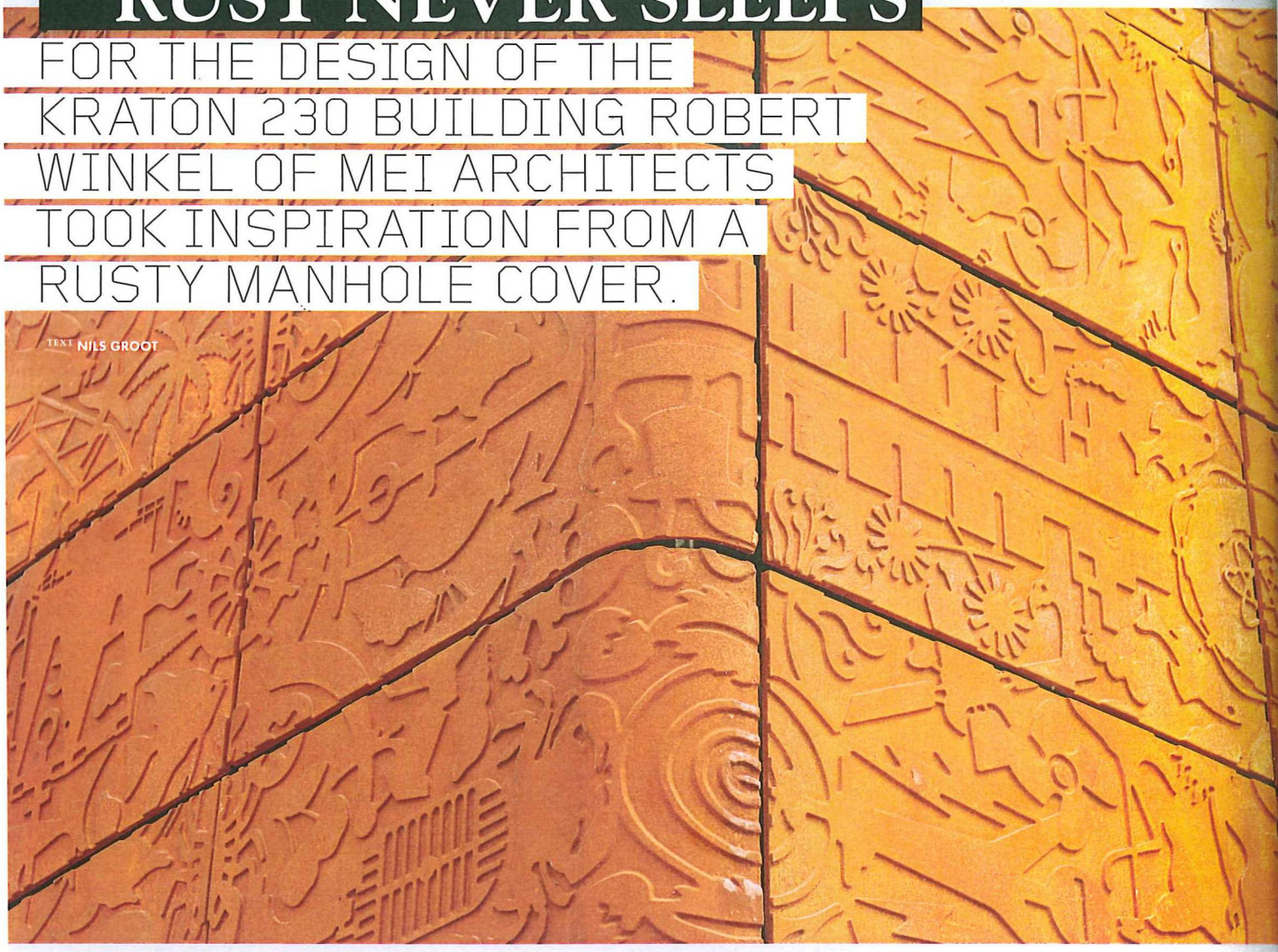
RUST NEVER SLEEPS

FOR THE DESIGN OF THE KRATON 230 BUILDING ROBERT WINKEL OF MEI ARCHITECTS TOOK INSPIRATION FROM A RUSTY MANHOLE COVER.

TEXT NILS GROOT



DETAIL OF CAST-IRON FAÇADE PANELS.

