

APPLICATION OF NEG ARG FIBRE

Ref. No. 010 JAN. 1993



NEG ARG Fibre, manufactured by Nippon Electric Glass Co., Ltd., is used throughout the world as a reinforcement for cement composites, including asbestos replacement products.

GRC-CGC Composite Panels for Research Institute in Japan



The Institute "ONWARD SOKEN" is a facility constructed for Onward Kashiya Co., Ltd., a leading Japanese apparel manufacturer, as part of its integrated approach toward the 21st century through new product development and personnel training programs. The facility consists of two wings: the East Wing, which houses research and development facilities, and the West Wing, where training programs are held.

Located in a lovely natural setting, the building was carefully designed from the outset to blend unobtrusively with the surrounding greenery. To meet this purpose, it was decided that the exterior walls would be finished with softly textured material, such as Indian sandstone and natural slate (Burlington stone). In addition, the structural design required that the materials for the exterior walls be as light weight as possible.

Kohri Build Co. has accumulated a considerable amount of experience using glass-reinforced concrete (GRC), and has been informed by Nippon Electric Glass Co., Ltd. (NEG) that GRC-CGC has excellent durability and dimensional stability. We consulted NEG with the goal of combining the GRC-CGC with Indian sandstone slices to form composite panels, thus tailor-making a material ideal for this project.



General view of the Institute "ONWARD SOKEN," a research and training facility of Onward Kashiya Co., Ltd., Japan's leading apparel manufacturer. The building is clad by GRC-CGC composite panels finished with Indian sandstone.

The Institute "ONWARD SOKEN"

Location: 1865 Ushikubocho, Kohoku-ku,
Yokohama City, Kanagawa Pref.,
Japan

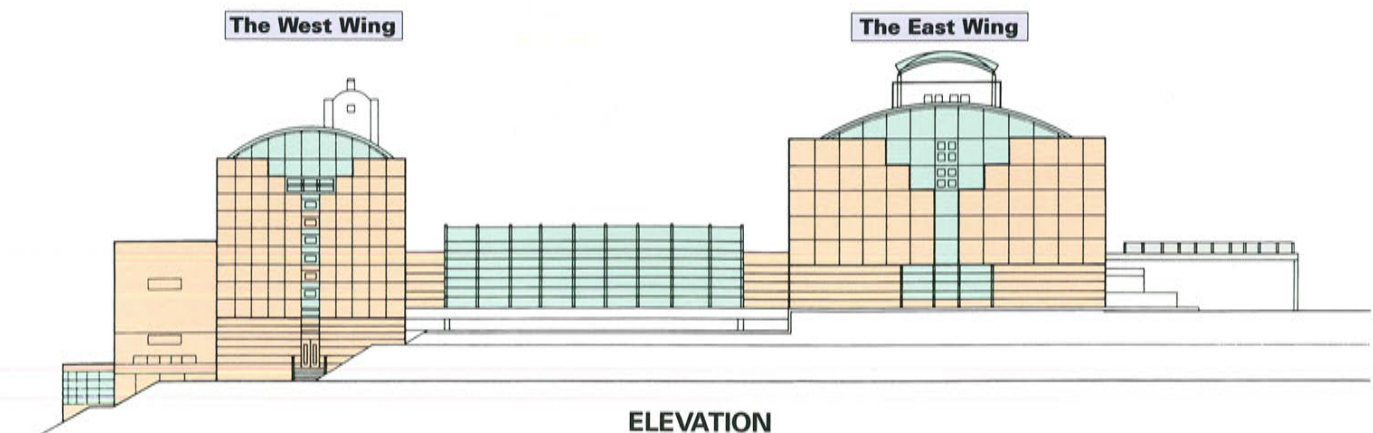
Architect & General

Contractor: Fujita Corp.

GRC Manufacturer &

Installation: Kohri Build Co., Ltd.

