

**“For many years, we have been relying on applying
fieldbus radio links in crane technology.”**

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SCHEFFER CRANE TECHNOLOGY

Appliance in the highly automated galvanizing plant

Application

Within automation of modern crane and lifting systems, fieldbus systems are part of the standard equipment for controlling operations.

Nowadays, radio links are applied within the fieldbus network, replacing conductor lines applied so far in applications with moved plant components. In 2011, OBO Bettermann established a metal competence centre as a highly integrated production facility with hot-dip galvanizing as the core element of the plant.

Challenges

Galvanization is always connected with movement processes: The workpieces run through a series of treatment steps for cleaning and pre-treatment, followed by the actual galvanizing process and completed by baths for follow-up treatment. Temporally changing restrictions of the transmission conditions by steel girders or other cranes should remain without any impact on the availability of the radio link. In addition, the fully transparent PROFIBUS connection should provide for comfortable start-up and

maintenance possibilities for conveyor components hardly or incapable of being accessed.

Solution

Via the **DATAEAGLE 3000** PROFIBUS radio link, data is reliably transmitted every 30 milliseconds from the central control unit S7 CPU 319 to the assigned mobile monorail crane travel units of the system over a distance of 50 metres. Thereby, their current position indications and driving tasks are continuously exchanged bidirectionally and safely actuated. Since galvanization plants are highly automated, highest availability is indispensable. In this process, Bluetooth has proved particularly interference-free.

Result

The radio modules have proved in operation. **Despite restricted line of sight there are no failures** which is presented in an increased efficiency of production and secured production quality.



1. The crane trolley in the galvanizing plant receives and sends data via **DATAEAGLE** slave.



2. **DATAEAGLE** is located directly in the ceiling construction and is the base station (Master).