



DATAEAGLE IN THE SPIN CYCLE

Stranders controlled by industrial radio



APPLICATION

DATAEAGLE in the "spin cycle" – a rather unusual, but very successful industrial application of the [radio module DATAEAGLE](#). It concerns modernization of control technology for stranders serving for the production of communication cables by twisting ("stranding") of several single conductors and strands. Stranders consist of a coil carrier around which a rotor – dragging the individual elements of pay-off frames– rotates with high speed.



CHALLENGE

Quality of the ropes and cables requires exact recording and control of the motion sequences. In the past, slip rings have been applied for signal transmission, with corresponding susceptibility to trouble in continuous operation. The particular challenge when changing to industrial radio technology was, and still is today, the very crowded and also metallic environment of the radio link, and the high speed with which coil carrier and rotor move against each other.



SOLUTION

Even here, like in many other applications, industrial radio technology and specifically the radio module [DATAEAGLE 3715 X-treme](#) of [Schildknecht AG](#) with omnidirectional antenna and Bluetooth technology succeeded in contributing to problem solving (substitution of slip rings): The innovative company [Kabel Sterner GmbH](#) has converted one of its stranders from slip-ring technology to radio transmission of signals using DATAEAGLE, having resulted in permanent interference-free operation.

[DATAEAGLE radio modules](#) apply the [2.4 GHz Bluetooth technology](#), which in view of their robustness and the feature of frequency hopping has almost replaced previously usual WLAN technology. WLAN technology due to its technology could not even be used here.



RESULT

After installation of radio technology, the strander was converted to control by fieldbus technology (PROFIBUS DP) in a further installation step. This also enabled to apply the [filter technology patented](#) by [Schildknecht AG](#) which is integrated in [DATAEAGLE 3715](#) as standard for particularly high operational safety when transmitting PROFIBUS signals.

"In view of the particular requirements, we have regarded the conversion from slip ring to radio technology rather skeptically in the beginning. However, the prospect of higher operational safety finally has let us take this step and we have not been disappointed", was the feedback of the responsible expert Ralph Püschel of the technical maintenance department on the project.

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