

# APPLICATION OF NEG ARG FIBRE

Ref. No. 022 JULY 2001



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 Panels Help Speed Up Construction of High-Rise — Parklane Apartments in Wellington





ON A TINY SITE in downtown Wellington, an 18-storey apartment building has gone up in a superfast 16 weeks. This includes everything from piling to finish painting and cladding. And all it took was just six men on site. The use of GRC panels for the cladding played a major part in the achievement.

The size of the site and its narrow frontage onto a busy inner city street dictated the form of construction. A small crane had to be used to avoid any illegal intrusion into the airspace of the adjacent building. Hence the need for lightweight panels which could be lifted by a small crane.

Modular design and construction processes were developed that simplified panel production and standardised frames. Key to reducing the on-site time was the careful planning, which took longer than the actual construction.

The building consists of a steel frame clad in GRC panels with precast concrete floor slabs and steel fibre reinforced concrete topping. The floor area is 240m<sup>2</sup> per level. Glazed windows were installed and sealed at the precastor's yard, and panels received an undercoat and first coat of paint before arriving on site. Spanners and wrenches were then used to bolt and fix the panels into position on the building.

Unnecessary scaffolding and craneage charges were eliminated, and the requirements of other trades did not have to be accommodated, resulting in significant advantages in cost and time, as well as quality.

The mould manufacturer can create intricate patterns and shapes, to give a wide range of options for architects. Stresscrete incorporated deep reveals and chases within the GRC panels to create shade lines to break up the smooth expansive surface. The finish quality far exceeded code requirements, and minimal preparation was needed prior to painting.

#### Parklane Apartments

Location: Wellington, New Zealand  
 Architect: CDC Architects, Wellington  
 Engineer: Connell Wagner, Wellington  
 Builder: Hartner Construction Ltd, Wellington  
 GRC Manufacturer: Stresscrete, Otaki, New Zealand

GRC panel size: up to 5m x 3m  
 Number of panels: 247  
 Panel weight: 620kg/panel  
 Transport: one truck load per floor  
 GRC rate of erection: one floor every two days



**Nippon Electric Glass Co., Ltd.**

1-14, Miyahara 4-chome, Yodogawa-ku, Osaka 532-0003, Japan