

## Case Study

Project/customer name:	Wind turbine base protection
Year of application:	n/n
Location/country:	Markkleeberg, Germany
Building type:	Wind turbine
Authorized contractor:	n/n
Additional project details:	Waterproofing with resistance to high vibrations

General view:



## Challenge:

- In order to maximize the longevity of the wind turbine, it is essential to properly waterproof and protect the turbines foundations. Otherwise the steel construction below may be affected by water and deteriorate.
- The solution provided would need to be fully cured as quickly as possible, be totally cold applied, and be resistant to mechanical, chemical and thermal loads. The propose system would also have to accommodate large amounts of movement, as the turbine foundations are put under a great deal of force which could lead to cracking.



## Solution:

- Prior to any works being carried out the old waterproofing material required removal and the steel work was cleaned and abraded at the base. These pre-works ensured the best possible bond between the Triflex TowerSafe system and the original foundations of the wind turbine.
- Triflex TowerSafe is highly elastomeric, and is designed to accommodate movement within the wind turbine. The solution is hydrolysis resistant, meaning that it won't break down when exposed to long periods of standing water or even submerged. It is also hard wearing and rapid curing, with the reinforced waterproofing resin being ready for overcoat or traffic in as little as 45 minutes.

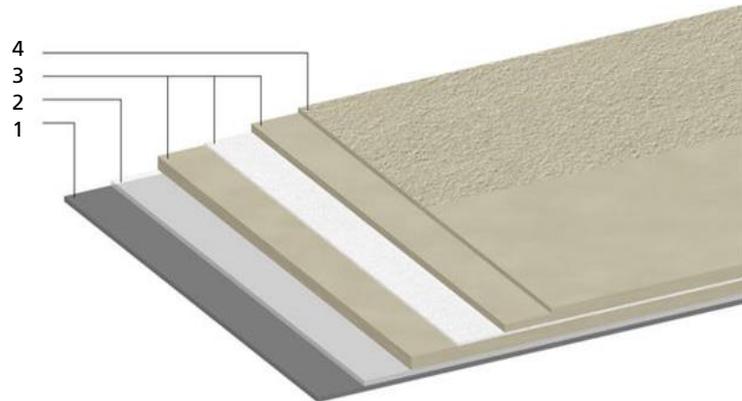


## Products used at a glance:

Triflex offers liquid PMMA\* based resins (e.g. ProDetail for details or ProTect for areas):

1. Substrate
2. Primer, if necessary
3. Waterproofing layers
  - a) Triflex ProDetail (2kg / sqm)
  - b) Triflex Special Fleece
  - c) Triflex ProDetail (1 kg / sqm)
4. Finish, if wanted

\* Polymethyl methacrylate



**Continually improved over 40 years in order to become the market leader in Europe.**



## Main benefits (European Guideline ETAG 005):

- 25 years estimated working life performance
- Fast curing time and rainproof after only 30 minutes
- Application possible till humidity of 99% and withstands surface temperature after application up to 90° C
- A liquid seamless solution that fits to any structure with complex geometry
- Adherence to any surfaces (Aluminum, steel, plastic, glass, bitumen, concrete, ...)
- Solvent free, environmental friendly and with no risk to health
- High resistance to chemicals, roots and rhizome, alkali and hydrolysis
- Cold application with no flame and flame retardant
- Highly UV resistant (1000 MJ/m<sup>2</sup> = 325 days)
- Easy to impose loads after application (for particular demands as green roofs)