



Measuring Jib extension on mobile cranes

Mobile cranes often have to be pushed to their limits in different areas of application, including operating in confined spaces. One safety issue here is the monitoring of the load torque so that the crane can immediately be taken out of operation if necessary, to prevent for example the crane from falling over, which would have catastrophic consequences. The load torque of the crane incorporates both the weight of the load and the current extension length of the jib arm. From this value, the minimum support displacement with which the crane can operate safely under existing general conditions can be calculated. Böcker Maschinenwerke GmbH in Germany determines the extension length using wireSENSOR P115 drawwire sensors. For this particular application, the sensor is mounted parallel to the lower telescopic cylinder and measures its length. The length of the lower telescopic cylinder covers the entire extension length of the jib arm. This means that the measuring range required, as well as the sensor installation size are kept as small as possible. Due to their compact installation size and flexible mounting options, the draw-wire sensors can easily be retrofitted. The cable is diverted via an additional roller so that no water can enter the sensor from the cable.

#### Demands on the measuring system:

- Measuring range up to 10m
- Ambient temperature from -20°C to +80°C
- Robust sensor design
- Compact installation size

#### Suitable sensor series

- WPS-xxx-MK120
- WDS-xxx-P115

