

Developing Design Models for Revitalizing *Hanok* (I) - A *Hanok* Remodeling Guide to Living Spaces -

Lee, Kang Min
Lee, Min Kyoung
Hwang, Joon Ho

The research is a plan to create demand for *Hanok* by improving settlement environment of deterioration of *Hanok* and providing a suitable living space in modern life. The purpose of the research is to develop and propose an effective manual(handbook) as a reference at *Hanok* remodeling.

In analysing tendency of *Hanok* remodeling, two parts are requested to be requested. One is spatial changes by modern lifestyle such as internalization of *Daechung*(main floored room), standing kitchen, inner bathroom and expansion or extension of rooms. The other is a performance advancement such as warming, electricity, insulation and installing double window. However, improvement of negative recognitions related to *Hanok* such as inconvenience and weakness in the heat and the cold has not fulfilled readily because of insufficient information offered to solve the problems.

To improve the problems and provide substantive information that copes with requests of consumers who desire to live in *Hanok*, the research builds a remodeling manual annually for a living space(room and *Daechung*), water space(kitchen and bathroom) and each spaces of a yard. In the first year, the research focuses on living space that consists of a room and *Daechung* space. A remodeling manual that contains characteristics and functions of a room and a *Daechung* is prepared.

Hanok formed the spatial characteristic that connects a building and a yard, and the floor system that is composed of Ondol and a wood floor. A living space mentioned by the research is inner space that includes a room made from Ondol and a main hall from wood floor except water space, kitchen and bathroom.

Current *Hanok* remodeling projects at Seoul and Jeonju-si where policy support is enacted actively are reviewed to examine improvement requirements for remodeling of living space. The most distinguishing transition of *Hanko* is to change *Daechung* into inner space completely by putting doors on the front space of the main floor. The reason why this tendency become popular is that while the advantage of the main floor of *Hanok* was to give the cool in summer season in the past, the cold has been aroused as one of problems of *Hanok* to compare to apartment that become popular housing style in the present.

In examining the use of internalized space of the *Daechung*, it is used as a main floor in traditional way, a livingroom of modern style, a livingroom combined kitchen and diningroom(LDK form), expansion of a main room, and a study room. This transition occur in order to secure dwelling space in terms of change of lifestyle and increase in household items. In examining the use of rooms, the main functions as a room is maintained, but a suite of rooms is transformed to one room, or it is used as storage space by expansion or extension to the back or the side mostly.

The required items for functional problems are structural change and water proofing of corroded lumber occurred by water leak and vermin damage, drainpipe and drip box installation, deteriorated roof tile and soil replacement, insulation and window work to prevent the cold, heating work of a floor, and equipment work including electricity, lighting and a cooler. The most frequent remodeling work is the window and door replacement. One of the main reasons is internalization of the main floor that requests door to be put at the front of the main floor. It is vulnerable to the cold by unsecured air tightness because *Hanok* is composed by one pane wooden windows. In addition, member of framework change due to deterioration by

characteristic of wood, heating work of a floor according to internalization, and installation of electricity, lighting and a cooler are fulfilled.

These days, most of *Hanok* remodeling works put its purpose on performance improvement. Consequently weak points are emerged for unsolved functional problems, and rampant construction works are in progress to resolve problems simply with disregarding characteristics of *Hanok*. The problems are caused by inadequate financial condition, but a bigger reason is an absence of prepared reference data that help people to get information and examples about *Hanok*.

The research suggests improvement directions for *Hanok* remodeling considering factors as follows to turn *Hanok* into a new housing typology.

First, plan that takes account of spatial features of *Hanok*

Second, design plan that takes account of facade of *Hanok*

Third, plan that takes account of function to make better use of a *Hanok* space

The remodeling manual of *Hanok's* living space is a kind of handbook that introduces various way to use rooms and the *Daechung* as suitable space in modern lifestyle, and induces residences of *Hanok* by containing applied real cases. If residents who want to live in *Hanok* have a remodeling plan, the manual provides specific measures to improve functional set-up of space and performance by considering advantages and features of *Hanok*. Also, the manual helps the residents to choose *Hanok* according to real cases and performance and characteristics of products.

The main agents using the manual are ordinary people who are interested in *Hanok* living. Other agents are public officials of local governments that proceed supporting projects of *Hanok*, and executives who are related with *Hanok* business.

The manual consists of four chapters in large - Introduction, Planning,

Performance, and Product Information. In the first introduction chapter, it explains meanings of rooms and *Daechung* as living space, and characteristics of space. In the second planning chapter, it shows applied alternations through case photographs and blueprints of utilization of storage space for rooms and *Daechung* that is requested in the present, expansion of space, installation of a main gate and a shoe rack. In addition, it describes a current situation of living space by lifestyle of residents, and 3D modeling. In the third performance chapter, it explains measures about insulation, heating, electrical installation and upkeeping by building elements(floor, wall, roof, and windows and doors) of *Hanok* through a ground plan, a cross-sectional diagram, a detail drawing, a execution method, and a construction order. Then, it suggests a performance comparative table for each method by advantages and disadvantages of it. In the last product information chapter, it provides information about features and kinds of finishing materials.

Keyword : *Hanok* Design Model, *Hanok* Remodeling, Living Space