

## Project Info



15 / 08 / 18



CC8™ Bulk Rolls



2,000m²



Vertical layers



Novaky, Fortischem,  
Slovakia



EKOFLEX



CC8™ used to reconstruct and provide protection to corroded concrete walls in a salt storage facility.



Completed installation

In August 2018, an 8mm variant of Concrete Canvas (CC) GCCM\* called CC8™ was chosen to reline a reinforced concrete salt storage area at the Fortischem chemical plant in Novaky, Slovakia. The Sodium Chloride used for the production of Hydrochloric acid at the plant had badly corroded the concrete over time and was attacking the reinforcement steel.

Alternative options for the repair considered were poured concrete and shotcrete, but due to the speed of installation and good impermeability of GCCMs, CC8™ was chosen.

Contractor Ekoflex installed 2000m² of CC8 bulk rolls with a team of 5 in 10 working days. The works were carried out in hot and dusty conditions due to the large concentration of salt dust remaining within the facility.

Prior to the installation, the walls of the area were cleaned and made smooth with mortar cement to fill cracks and to fill any potential voids.

The installation itself involved relining the walls, which were near vertical and up to 8m tall in some places. The lower section of the walls, in direct contact with the salt once filled, was lined with a double layer of CC8 to avoid any degree of salt ingress. The CC was fixed to the substrate using a Hilti nail gun and x/cr 58 nails. Sika Adhesive sealants were used to improve impermeability between the layers of CC.

\*Geosynthetic Cementitious Composite Mat







*Salt storage facility in use prior to installation*



*Walls had been corroded by the salt*



*CC joints were sealed using an adhesive sealant*



*Completed first section of installation*

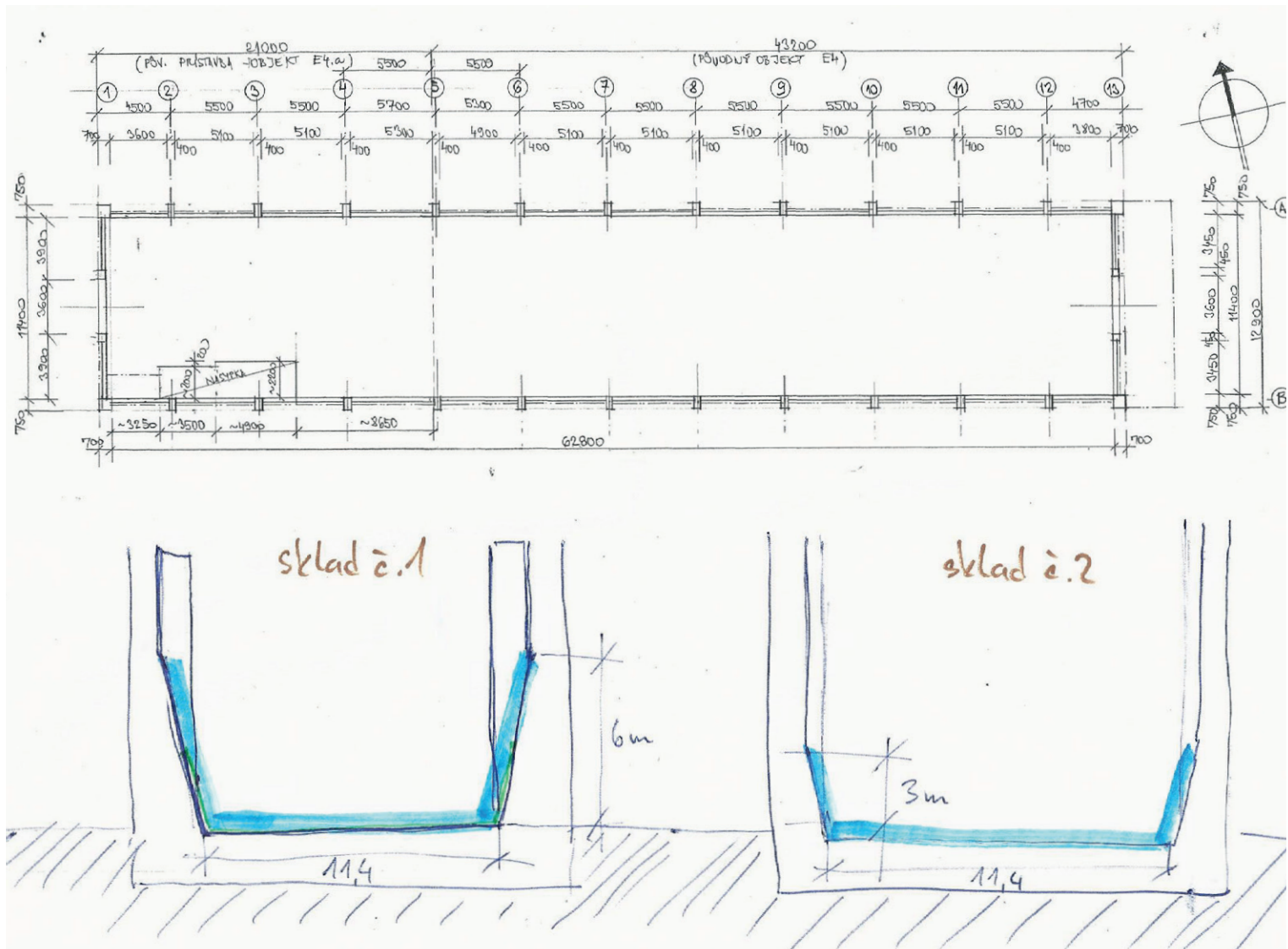


*Following hydration, walls were painted*



*Facility back in use following installation*





Design plans for installation

Due to the heat and the near vertical installation, final hydration was provided by the resident fire brigade and was carried out twice in the space of a couple of hours to ensure proper saturation of the material. 24 hours later, the CC had reached 80% strength allowing for the whole installation to be painted white using a standard masonry paint.

Overall the completion of the project was deemed a complete success with the biggest benefit being the time saved, reduced from a two-month project using the traditional concrete methods to just 10 days. As a result, outage time for the production of the plant was significantly reduced, saving the client money.

To date, 1000m<sup>2</sup> of CC8™ have been installed. A second salt containment area at the plant is due to be relined in late autumn 2018, when the remaining 1,200m<sup>2</sup> will be installed.

*"We were very happy with CC as a new innovative technology which reduces installation time and improves other qualitative aspects of reparation projects for salt storage, such as water insulation and a good homogeneity of the surface of the storage facility, ensuring high quality of salt used in production."*

Marek Kvasnica  
Director, Ekoflex