Semi-Monthly ISSN 0021-4477

Japan Lumber Journal

Friday, May 31, 2019 Volume 60 Number 10

Timber Engineering Terrace

An open seminar was held in Shinkiba Tokyo on April 24 marking the third anniversary of a "Wooden Structure Design Information Sharing Circle (commonly called "Timber Engineering Terrace". The event was participated by 200 construction and wood related persons centering designers. Under the title of "Wooden Construction's Potential Talked Through Examples of the Experts' Own Works", specialists in three fields, "Designing", "Structure", and "Fire-resistance" delivered lectures respectively.

First, representative of Timber Engineering Terrace, Mr. Koji Jitsunari said, "When I look back the three years since the foundation of our group, I realize public interest in wooden construction has increased. Wooden buildings, which had been built as symbols, have been generalized recently. And the number of them has increased." He also emphasized the significance of the circle's activity saying, "Structural designers are more and more in-demand. We have to rapidly 'formulate a shared understanding' with our forerunners."

In the next part, Mr. Masahiro Harada, a professor at Shibaura Institute of Technology, talked about the "Designing" and said, "In an architecture existing reasonably in the nature, wood is an advantageous material." He added, "Wooden buildings comfortably suits with the beautiful nature. And it is also a great charm of the material that we can design buildings taking advantages of its traditional parts and its modern feelings."

From the viewpoint of "Structure", Mr. Toyohiko Yamabe of Yamabe Structural Design Office talked about the potential of wooden architecture, illustrating examples of his own works as follows: "Mikawa Elementary and Junior High School in Nagomi Town" that features frame structure with knee braces constructed by large sectional long members made out of standard-sized lumber, "the headquarters' showroom of KASHIWA Co., Ltd" which is characterized by a 450 square zelkova central pillar, an 18-square-meter open ceiling and the second floor hung from the ceiling".

From the viewpoint of "Fire-resistance", Mr. Noboru Yasui of Team SAKURA Architectural Office talked about the possibility of wooden construction which follows fire

(Continued on Page 2)

Hot Topic

"The Implementation Status of the Measures for the Promotion of Wood Use in Public Buildings" was released by the Ministry of Agriculture, Forestry and Fisheries and Ministry of Land, Infrastructure, Transport and Tourism.>> Page 2

regulations and makes the best of technologies, showing "Hoshinomori Elementary School in Uozu City" (three-storied wooden building). Under a change in the law that took effect in 2014, he was able to design this type of building in semi-fireproof structure.

Timber Engineering Terrace was formed by cross-sectional members who hope the spread of wooden buildings such as makers of construction materials, hardware makers, software manufacturers, structural designers, builders, the mass media, and inspection organizations after the enforcement of "Act for Promotion of Use of Wood". It aims to cultivate structural designers who are good in wooden architecture by creating a place(=terrace) to share required information when designing middle-scaled and large-scaled wooden buildings.

:Government:

The status of the measures for the promotion of wood use in public buildings

Ministry of Agriculture, Forestry and Fisheries and Ministry of Land, Infrastructure, Transport and Tourism have released an annual report named "The Implementation Status of the Measures for the Promotion of Wood Use in Public Buildings (Fiscal 2017)".

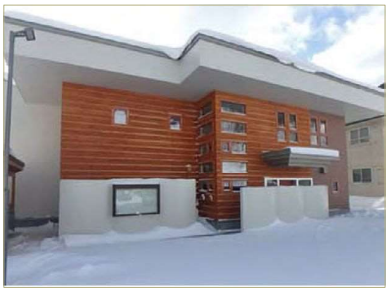
As is shown by "Achievement Situation of the Wood Utilization Target in State-Built Public Buildings", the number of low-rise public buildings (lower than three stories) built in the same fiscal year is 127 units and their total area is 14,293 square meters. Among them, wooden buildings are 80 units (42 units in the previous fiscal year) and their total area is 9,457 square meters (7,282 square meters in the previous fiscal year). The wooden rate marked the record high with 63%.

Large buildings include road infrastructure (roadside stations, warehouses, parking) of the Ministry of Land, Infrastructure, Transport, government office building of the Ministry of Agriculture, Forestry and Fisheries, and those ministries' 16 cycle yards. In addition to them, small buildings such as store rooms, warehouses, and rest houses were built of wood, resulting in a greater number of units and larger area than the previous fiscal year.

Calculated based on the number of the units, the wooden rate in low-rise public buildings is 63%, which exceeded the result (43.3%) in the fiscal 2016.

Main examples of the wooden buildings are: a cycle yard of Tokamachi Summary Court (single storied house with a floor space of 10 square meters, Tokamachi City in Niigata Prefecture), Soya Forest Management Station building (two storied building, 473 square meters, Wakkanai City in Hokkaido) of the Ministry of Agriculture, Forestry and Fisheries, shelter in Mt. Itodake (two storied house, 59 square meters, Tsuruoka City in Yamagata Prefecture) of the Ministry of Environment, and others.

The report explains the main reasons for low-storied buildings which were not built of wood as follows: (1) the structure needs to bear heavy load to undergo inspections using a crane, (2) the facility should be disaster-preventable as it is to operate the gate



Soya Forest Management Station building

at the occasion of a waterflood, (3) the facility is a basement storage and it requires bearing capacity of soil, and other things.

The number of public buildings (not only low storied ones) with wood interior finishes in the same fiscal year was 171 units (189 units in the previous fiscal year). Among them, 85 units were newly built and 86 units were remodeled. Chief examples are Cabinet Office's Central Government Building No.8 (Chiyoda Ward in Tokyo, used in walls and signboards), gymnasium in Ichigaya (Shinjuku Ward in Tokyo, used for the floor) of the Ministry of Defense, Wakayama District Joint Government Building (Wakayama City, used in walls and the reception counter) of the Ministry of Land, Infrastructure, Transport, and others.

Wakayama District Joint Government reception counter

Total consumption of wood in those construction and wooden remodeling is 3,139 cubic meters

(Continued on Page 3)