

Case study: Application of MBX® Bristle Blaster® Technology in maintenance works on Wind Power Stations



Project: Maintenance of Wind Power Stations, built in 2006

Situation 2011:

Welding seams connecting the segments show rust, partially paint has cracked from subjacent rust.



Examples of affected welding seams caused by rust

The task:

The welding seams must be treated by removing loose paint and rust, cleaning and simultaneously generating an anchor profile before applying the new coating.

In order to avoid complete scaffolding the towers the works should be performed by a company specialized in working on the rope. (rope-assisted workplace positioning)

Details: Welding seams of 12 metres length each have to be processed in a width of 7 cm.

Loose old painting shall be removed using a flap-wheel grinder, then cleaned and roughened by MBX® Bristle Blaster®. After this process a new layer of coatings has to be applied (priming and finishing coat).

Findings and Results:

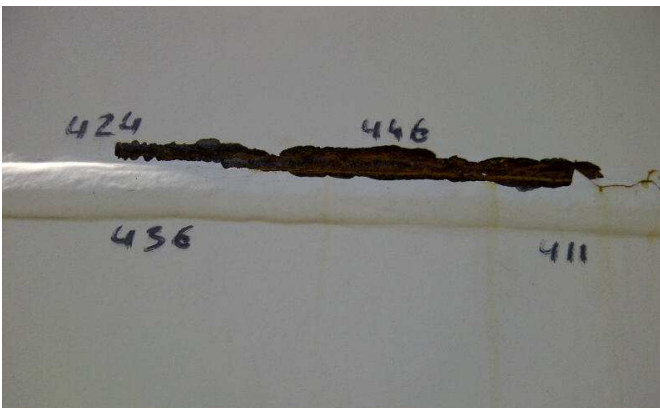
Per welding line approx. 2 to 2.5 hours are needed for surface preparation consuming on average 3 to 4 MBX® Bristle Blaster® belts.

The generated anchor profile was measured with $76 \mu\text{m}$ (Rz). Although working in a hanging position makes it more difficult working with certain pressure against the surface, the measured roughness after 0.5 hours of using one belt was still $40 \mu\text{m}$ (Rz) and still sufficient as anchor profile.

As especially beneficial in this particular situation the application has been proven the MBX® QuickAd® which allowed changing the MBX® Bristle Blaster® belts fast and without additional tools.



Application of MBX® Bristle Blaster® on wind power station



Welding seam before and after treatment with MBX® Bristle Blaster®



Detailed view of cleaned and roughened welding seam