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Precast Concrete Lavatory

There are many free public lavatories in Japan. At parks, stations, parking areas, you can find them almost anywhere at public places. Since Japan's Government issued a regulation which prohibits urinating outdoors in 1872 in Tokyo, the number of the public lavatories increased at a rapid rate. However, as they have been mainly constructed in an obscure place, the image of public lavatory are still "Dark", "Dirty", "Stinky", "Scary". Recently, to redeem these images, the local governments are putting effort into the renovation.



Fig. 1: The public lavatory is regenerating as a multipurpose lavatory (with the make-up, baby changing spaces, etc.) where wheelchair users and the elderly are easily accessible.

The Great East Japan Earthquake served as an example of how important to secure lavatories in a disaster. The local governments are renovating and increasing the number of lavatories in public open space, such as parks. In this article, some examples of the precast concrete lavatory will be introduced.

The image of public lavatory has been drastically changing these years. The lava-

tories are moving from obscure place to near the busy street, turning them into positive image to promote aggressively their use. Therefore the structure requires a high quality and a good appearance which blend with the surrounding environment for meet the purpose.

Traditionally, it took long time and was difficult to maintain a certain quality to construct the structure on site. However, the construction period can be dramatically shorten by manufacturing the structure whole or in parts by precast concrete because, the element/parts are manufactured including its paint coating in the factory leaving only the assembling work or just unloading the whole structure from the trailer.

As described above, Fig. 2 shows the Combination Type. Since it is assembled on site and it is highly flexible, it expands the possibility in design which allow the structure easily blend with the surrounding environment. Also, most of the units of this type are panel-shaped, the mould for manufacturing can be produced at low cost and in addition, the mould can be adjusted for different dimensions easily. However, the construction time is the disadvantage of this type.



Fig. 4: The interior of a Precast Lavatory made in Turkey.

On the other hand, Fig.7 shows the Precast Lavatory Integrated Type. It also can be designed for the different sizes by laying and jointing multiple units together. The mould cost is much higher than the Combination Type but, the greater advantage is that they can be carried as inventory.



Fig. 2 and 3: Assembling the precast elements on construction site.

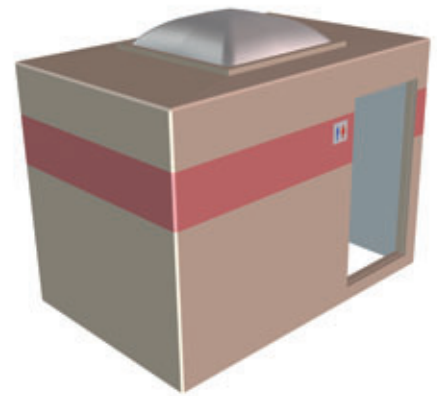
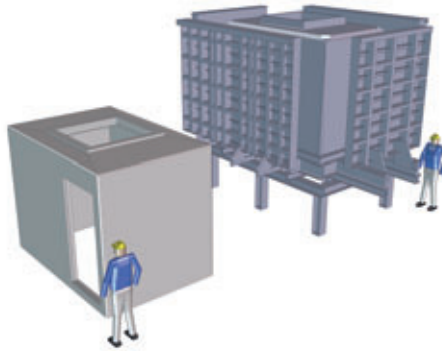
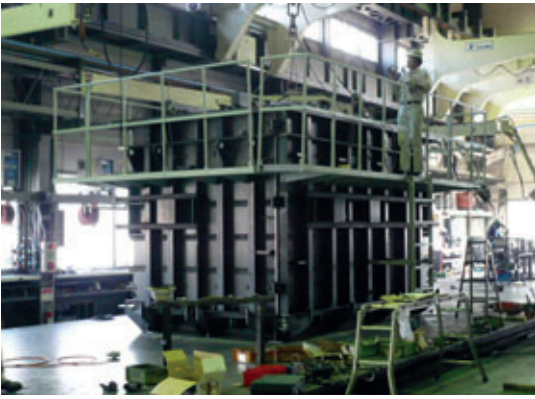


Fig. 5 and 6: Mould and concrete product of a Precast Lavatory

Fig. 7: Precast Lavatory Integrated Type

Fig. 4 shows the interior of a Precast Lavatory made in Turkey. The complete process including painting, tiling, and installing the equipment and pipelines are done at the factory. For this reason, the high product quality can be ensured. By the way, the mould is not limited to manufacturing Precast Lavatories. It can be also used as shelter and disaster prevention storable compartment or even residence for example.

Toyotaforms have developed and provided moulds with collapsible inner cores which can be manually opened/closed in seconds from outside the mould by one-touch. It was so difficult to produce this kind of the concrete product (the top slab is integrated with the straight walls) but, Toyota Forms made it possible to manufacture them easily by using their mould technology.

FURTHER INFORMATION



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