

# STÖRBRÜCKE REFURBISHMENT PROJECT

**SUCCESS  
STORY**

with



EIFFAGE

**SPH**

## The Project

In 2015, renowned industrial painting contractor Surface Protection, located in Hannover Germany was awarded the refurbishment contract of Storbrucke Bridge with a total length of approx. 1,160 m in the course of the motorway A23. The project consisted of blasting off the old coating with a thickness of average from 400 µm and rehabilitate the steel structure and apply coating for corrosion protection. The total surface to be treated was around 12 500 m<sup>2</sup>.

## The Challenges

Surface Protection had several challenges. The project required short completion deadline. The blasting and coating operations, thus needed to be very efficient and meet the high quality demands.

The bridge is built on the river Stor in a green area. To preserve the environment and gain in the efficiency, it was necessary to reduce the quantity of the dust and waste to be generated from the operations of the blasting and coating during refurbishment.

### CUSTOMER VOICE

**“We preferred Phenics system since it significantly reduced manual operations, not to speak of all the savings associated to waste disposal and transportation. Through the use of Phenics we reduced the amount of waste, the transportation costs and the physical strain of employees on site. The Phenics system has proven itself and I would use it again in coming, suitable projects.”**

**Mr. Moldenhauer, Project Manager,  
from SURFACE PROTECTION**





## The Solution

Surface Protection decided to combine a variety of advanced engineering, surface preparation and coating technologies to meet these challenges. They opted for steel abrasives from WAbbrasives, Profilium 45, a brand of WINOA, designed specifically for air blasting operations to create efficiency and ensure quality to reach for optimum surface profile. The coating system to be applied was supplied from HEMPEL to have maximum protection and corrosion control and achieve extended service time of the bridge.

Use of steel abrasives required first of all a sound containment so that the abrasives stayed within the encapsulation. Barges were designed and installed under the bridge to contain the working area. Secondly it required suction and recycling systems. For this, Surface Protection trusted in PHENICS, a brand of WINOA for full service of equipment and technical service. The machines are installed under the bridge and via high suction power, it was possible to recover the used grit. Then the grit channeled through the recycling system where it is cleaned, separated from paint particles and non-magnetic materials and transferred back into the system. By this way, the operators did not do any manual filling work of blasting pots which were automatically filled by the recycling system.

## The Benefits

The main advantage of using recycled grit was the drastic reduction in the waste generation. Had the Surface Protection chose expendable abrasives, it would have meant around 625 tons of waste since approx. 50 kg of abrasive is used to treat one 1 m<sup>2</sup> without any chance of recyclability. This would have resulted in compelling operations of waste evacuation, extra transportation and waste disposal charges, let alone the damage on environment through excessive waste generation. However by using steel abrasives Surface Protection only purchased 15 tons of abrasives and the waste generated was limited to 13 tons.

As the road and the bridge industry looks for long-term solutions for preserving and refurbishing the older bridges and constructing newer ones to accommodate the public demand, new technologies must be used to help industry achieve better time and cost efficiency while preserving nature through environmentally compliant solutions such as recycling.

For further information,  
contact us on [phenics.com](https://phenics.com)

