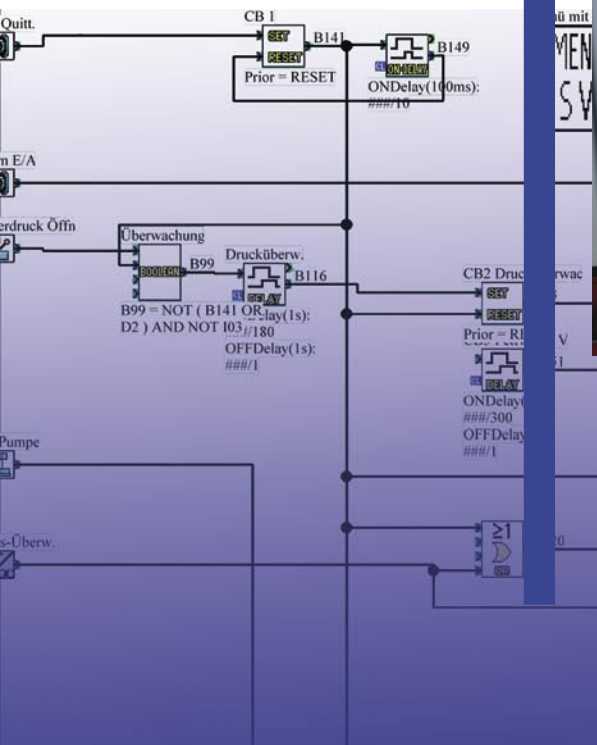
moklansa

SKBS

Electronic
rail head wetting system



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Familiar problems

In spite of all the latest technological developments, points and bends are still the most sensitive areas in rail transport. Worn tracks, point rails, check rails and wheels cause trouble for operators, are often very noisy and disturb passengers and people living nearby.

This is where intelligent lubrications can help, and moklansa is one of the pioneers in efficient track lubrication systems. For many years, the **moklansa E3S** electronic rail lubrication system has proven its worth in continuous use for state-owned railways, private rail operators, local transport companies and industrial enterprises at home and abroad.

The result is a significant reduction in wear, leading to longer service life and much less cost and effort for repairs. Noise is also reduced, although sometimes not to a satisfactory extent.

Always striving for new solutions

Our aim must therefore be to stop the extremely irritating screeching caused by friction on the tracks. This is why we have now come up with the ideal solution for very fine wetting of the rail head: the **SKBS electronic rail head wetting system** ensures that trains travel quietly on bends.

This system is also based on a logical principle: precisely metered lubricant wets the surface of the inner rails on the bends exactly where the relative movement of the wheel causes high-pitched screeching.

These are the main elements of the **SKBS** rail head wetting system:

- Very fine wetting of the rail surface with extremely economical metering
- Improved control system with additional monitoring
- Safety monitoring which only allows specified procedures and prevents over-lubrication

The system has been certified for the first time by the technical inspection agency of the district authority of Düsseldorf.

targeted and sparingly applied

Improvements to crucial details

Lubricant supply
Using a special drilling technology, the rail is equipped with ducts which open exactly on the rail head.

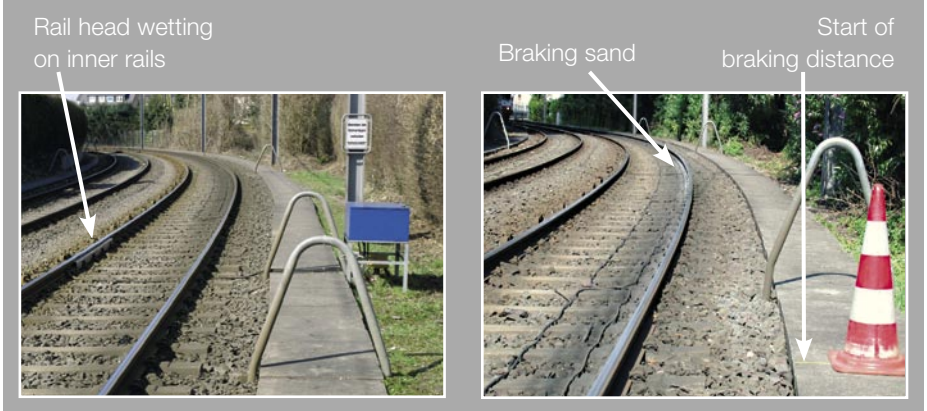
Hydraulic circuit
We have improved the hydraulic circuit so that the lubricant can be much more precisely metered. Only a third to a half of the usual amount is needed. This reduces repair costs and does less harm to the environment.

