

Integrated design approach for improving architectural forms in industrialized building systems

ABSTRACT

An architectural design process is investigated to achieve form flexibility in industrialized building systems (IBS), as IBS constructions do not have sufficient flexibility to develop varied architectural forms. The ethnography method has been used to examine the issues related to “form” flexibility in the design life cycle of IBS constructions by observing the constructions of live experimental models. The major tasks and respective design aspects that facilitate form flexibilities in architectural design have been identified. Furthermore, an integrated life cycle model has been developed to effectively address the interfaces between the design tasks and eventually fulfill the needs of IBS in the design life cycle.

Keyword: Architectural design; Built environment; Design management; Design model; Design strategy; Industrialized building system; Form flexibility.