Bodenberg 200 - Laminate for anticorrosion

Description

This laminate is made of reinforced fiber and synthetic resin, as the FRP surface layer or sealing layer.

Components

The reinforced fibers include glass cloth, glass mat, polyester cloth, carbon fiber and hybrid fleece. The laminating solution can be based on epoxy resin, vinyl ester resin, furanic resin and phenolic resin.

Requirements for the concrete substrate

The substrate must be solid and compact; the strength must be tested and meet the design requirements, with minimum compressive strength 30 MPa. Both penetration of under-water and uneven sedimentation is forbidden. There should be no exposed sand, de-bonding, cracking and voids and pits. The surface should be flat, with less than 3mm height difference in 2 m . The substrate must be dry and free of dust and contaminants such as oil and grease. The substrate should have minimum peel strength of 1.5 MPa. The residue moisture content must not exceed 6%. The slope of the substrate must be tested and meet the design requirements, and the possible deviation not more than 0.2% of the slope length, or maximum 30mm in value.

Substrate treatment

The substrate must be clean. It can be cleaned with brushes, compressed air or industrial vacuum cleaner. Surface contaminated by oil, grease and chemicals must be treated. If the surface is scratched with cement screed, the surface must be pressed and smoothed, and rough treated later. The curing scratching layer should not include any defects like cracking, exposed sand, de-bonding, voids and pits.

Application of laminate

1、 Primer: on the treated substrate, the primer should be coated evenly without defects such as non-coating or flow. The curing time should not be less than 24 hours.

2、 Repair: for the uneven area in the substrate, cement based on synthetic resin can be used for scratching. The curing time should not be less than 24 hours. To repair substrate for furanic and phenolic laminates, epoxy resin-based cement is recommended.

3、 Laminate installation: laminating solution is applied on the surface by using a roller, then the first layer of glass mat is pressed fresh in fresh –with an overlapping width of approx. 5 cm - and rolled on bubble free by using a roller, saturated with laminating solution. The remaining air must be removed by using a laminate roller. Same for the second layer of glass mat, with approx. 50cm staggered joints. For internal and external corners 1-2 more reinforced materials are recommended to be used.

4、 Top coat: Evenly application. If two coats are needed, the second layer can only be installed after the first layer is cured.

5、 As sealing layer: after application of the last layer of reinforced materials, the laminating solution should be coated, and then sanded with aggregate in size of 0.7-1.2 mm..

Field of application

Places where chemicals appear, such as chemical industry, metallurgy industry.

Anticorrosion design

Check list for corrosion protection. The chemical stress, thermal stress, mechanical stress and other stresses are the preconditions for the correct recommendation. Following the operating conditions by the customers can guarantee the long-term application.

Cases

1. Floor for chemicals' warehouse

2. Lining of tank in fragrance workshop

3. Protection of pickling tanks and trenches

4. Laminate sample based on furanic resin

Reference

Standard of China GB 50212 -2002 <<Norm of application and inspection for anticorrosion construction>>

AGI - working document S10-2 Protection of structures against chemical attack, utilizing tile coverings (acid protection engineering), sealing layers