Method statement BC Line GRP Resin

BC GRP Line resin method statement typically outlines the process for the proper installation and application of GRP linings in tanks.

BC GRP Line resin is used for protecting tanks from corrosion, leaks, and chemical attacks, providing a durable, waterproof surface. Below is a general method statement for GRP tank lining products:

Introduction

This method statement details the procedures for the application of BC GRP lining to tanks. The GRP lining system is applied to protect the tank from corrosion, enhance structural integrity, and ensure waterproofing. It covers surface preparation, materials used, application procedures, curing, and inspection.

Materials and Equipment

GRP Lining System: Resin (polyester, vinyl ester, or epoxy), fiberglass mat (chopped strand mat, woven roving)
Primer: As recommended by the manufacturer
Catalyst and Accelerator: As per product specifications

Tools and Equipment:

Angle grinders, abrasive blast equipment
Rollers, brushes, and spray guns
Measuring tools for resin and hardener mixing
PPE (gloves, goggles, respirators)

Surface Preparation

Inspection of Tank:

Inspect the tank for damage, rust, and existing coatings.
Record any areas needing repair.
Surface Cleaning:

Remove all oil, grease, dirt, and other contaminants from the tank surface using detergent or degreasing agents.
Rinse thoroughly and dry the surface.

Abrasive Blasting:

Abrasively blast the internal surface to remove rust, mill scale, or old coatings.
Achieve a roughened profile (surface roughness 40–75 microns).
Clean blasted surface of dust, loose particles, or any residual contaminants.

Surface Repairs:

Repair any holes or cracks in the tank surface with epoxy filler or putty as needed. Allow repairs to cure before proceeding.

4. Application of GRP Lining

Priming:

Apply a BC GRP primer coat if recommended by the manufacturer.

Ensure the primer is fully cured before applying GRP resin.

Mixing Resin:

Mix the GRP resin, catalyst, and accelerator according to manufacturer specifications.

Ensure proper proportions and stir thoroughly to avoid improper curing.

Applying Resin and Fiberglass Mat:

Start by applying a layer of resin to the tank surface using a roller or brush.

Lay the fiberglass mat on top of the wet resin, ensuring it is saturated.

Roll over the mat to remove any air bubbles and ensure full adhesion of the mat to the resin.

Apply additional layers of resin and fiberglass as specified, typically 3-4 layers depending on the tank’s usage.

Layer Build-up:

Allow each layer to cure as per product guidelines before applying subsequent layers.

Apply layers systematically to ensure an even and consistent thickness.

Final Resin Coat:

Once all layers of fiberglass mat are applied, finish with a final resin coat to ensure a smooth surface.

5. Curing

Allow the GRP lining to cure according to manufacturer's instructions (typically 24-48 hours depending on resin type and environmental conditions).

Ensure that no water or foreign materials come into contact with the lining during curing.

6. Inspection and Testing

Visual Inspection:

Inspect the lining for defects such as air bubbles, cracks, uneven thickness, or incomplete coverage.

Spark Testing:

Perform a spark test to check for pinholes or breaks in the lining.

The test is carried out using a high-voltage tester across the surface of the tank.

Thickness Measurement:

Use a thickness gauge to measure the lining thickness. Ensure it meets the required specifications.

Repair:

If any defects are found, make repairs by lightly sanding the area and reapplying the resin and fiberglass.

7. Completion

Once the lining has fully cured and passed all inspections and tests, the tank is ready for use.

Prepare and submit all documentation, including test results, inspection reports, and a final handover certificate.

This method statement should be adapted according to the specific GRP lining product manufacturer’s guidelines, tank conditions, and safety regulations.