific article explores the principles of Lean Construction and investigates their application in building refurbishment projects. Specifically focusing on the context of building refurbishment, this article delves into the key concepts and tools of Lean Construction, such as Value Stream Mapping, Pull Planning, Just-in-Time Delivery, Last Planner System, and Visual Management. These tools enable the elimination of waste, improvement of project outcomes, increased productivity, and reduced costs. Moreover, this article presents the results of surveys and interviews conducted within the building refurbishment sector, examining the implementation of Lean Construction practices. The findings illustrate the potential benefits of Lean Construction in enhancing project delivery, reducing costs, and improving overall project outcomes. Based on these insights, practical recommendations are provided for the successful implementation of Lean Construction solutions in building refurbishment projects, including the importance of leadership, stakeholder collaboration, continuous improvement, and the use of data and metrics to measure progress. This article contributes to the knowledge base on Lean Construction, providing guidance for the development of building refurbishment projects and serving as a catalyst for further research in this field.