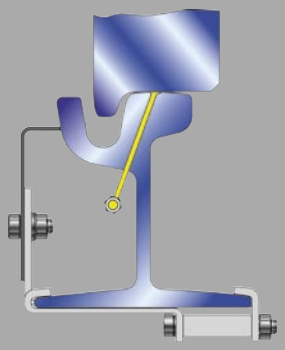
Monitoring system
The function of the system is continuously supervised by a monitoring system which operates separately from the PLC. It logs all the activation times of the pump and stores the data for 31 days.

Safety control system
The software-based inspection of the pump activation time is monitored by an additional safety circuit with a timer relay. This means the tracks cannot be overlubricated, because if the specified pump activation time is exceeded, the system is switched off and can only be started again after the power supply has been interrupted.

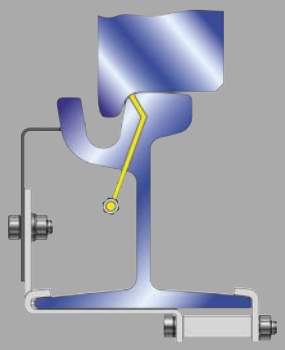
Optional combined use
Rail head wetting with the moklansa SKBS can also be ideally combined with a rail flank lubrication system such as the familiar moklansa E3S. This ensures maximum reduction of noise and wear.

Brake test during the admission phase

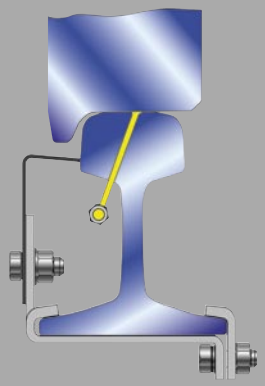




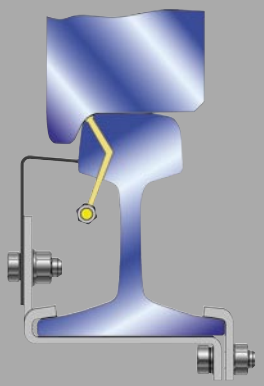
Grooved rail profile:
rail head wetting duct
of the inner curved rails



Grooved rail profile: lubrication channel
for rail flank lubrication
of the outer curved rails



Vignol rail profile: rail head wetting duct
of the inner curved rails



Vignol rail profile: lubrication channel
for rail flank lubrication
of the outer curved rails

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SKBS

Electronic rail head wetting system

Cabinet design

Box design

Overview

Dimensions	
Box design 1 or 2 grease reservoirs	Housing box W 800 x D 600 x H 350 mm Mounted on base, jig or installed in ground box.
Cabinet design 1 or 2 grease reservoirs	Housing cabinet W 800 x D 450 x H 1100 mm Mounted on foundation, concrete plate or light concrete base.
Power supply	230 V/AC, 24 V/DC, DC/DC converter 400 ... 1050/24 V Solar-powered or replaceable battery pack.
Controller	Compact PLC with key operation, operating states and inputs can be read on the display. Function diodes, potential-free contact for remote transfer. Monitoring for data logging, separate from the PLC Monitoring of pump activation times using independent timer relay.
Vehicle detection	Inductive proximity switches, installed in a sensor terminal box or a sensor unit. Alternatively: external signalling.
Grease reservoir	Dual-chamber re-usable vessel with roller membrane technology, capacity 12 litres, effective volume 9 litres, design pressure 16 bar. Designed, manufactured and tested in accordance with directive 97/23/EC of the European Parliament
Lubricant conveyance	Directly to the contact faces via specially drilled ducts in the rail.
Lubricant	KUB 1 K-30 with further improved coating properties and extremely low consumption. Particularly suitable for coating the head if the dosage is accordingly low. If other manufacturers' products are used, we recommend a compatibility test with the polymers used.
Options	BCD-coded interfaces for data exchange. Complete data exchange including alarm chain with GSM technology.

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