BRIDGES

- Excellent corrosion protection
- Longer durability
- Saves resources

Protection against corrosion
Corrosion damage can lead to large costs in bridge construction worldwide. The bridge construction is assured against corrosion through the development of an environment that keeps a maximum of 50% relative humidity (RH) around the steel construction. The girders, on which the tracks lay upon, can be protected against corrosion by the circulation of dry air through the truss, whereas the corrosion protection paint is expensive and demands maintenance. Painting the bridge increases the weight. Even affixed constructions can be dehumidified instead of using corrosion protection paint. For suspension bridges it is important to protect the steel cables from corrosion, besides anchor and saddle rooms the wire can also be protected with an enclosure where dry air is re-circulated in the enclosure.

A dehumidifier demands minimal maintenance and saves a lot of time compared to personnel applying corrosion protection paint. Corrosion protection is also necessary in spots very difficult to reach and dry air is often the preferred method.

Swedish DST-dehumidifiers protects the French Millau Bridge
The impressive Millau Bridge in the southern part of France is dehumidified by several DST-dehumidifiers. Eiffage (the company standing behind the bridge construction) guarantees that the bridge will have a service life of 120 years. One of the measures taken in order to keep up with that guarantee is the dehumidification of the bridge's inner parts as protection against corrosion. Several DST-dehumidifiers have been installed on the bridge inside beneath the roadbed. The dry air is distributed through a channel system.

Millau Bridge, France

References
Seibu Giken DST AB dehumidifiers are, among others, used on the following bridges:

South Africa: Nelson Mandela-bridge
France: Millau Bridge
Switzerland: Lorraine Bridge
Sweden: Liljeholm Bridge, Sickla Bridge, Fotö/Hönö Bridge, Vallsundsbron -Östersund
Norway: Triangle link, Flå Bridge, Mjosund bridge, Langnes Bridge, Nord-Tröndelag, Grong Bridge, Nord-Tröndelag

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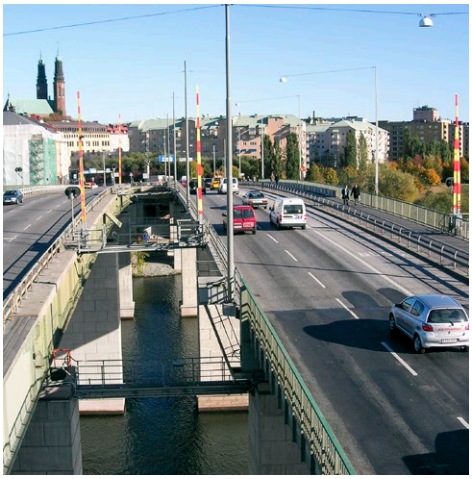
World leaders in dehumidification.

Examples of DST

Dehumidified bridges



Liljeholm bridge
Liljeholm bridge in Stockholm, Sweden, is made out of two bascule bridges dating back many years. Inside the bridge, you will find the machinery which operates the opening mechanism, a 500-ton counterweight for the relevant bridge, and gigantic gearwheels. These have to be rustproofed, and this is where dehumidification plays it part.

In 2001 a DST dehumidifier was installed in one of the bridges, and the relative humidity was then logged carefully. The result was positive: the relative moisture level fell. Another DST dehumidifier was then installed in the other bridge. A desiccant dehumidifier reduces the relative humidity to the desired level. If the relative humidity is lower than about 50%RH, steel and iron will not rust.

Hong Kong–Zhuhai–Macau bridge
The world's longest bridge between Macau, Zhuhai and Hong Kong, in China, are ensured a long life-time thanks to DST dehumidifiers. The girders of the bridge are protected by DST dehumidifiers. The construction for the bridge started 15 December 2009 and are due for completion at the end of 2017. The bridge is going to be 50 km long and consist of a series of bridges and tunnels.

Yavuz Sultan Selim bridge
The third Bosphorus bridge, which it is initially named, in Istanbul, Turkey, is a bridge for rail and motor vehicle transit over the Bosphorus. The bridge is the widest suspension bridge in the world and has the longest span that has a rail system on it. The Bosphorus bridge is also the suspension bridge with the highest tower of the world.

The bridge girders and wires are protected by DST dehumidifiers. A revolutionary re-circulating system protects the wire enclosure throughout the full span of the bridge.

Dehumidification – a long-term and economical investment
Rustproofing is costly, sometimes tricky to implement and requires a lot of staff, so dehumidification as a means of corrosion protection in closed areas has become an ever more common solution. Dehumidification is also more environmentally friendly than rustproofing.

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