

EVALUATION OF PLANNING AND HABITABILITY OF MODEL STEEL HOUSE. Ju, S.R., Bae, S.H., Department of Housing, Child & Family Studies, Kyunghee University, Seoul 130-701, Architectural Interior Department, Kyungwon College, Kyunggi-Do, Korea

In line with the trend toward the protection of natural environment, the steel framed house is suggested for the next industrialized generation. In Korea, the rapid increase in apartment construction has caused severe problems in the quality of concrete structured apartment. Consequently, this has led to the development of alternative building material and technology. POSCO, Korea's largest steel producer, with the support of construction companies has constructed the model steel house in three different locations. (Seoul, Pohang and Kwangyang) The purpose is obviously to assess the marketability of steel framed house in Korea.

Steel framed house (Steel House) is constructed by 2×4 construction technique(traditional wooden structure) but using light weight steel stud as its material. Carrying appearance and image of similar to those of typical wooden houses, the steel framed houses have advantages over the typical houses: they are cost effective, dimensionally stable, noncombustible, termite resistant, durable, strong but light in weight and recyclable and flexible in planning.

We evaluate the habitability of model steel house from the perspective of architectural planning. The goal of this study is too collect basic data required to design the steel framed house suitable to Korean life pattern and housing needs. Based upon the evaluation from women housing professionals, we analyzed model steel house in the following areas: layout planning, interior space design and exterior space design.

Our analysis reveals that the habitability(heat insulation, air tightness and sound insulation) is equal or superior to that of traditional houses. But in the housing planning, the certain aspects of steel houses is not suitable to Korean life style: the lack of storage space and utility space, inflexibility of plan. We conclude that given its cost efficiency and environmental concern, steel house is possible housing type in Korea.