

CONTACT WIRE DE-ICING



TRAIN AND TRAM

The ice formation of the overhead contact lines during the winter months is a problem for many transport services. The reduced conductivity can produce electric arcs which may lead to burning out of the contact wire and collect strip. Very thick ice can stop the current flow completely so that no traffic can occur. In either case costs can be substantial.

The System

The newly developed contact wire de-icing system is able to detect the position of the contact wire during operation. Then a proximity switch only triggers the spray nozzles which are located directly underneath the contact wire. As a result, the Pantotec is sprayed precisely onto the contact wire.

The well-proven Turbolub distributor guarantees that the antifreeze is evenly distributed among the nozzles in action.

The catenary de-icing bracket roller coats the catenary wire with the de-icing product so that no frost or ice can form.

These systems are suitable for the defrosting of all wires exposed to the weather. So for all electrified rail vehicles.

Advantages of contact wire de-icing

- 💧 Reliable prevention of overhead contact wire icing
- 💧 Reduction of wear and damage to pantographs
- 💧 Significant increase in reliability of rail operation
- 💧 Monitoring options for maximum process reliability
- 💧 Environment-friendly thanks to high efficiency of system
- 💧 No wear of de-icing system caused by friction as a result of contactless application
- 💧 Quick pay-back due to lower variable costs in comparison to conventional systems.



Spraying system

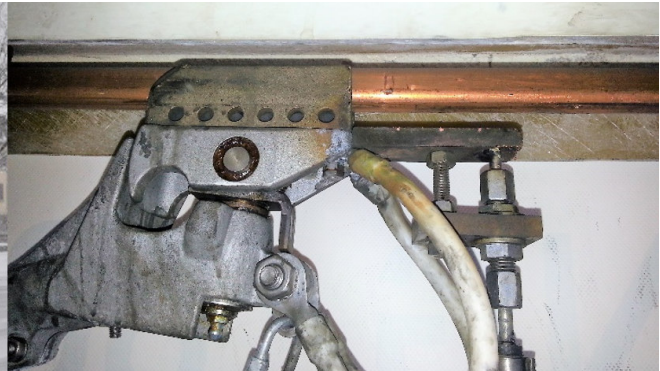
*Control CWDS
(Contact Wire De-icing)*

De-icing bracket with roller

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Trolley bus



Pantograph converted to spray head

TROLLEY BUS

The ice formation of the overhead contact lines is a problem for the trolley bus operation as well.

For the contact line treatment with Pantotec a pantograph equipped pickup as shown is a good solution. For application purpose the pantograph heads are converted into spraying devices which spray Pantotec at 35 bar against the catenary.

Once applied in the early morning and if the contact lines are not idle for longer time the daily traffic of busses will make a further treatment unnecessary. However, if night frost is probable, the treatment must be repeated.

Reliable frost protection de-icing of the contact lines:

Pantotec

Pantotec prevents the icing of the contact wire for trams, other rail vehicles with overhead lines and trolley buses during the winter months.

Pantotec is a mixture of glycols, polymers and additives. It does not form any gumming on the contact wire.

Pantotec has a very high adhesion and remains in dry weather over several days the contact wire.

After heavy rain or snow, the process is repeated.



Benefit

- 💧 has a very high adhesion
- 💧 does not form any gumming on the contact wire
- 💧 Application temperature <- 30°C.
- 💧 Carrier liquid: 80 % degradable CEC-L-33-A-93 