

Wireless control of 1.5 MW turbine blades

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transceivers in every rotor for redundancy and higher reliability

over

4

years trouble-free operation

over

40

systems equipped with this control



The Idea

Experts needed to control turbine blades in the power plant JAWORZNO III in Poland.

Wired solution to control 1.5MW turbine blades turned out to be very unreliable. The only option was to use reliable and robust wireless solution.

The solution was provided as a custom development project by IQRF experts for Sigma Group.



The Solution

The automated SIG-BPS-01 control system consists of:

- 1) 2 IQRF modules integrated into the rotor when every module sends out data twice on 2 different channels for absolutely successful data delivery.
- 2) Handheld panel for local control with multi-language support.
- 3) Remote control application.



The Results

Blade angle and rotation speed information are used to calculate optimal cooling and, if necessary, these parameters are remotely wirelessly changed.

There hasn't been any problem with the wireless communication for many years since the installation.



The IQRF Benefits

IQRF wireless technology is highly robust and reliable so it is possible to use it also in this strict environment.

The IQRF advantages are excellent RF specifics and a robust mesh network which allows transmitting data from tools to the central cloud system very reliable.