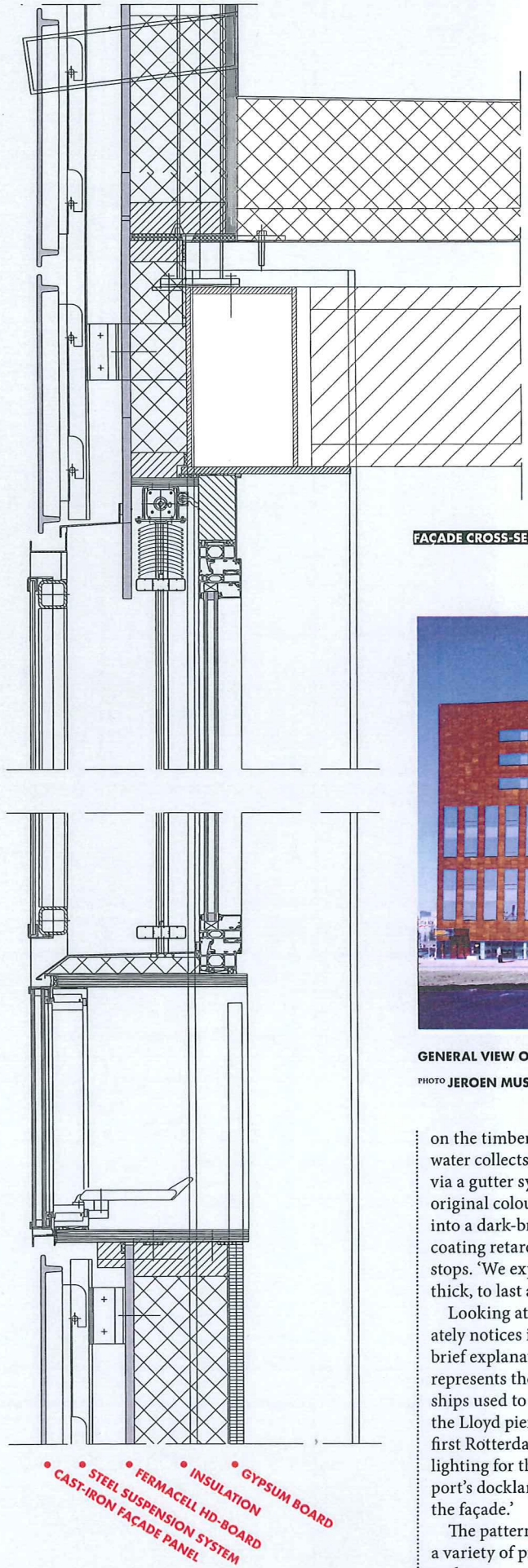
PHOTO ROB HOEKSTRA

UNTIL THE MID-1970S, THE PORT OF Rotterdam's 'Schiecentrale' was a power plant that supplied electricity to the area (not to mention, when the wind blew from the south-west, smoke, soot and dust to the residential districts of Delfshaven and Middelland). Then larger and heavier cargo ships were introduced, requiring a deeper shipping channel. The port operations were relocated to Maassluis.
The Lloyd Quarter (named for the shipping line) fell into decline and the power plant was closed down. Eventually re-zoned, the area has evolved into a creative centre where audiovisual and ICT companies have opened offices and where creative workers gaze at passing ships for inspiration.

Robert Winkel, the architect who designed Kraton 230, looked elsewhere for inspiration. He was inspired by a rusty manhole cover. 'I wanted to give the façade an industrial look. Staring at the ground, I saw a manhole cover and got the idea of a cast-iron façade.' In order to study the behaviour of cast iron and its adaptation to the building structure, Winkel had a storey-high façade section constructed next to the building site. The result is striking: the edifice, which houses 14,000 m² of office space and 180 work/housing apartment units that can be custom-partitioned, is adorned in bright-orange cast iron.

The study of the material revealed two things. First, it started to rust. A chemical reaction turns the bright-orange cast iron reddish-brown within a year and a half. This created an additional problem: what to do with the rusty water? 'We flush it into the sewers via a system of gutters designed in tandem with the façade. The chemical reaction turns the Fe_3O_2 iron oxide into Fe_2O_3, which is not harmful to the environment.'

The design and approval process took a mere nine months, and the installation of the cast-iron façade panels began in mid-December 2007. These 40-kg façade panels are hooked onto rails



FAÇADE CROSS-SECTION, 1:10 SCALE.

'WE INCORPERATED THE LEGACY OF THE PORT'S DOCKLANDS AND INDUSTRY IN THE DESIGN'

ROBERT WINKEL

GENERAL VIEW OF KRATON 230.

PHOTO **JEROEN MUSCH**

on the timber cavity-wall sections. Rust-laden water collects inside the cavity wall and is flushed via a gutter system. After a year and a half, the original colour will have almost entirely mutated into a dark-brown, impermeable coating. This coating retards oxidation, which actually never stops. 'We expect the panels, which are 8 mm thick, to last about 50 years.'

Looking at the façade close up, one immediately notices its pattern. Winkel provides a brief explanation: 'The pattern is a design that represents the history of the area. Passenger ships used to sail for the Dutch East Indies from the Lloyd pier, and the Schiecentrale was the first Rotterdam power plant to supply artificial lighting for the port at night. So the legacy of the port's docklands and industry is incorporated in the façade.'

The pattern designed by Job Smeets includes a variety of pictograms – from rats, spiders, seahorses, cranes, swordfish, crabs and starfish to letters-in-a-bottle, skulls, container ships, satellites and passenger ships. 'Studio Job is known for its cast objects. Job Smeets, the design's creator, makes very large, heavy objects and is familiar with the phenomenon of industry,' says Winkel.

Winkel was so happy with the result that he immediately claimed 230 m² for himself – a space that can be partitioned at will and affords a permanent view of the steadily evolving Lloydkwartier, where ships sail in from all over the world and a lonesome barge brings scrap iron and rusted steel into the harbour.

www.mei-arch.nl