



Case study

Air cleaning device for more safety and improved employee protection



Customer

Schenker
Deutschland AG



Location

Langenhagen
(DE)



Sector

Logistics



Dust reduction

Up to 65%

At a glance

“Employee protection has been greatly improved thanks to the air cleaning devices from Zehnder Clean Air Solutions, and the quality of our service has also increased considerably with a higher level of safety than before. I would recommend the air cleaning systems to anyone.”

Christian Schulz, Managing Director

Challenges

Due to the high handling volume in the hall and abrasion of the forklift wheels, the dust development was extremely high. When a new trans-shipment hall was built, clean, low-particulate air was to be provided right from the start. Special attention was also placed on employee protection: A negative fire safety report for the previous hall had raised awareness among the managers of the danger posed by dust build-up on the systems. This was to be avoided right from the outset at the new site. The aims were to make a decisive contribution to employee health, increase safety, guarantee the quality of the goods, and ensure the impeccable appearance of the site.

About Schenker Deutschland AG

Schenker is a leading provider of global logistics services. Over 68,000 employees work for customers at over 2,000 locations around the world. Schenker Deutschland AG has 100 sites in Germany and is an industry leader in integrated logistics. As a successful global player, the logistics service provider focuses on high quality standards and responsible relationships with customers, partners and employees.

Benefits

The air cleaning devices from Zehnder Clean Air Solutions now ensure greater safety at the DB Schenker workplace in Langenhagen: Firstly, the risk of fire due to dust build-up on the electronic systems has been demonstrably reduced. Secondly, it was possible to minimise the danger posed by slipping due to deposits on the floor. Employees benefit from a much healthier working environment. There are also financial advantages. The amount of cleaning required has been reduced considerably, dust-related wear has been minimised and the machines last longer. It was even possible to cut maintenance intervals by half. The impeccable, clean appearance of the hall has also enhanced the excellent image of DB Schenker Langenhagen.



In Hanover-Langenhagen, DB Schenker operates Europe-wide network logistics in the system, load and partial load transport sectors. A staff of 350 work on a trans-shipment area of 7,500 m² and office and social areas of 2,000 m² in order to organise shipments and deliver them to their destination by land. The focus is on European business centres.

Christian Schulz, Managing Director at the Langenhagen site, explains the company philosophy: “We provide top quality services for our customers. **That is only possible with healthy, motivated employees, so protecting our employees is particularly important to us.**” Kathrin Schubert, Environmental and Health and Safety Officer for the facility adds: “All measures that are good for our employees, that prevent accidents, increase safety or simply make their work easier, have a high priority.”

Extreme dust concentrations – a major challenge

A new trans-shipment hall was to be built for DB Schenker in Hanover. From the outset, the planners did not only take the latest technical energy standards into account, but also the health aspects. However, the project was also influenced by experiences from the old hall. For example, the fire safety certificate issued for the previous trans-shipment facility indicated the risk of dust deposits on the electronic systems.

Therefore, the particle emissions were one of the greatest challenges. Schulz sums it up as follows: “The dust build-up in a cross dock terminal is extremely high, as there is a lot of motion. The high speeds when loading and unloading lead to immense build-ups of dust, especially due to abrasion of the forklift wheels.” **A particle-matter load of this magnitude adversely affects both employee health and safety.** Deposits of fine and coarse dust can lead to a slimy film on the hall floor in wet weather, significantly increasing the risk of slipping.

In addition: Dust deposit on systems are a safety risk and can be cost-intensive. Operations Manager Martin Witt provides an example: “Dust is sucked in through the air vents of the transformer stations and the distribution system of the building's electronics, **which can cause problems in the event of electrical short circuits and fires.**”

As a result, we had to have these sub-distribution systems expertly cleaned by an external service provider”

At the market leader's Hanover site, another focus is on high standards. According to Witt: “Quality is a fundamental principle. In a highly competitive market in the service sector, it determines where customers place their orders.” Cleaner air plays a critical role here. A high particle-matter load not only adversely affects the quality of the goods, but also the appearance of the site. If a potential customer wants to check out the facility, **a dusty appearance can be off-putting.** To avoid this and keep the halls clean, labour-intensive cleaning processes were required.

All these aspects convinced the decision makers in Hanover to take action. The managers looked at other DB Schenker sites in Germany and came across a hall facility in Berlin where Zehnder industrial air cleaning systems were being trialled with great results. That was the deciding factor.

Perceptible and measurable improvement of the air quality by Zehnder Clean Air Solutions

A Zehnder expert came to the new trans-shipment hall in Hanover to take stock. Based on the local conditions and the dust level readings, 22 Zehnder CleanAir 3 units were chosen. These intelligent air cleaning systems filter particles from the air before





they can be inhaled or clog goods and systems. As the hall had already started operation before installing the Zehnder devices, a clear before/after comparison could be drawn. Schulz: **“What particularly surprised us was the positive feedback from employees on how the air quality had improved.”** Witt adds: “That alone is reason to say that it paid off.” Even customers familiar with similar facilities noticed the very high standard of cleanliness at the DB Schenker facility in Langenhagen.

The dust level readings before and after commissioning the air cleaning systems substantiated the subjective feelings: After installing the Zehnder units, the particle-matter load decreased roughly 50% on average. According to Witt: “The reactions were enthusiastic as we would never have expected peak reductions in contamination of up to 65%.”

Positive precedent: More safety, more flexibility, fewer costs

Reducing the particle emissions in this way improved safety in the workplace considerably, the risk of fire was demonstrably reduced. There were also financial benefits. Kathrin Schubert sums this up: “We have less cleaning to do and the devices last longer.” Maintenance intervals have even been halved. What’s more, the flexible service concept allows Schenker to react quickly to changing business processes without significant capital lockup.

Michael Bartels, Regional Manager Clean Air Solutions Deutschland, who oversaw this project, explains the underlying philosophy: “Our service is so special because it is truly tailored to individual customers’ needs. And we offer them a **full-service package**, so that they don’t have to worry about anything.”

Managing Director Schulz sums it up as follows: “In the end, Zehnder’s service model and performance won us over. Employee protection has greatly improved, and the associated quality of our service has increased considerably – with more safety than before. I would recommend the air cleaning systems to anyone.” No sooner said than done: The Hano-ver-based company has already brought the industrial air cleaning systems to the attention of other Schenker sites. Watch this space.