
Putzmeister

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Putzmeister truck-mounted concrete pump is used to cool Fukushima

For over 50 years, Putzmeister has been building truck-mounted concrete pumps. They are designed for use in the widest range of concrete applications, such as the construction of bridges or high-rise buildings.

A truck-mounted concrete pump consists of a truck, a support device, a piston pump and a boom with 4 to 6 arm hinges. Putzmeister offers booms with vertical reaches of between 20 m and 70 m. And with the M70, Putzmeister offers the longest boom that is in use in the world.

At the reactor in Fukushima, workers are currently using an M58-5 truck-mounted concrete pump (produced in Aichtal near Stuttgart) that has a vertical reach of 58 m and a 5-arm boom in order to support the cooling of the damaged cooling pools. The advantage of this is that cooling water can be fed a great distance over the destroyed buildings and can be fed to exactly where it is required.

The pump has an output of 160 m³/h at a pressure of 85 bar and is driven by the truck's diesel engine. This means that it does not have to rely on any external power supply. The machine is operated using remote control which allows the distributor arm to have flexible movement.

The Putzmeister M58-5 that is being used in Fukushima was intended for a customer in South-East Asia and was redirected to Japan so that it could quickly reach the nuclear power plant.

Putzmeister products have already been used in previous crisis situations. As a result of this, in 1986, a fire-extinguishing kit was offered as a retrofit on truck-mounted concrete pumps.

Since then, Putzmeister concrete pumps have continued to prove their effectiveness, even outside of their original purpose, when crises have occurred.

In 1986, after the tragic accident at Chernobyl, Putzmeister helped to make reactor block 4 safe again at the Chernobyl nuclear power plant. In total, 11 Putzmeister truck-mounted concrete pumps and stationary pumps were used.

Captions:

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An example of a Putzmeister M58-5 being used for high-rise concreting. The concrete is fed through a truck mixer

1627-2

Putzmeister M58-5 uses water to cool Unit 4 (Source: TEPCO)

1627-3

Putzmeister brochure from 1986

1627-4

Putzmeister M46-5 truck-mounted concrete pump being used to extinguish a fire in Sigmaringen

1627-5

5 Putzmeister truck-mounted concrete pumps fill the steel moulds (arranged in a pyramid shape) for the new protective walls

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Radiation protection: A truck-mounted concrete pump that is fitted with a lead cover is used in Chernobyl