

The recent trends on prefabricated buildings with circular economy CE approach

ABSTRACT

In some countries, prefabricated or industrialized building systems (IBS) have often been described as potential solutions in the sustainable construction process, moreover with the integration with a circular economy. Despite the increasing number of publications on prefabricated buildings and the circular economy in the construction industry, there is an absence of research that discusses prefabricated buildings with the integration of circular economy (CE) and the future direction of this strategy. Therefore, this article will review the current literature on prefabricated building with a CE approach, and map the future trends of prefabricated building with circular economy (CE). A list of keywords (circular and prefabricated economy) related to the scope of this research was identified. In the second step, the keyword for studies in Scopus, WoS and Mendeley were searched, and a total of 36 papers were reviewed. A themed review was carried out, where five final themes were identified: assessment; building materials; technology; framework, and business model. The results suggest a new framework of research trends in the prefabricated buildings with a CE approach in the industry. This study will benefit future researchers that focus on prefabricated buildings with a CE approach.

Keyword: Prefabricated; Industrialized building system (IBS); Circular economy; Green construction; Building industry