Date of Completion: August, 1990



We learned that NEG has accrued a large amount of data regarding composite panels, including GRC-CGC inlaid with tiles. With the data from NEG and our own accumulated know-how, we started the development of composite panels that fully met the design specifications. This intensive R&D project involved the fabrication of many prototype panels that were subjected to a myriad of rigid tests. One year later, we finally

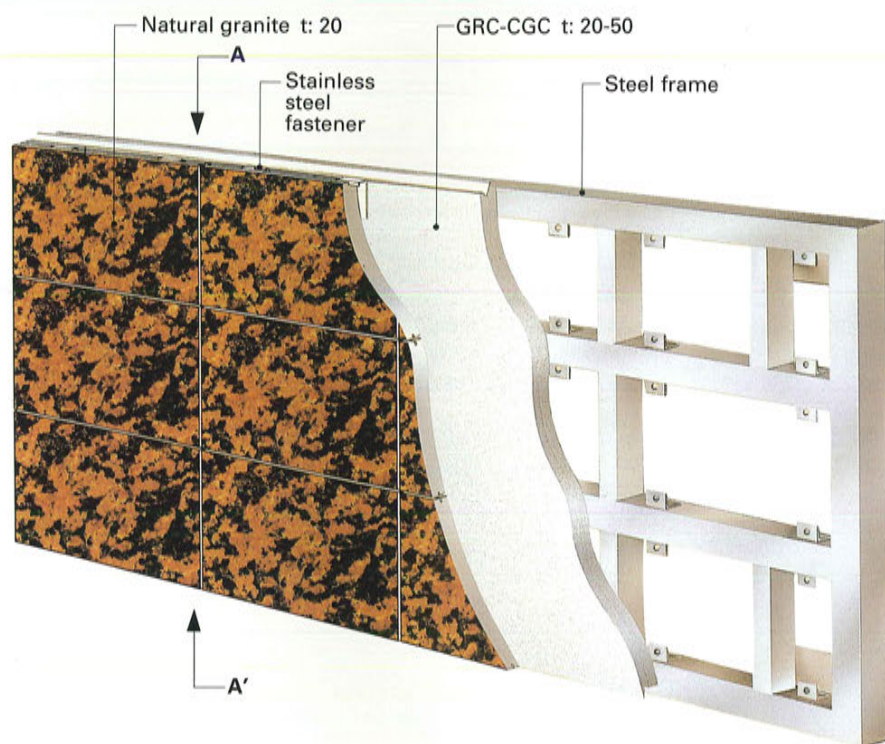
succeeded in developing GRC-CGC composite panels that cleared every design requirement.

The product has since been called the "Kohri Granite Wall," architectural cladding panels formed integrally of natural granite (sandstone, in this case), GRC-CGC, and steel frames. It weighs only about a third as much as conventional precast concrete inlaid with stone, and reduces the installation period to one-

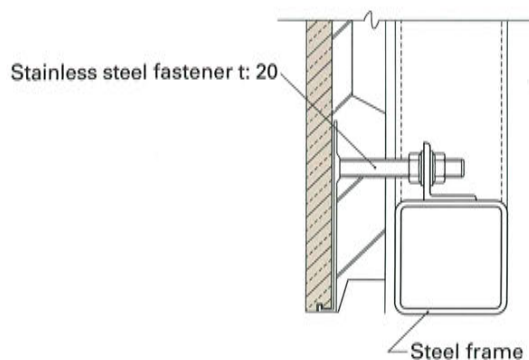
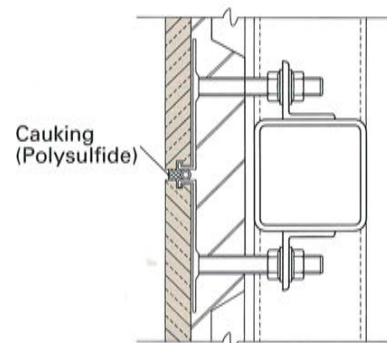
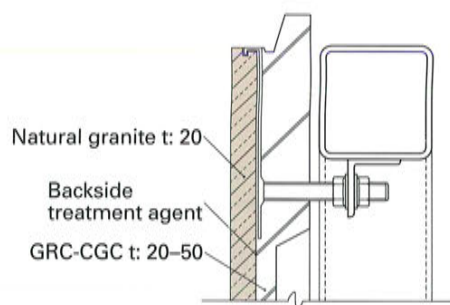
fifth of that required by conventional masonry methods.

At the Institute "ONWARD SOKEN," the desired facade was achieved by using "Kohri Granite Wall" panels with an exterior finish of Indian sandstone.

Nobuhiro Takeda
General Manager
Technical Development Division
Kohri Build Co., Ltd.



STRUCTURE OF KOHRI GRANITE WALL (Unit: mm)



CROSS SECTION A-A'



The courtyard of this facility provides a relaxing and meditative atmosphere for researchers.



Lower part of exterior wall is finished with natural Burlington stone.



Nippon Electric Glass Co., Ltd.

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