



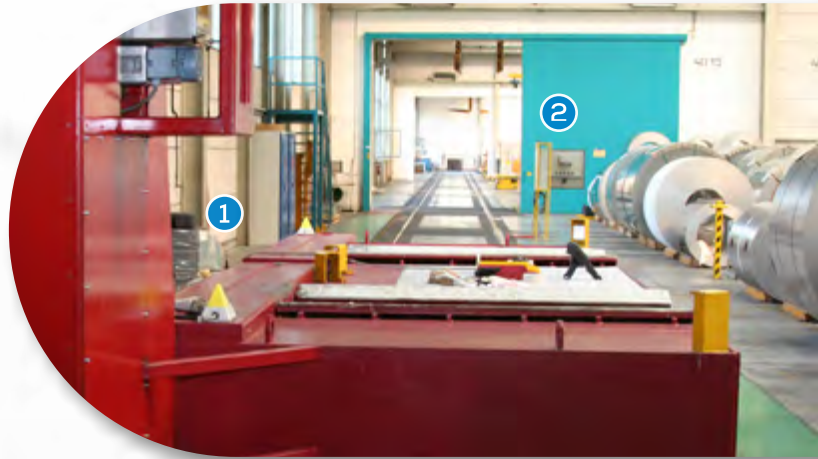
SCHILDKNECHT
SMART DATA COMMUNICATION



**Cable Substitute in the Cold Running Mill
using Radio by DATAEAGLE 3000**

DATAEAGLE INCREASES RELIABILITY

The vehicles ensure a smooth material transport between production and warehouse. The power and data transmission used to be realised by cables, which are often to be maintained because of mechanical stress.



①

The existing control cabinet on the vehicle will be extended by the [DATAEAGLE 3715 salve](#). The antenna is mounted at the top of it.

②

The central control cabinet houses the [DATAEAGLE 3715 master](#), which is connected to the control unit and sends the signal to the vehicle.





APPLICATION

In cold running mills, heavy loads (e.g. stainless-steel coils) are inter alia transported over long distances within production halls. Vehicles applied for this are automatically controlled, where upon hybrid cables are still used in many cases, providing for energy supply and control (very frequently via PROFIBUS as Fieldbus) of the vehicle.



CHALLENGE

Cables are often used to supply the vehicles with power and for data communication. However, this solution has a negative effect with regard to operational safety (cable break), increasingly leading to [applying radio technology \(Industrial Wireless\) as cable substitute](#): The cable is then only applied for supplying energy while signal transmission is done via radio links set up between vehicle and control unit using wireless modems.



SOLUTION

The DATAEAGLE radio module series of [Schildknecht AG](#) represents a particularly proven and reliable radio technology for this. The [DATAEAGLE 3715](#) variant was especially designed for transmitting PROFIBUS signals and is fitted with a [patented filter technology](#) for bridging possible signal failures. This [patented data pre-processing](#) provides for a particularly high availability of the radio link and the transport vehicle and thereby for a smooth and cost-effective production process. With regard to high availability of the plant the [Bluetooth radio technology](#) applied in the [DATAEAGLE 3715](#) has an effect as well; compared with WLAN, it proves considerably more reliable, particularly via larger distances (> 30 m) and especially in a “metallic environment” as characteristic for rolling mills.



RESULT

About ten years ago, the steel company [Aperam Stainless Services & Solutions](#) in Sersheim (near Stuttgart) successfully implemented the modern radio technology as a cable substitute for a distance of more than 100 m: The [wireless PROFIBUS signal transmission](#) using [DATAEAGLE 3715](#) still runs trouble-free, and also energy supply of the vehicles has become more reliable and cost-effective. For the company, the step from the cable to radio technology was the perfect decision and crowned with great success. [Radio as a cable substitute](#) – a typical example for applying [Industrial Wireless](#) and an important progress for [intralogistics](#).

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