

Dillinger relies on metal polymer:

Crane track rehabilitation at Europe leading heavy plate manufacturer

The Saarland steel company AG of Dillinger smelting works (Dillinger) produces around two million tons of heavy plate every year. The "supporting elements" are the double-girder bridge cranes which transports slabs.

As a result of the high wheel loads and the constant operation, the thickness of the crane track upper chord is reduced by retracting the rail foot of the crane rail to different height dimensions. The result: The load-bearing capacity of the crane track girders could no longer be guaranteed in terms of statics.

The solution was provided by the metal polymer MM1018 of the polymer and coating specialist Diamant Metallplastic, which has proven itself in the gap compensation between steel components. The polymer system that can be applied on site ensures 100% form and force locking, full-surface gap compensation between the reinforcing lamella and the upper chord.

The rail of the crane runway was lifted and the retracted area under the rail cleaned. Then a reinforcing lamella was placed and adjusted. The gap between the retracted upper chord and the reinforcing blade then was balanced with MM1018 by injection in order to be able to force-fit the wheel loads into the crane runner again, as required in the state of art.

In order to ensure a tension-free stretching of the components without damage - for example, by heat or cargo on the rail - a release agent between the layers was also introduced. The release agent releases immediately after application and leaves a permanent, wafer-thin release film, which prevents the surfaces from sticking in the long term.

Within 24 hours, the metal polymer MM1018 hardened and leveled the track safely. Work on the gap compensation was carried out parallel to the placement of the reinforcement

lamella. They fit into the workflow without any loss of time and seamlessly. In the first of several construction stages, about 100 meters of the crane run per side were rehabilitated. Here, about 1.1 tons of the metal polymer were used.

Diamant Metallplastic GmbH, headquartered in Mönchengladbach in the Rhineland, develops, formulates and produces metal polymers and coatings for a variety of industries like: the metalworking- casting, steel and bridge construction and shipbuilding industry. Founded in 1886 and still managed as a family business, Diamant Metallplastic GmbH has a global sales network with over 40 foreign agencies in major industrial centers around the world.