

news

Neues von SCHENCK PROCESS

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Always trouble with flexible cable connections ? **SCHENCK solutions for wireless transmission of weighing data from mobile weighing systems:**

Example for a typical cable connection between a ladle ferry and the building:



From the ladle ferry, which moves over ± 30 meters, a cable catenary is connected to the stationary connection box at the building.

This flexible cable connection is problematic in many aspects (as already the above photo indicates):

- it can burn because of slag splashes
- it can be damaged mechanically by the steel plant environment
- it can break due to its continuous movement
- the data transmission close to the cable for the motor power can cause electromagnetic interspersions (EMC)

In this NEWS we present to You our actual solutions for wireless signal transmission of weighing data:

- **Infrared**
- **Radio modem**
- **WLAN**

The benefit in wireless data transmission particularly is based on

- **an extreme reduction of repair and maintenance costs, and**
- **in a remarkable enhanced availability and reliability of Your mobile weighing systems.**

Keep in Motion

1) Infrared data transmission

This solution is used, if an intervisibility between transmitter and receiver is possible:

Essential characteristics are:

- ☒ Simple alignment, adjustment and handling.
- ☒ The transmitter distance in steel plants reaches up to 200 meters.
- ☒ There are no EMC problems at all, for example close to electric arc furnaces.
- ☒ Influence of dust or daylight variations are handled well by the modern systems.
- ☒ The service temperature range is up to 50°C.
- ☒ An infrared equipment is cost-efficient.

Schenck has realised infrared data transmission for example in ladle ferries for pig iron transport. The alignment of light transmitter and receiver is easy for these rail-based vehicles.

2) Radio data transmission with two or more radio modems

This data transmission is characterised by the following features:

- ☒ Normally, it is carried out as a point to point connection (cable substitute), for example used, if an intervisibility is not possible.
- ☒ Under favourable ambient conditions distances up to 300 meters are realisable.
- ☒ It is also possible, that several weighing systems send to one central fixed receiver.
- ☒ Dust, even in big quantities, is no problem.
- ☒ The service temperature range is up to 60°C.
- ☒ The application today is easy, because no special radio frequencies must be requested.

The transmitting unit gets the weighing data for example over a RS 232 interface from the Disomat B plus, which is installed on the ladle ferry, and gives them in the same format via the radio receiver at the fixed position to a large display or the customers EDP.

3) Radio data transmission with WLAN

This data transmission has following additional advantage:

- ☒ It permits to feed the weighing data via radio link into a customer network. A PC, connected to the customer network, can receive these weighing data and process them correspondingly. It is possible to control several weighing systems from any PC in the plant.

For example, this technique is successfully used on mobile scrap trailers. Since those trailers do not feature an own energy supply for the weighing

technique, special accumulators are installed inside. The accumulators were dimensioned by Schenck, so that a charging of 24 hours is sufficient for one week of operation.

This combination of **power supply with accumulators and wireless data transmission** leads to complete wireless weighing systems, in other words, the **wireless LAN of weighing systems !**

New possibilities generated by new SCHENCK products:

In future, the SCHENCK DISOBOX offers new possibilities for a more comfortable wireless power and data transmission. This are the new features:



- ☒ Enormous reduction of the energy consumption for the weighing components.
- ☒ The small and rugged DISOBOX is installed on the ladle ferry or, in case of a crane, on the crossbeam,
- ☒ the DISOMAT B plus for the weight display, the communication with the PLC and all further functions is installed stationary and well protected.

You should not be troubled any longer with defect measuring cables, just remove them, with solutions of SCHENCK ! We look forward to Your inquiry for new projects or modernisation !

 **SCHENCK**

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