

# **Method Statement - Chilled Water Pipe Insulation**

## **1. Purpose**

This method statement covers on site installation of **thermal insulation** for the complete chilled water piping system.

## **2. Scope**

This procedure is applicable for insulation of all supply and return mains, headers, branches, risers, drips, run-outs, pump suction and discharge, pipework, fittings, flanges, valves, expansion and movement devices, flexible connections associated with the chilled water piping system installation.

## **3. Responsibilities**

HVAC mechanical engineer and supervisor is overall responsible for implementation of this procedure and ensure that the quality of pipe insulation work is good.

Before starting the pipe insulation work you have to ensure that all the installation work for chilled water piping is complete. Also make sure the installation approval from consultant.

## **4. Pipe Insulation Method**

- Site supervisor will obtain latest construction drawings and signed-off pressure test certificates for the area by the construction department.
- Site supervisor will requisition approved materials required for the specific installation to be carried out and adhere to the following guide lines.
- For insulation schedule refer to latest revised construction drawings.
- Supervisor to ensure that there is ample clearance around pipe fittings and plant to enable the installation of thermal insulation to be carried out.
- Care is to be taken that surface sections of the installation to be insulated are free from damage, surfaces cleaned, painting has been completed, and is not wet or damp.
- Ensure that the surface of pipe is cleaned properly, dry and is ready for insulation.
- All joints will be wrapped with 150mm wide adhesive tape.
- The Supervisor is to ensure that there are no insulation joints located within sleeves or at hangers.
- Insulation of pipes passing through fire barriers are fire resistant and all gaps around will be sealed with fire resistant material.

- Where sheathing is applied to insulation, the seams will be angled away from view whenever practical.
- Glue from approved manufacturer will be applied with even spread on complete surface of insulation.
- Sufficient adhesive shall be applied on the pipes and inside the insulation, the insulation will be wrapped to the pipe and pressed firmly at its location when the adhesive is ready for jointing of pipes surface and insulation.
- Similarly apply glue partially on the pipe and let it dry, then fix the rigid pipe shaped insulation on one end by opening snap on side and slowly press the insulation from one end to the other so as to ensure that the insulation sticks on the pipe completely and in order to avoid formation of any free air passage between the insulation and pipe.
- Seal the longitudinal joints and joints between sections with self-adhesive tape rightly centred to lap & section surface.
- Install materials & follow manufacturer's instructions throughout the pipe insulation works.
- Aluminium tape shall be used to make the insulation work cohesive and cover the gaps on joints etc.

#### **5. Pipe Insulation Quality Control**

- It will be ensured that all completed insulation work is neat and tidy, and that there will be adequate spacing between pipes, valves and joints.
- Generally, the clearance between pipework and or pipe lagging will not be less than 200mm.
- Where possible 125mm clearance will be left between the underside of the pipes and the finished floor level, and in no cases will this clearance be less than 100mm.
- Suitable access for operation and maintenance of valve and other in line equipment will be ensured.
- The supervisor in charge and the QC officer will continuously monitor the activities to ensure that all components indicated on the approved drawings have been installed and that the installation is in accordance with the contract requirements and manufacturers recommendation.
- Pipework identification will be done as per the approved materials. All completed pipe insulation installation work will be protected to avoid damage until final inspection and sign off by the Client.

#### **6. Reference Documents and Forms**

- Insulation Check List.
- Construction System Drawings
- Specification, Particular & General
- Identification Procedure