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SIMOCRANE Straight-run Control System (CeNIT)

Straight-run controller for EOT/OHB cranes

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Wear of crane wheels and rails
Prevent excessive wear of crane track wheels and rails which is caused by off-tracking. For instance excessive off-center loads, uneven by driving forces or uneven rail layout on the overhead structure cause for significant wear of a crane cannot be frequently determined or resolved.

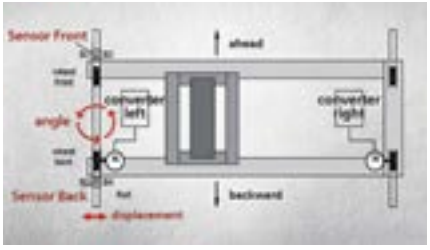
When using the straight-run controller known as "SIMOCRANE CeNIT", it is possible to control the crane in such a way that off-tracking is prevented. It guides the crane parallel to the rail track and therefore significantly reduces the wear of wheels and rails.

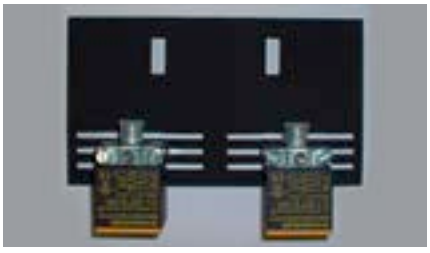
Electronic straight-run controller
The task of the SIMOCRANE CeNIT is to specifically align the crane to the rail center line by applying different drive speeds and thus keeps the crane at its position. If the crane travels too far to the left, then it is adjusted to the right. If it is centered, then it travels straight ahead. In most applications, the controller ensures that the crane moves along the reference line (track center line) in a 5 mm tolerance. The wheel flange does not contact the rail.

Application conditions
The SIMOCRANE CeNIT is primarily suited for EOT/OHB cranes where increased wear of track wheels and rails is observed or can be expected. SIMOCRANE CeNIT straight-run controller is successfully used on various EOT / OHB crane applications like coil store cranes, scrap cranes or tambour cranes.

The pre-conditions to implement Simocrane CeNIT straight run controller are:

- A lateral shift between the wheel and the track of minimum ±15 mm.
- Two separate converter drives.
- Possibility of mounting of two sensors at both ends of the head beam.
- Place of approx. 450x120mm in the control cabinet for pre-assembled controller.





Example of a distributed mounting of the sensors (picture 1).
Inductive sensors (picture 2).

Avoid wear of crane track wheels and rails

Technical Information
The main function of the SIMOCRANE CeNIT straight-run controller is to adjust a crane to stay centered on the rail track. It comprises of a programmable logic controller (PLC) and inductive sensors.

The controller is usually housed in a control cabinet or in an Electric House located on the crane bridge. The sensors are mounted at both ends of a head beam. Special brackets are included in the delivery scope to simplify sensor mounting.

The controller can be adapted to the specific crane conditions using the integrated webserver of the S7-1200. Separate converter drives on each side are required to use the straight-run controller. The connection to the crane control is established either via digital and analog input and output signals, PROFIBUS DP or PROFINET.

The sensors can be used in the temperature range from –25 °C to 70 °C. The controller operates in the temperature range from 0 °C up to 50 °C.

Scope of Supply
- Straight-run controller unit
- Sensor mounting
- Documentation in German or English
- Commissioning support

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