



Storage for Kimyogumi



This warehouse is for storing the works of a potter. The project is based on the idea of utilizing old marine shipping containers. Two containers about 6 m in length are provided with eaves and simply laid out. Placed on top of the containers are in-situ concrete panels

11.5-m long and 12 to 15-cm thick to form canopies that are 2.7-m length. Two sets of containers, intended for mobility, are combined with the immobile concrete panels positioned at a right angle so that the corners of the eaves are in contact with each other.

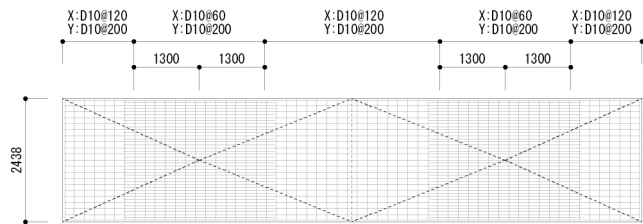


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The marine containers can be stacked in eight layers for shipping, with the bottom container capable of supporting 1660kN to 2400kN of vertical force. The containers can also withstand the changes in stress caused by vibration during transport. The plan is to reuse such architectural structures as marine containers with excellent intensity, rigidity, and lightweight properties as a warehouse. The site is located in a mountain village and often subject to unexpected gusts of wind, and thus the structural stability against wind pres-

sure is ensured by deliberately increasing the weight of the roof frames to be added to the structure. A single concrete plate (with an average thickness of 13 cm) shaped like two flat quadrilateral plates placed in succession comprise the roof to form cantilevered canopies (2.7-m wide), of which the base parts where the largest bending stress is applied are provided with maximum thickness. Thin rebars are used for reinforcement that is practically allocated in conformity with the shape of the roof to accommodate the moderate slope.



Roof plan

PROJECT DATA

Project name: Storage for Kimyogumi
 Building type: Storage
 Structure: Reinforced concrete
 Location: Daigo, Ibaraki Prefecture
 Architect: Makoto Yamaguchi + Ryuji Nakamura
 Structural engineer: Yasutaka Konishi / Konishi Structural Engineers
 Site area: 472.72 square meters
 Building area: 45.10 square meters
 Total floor area: 28.38 square meters
 Completion: 2006

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Makoto Yamaguchi Design Inc.