

PIPE PRE-INSULATION

1.0 SHEAR KEY SYSTEM

1.1 PRODUCT WORK SEQUENCE

Pre-foaming Inspection and Preparation

Pre-painted pipe spools are brought one at a time into the enclosed factory and lowered onto a variable height saddle support system. Pipe rotation wheels are fitted at each end of the pipe.

The pipe is rotated to check the dimensional tolerance and the condition of the paint coating. Dimensional tolerances are then logged and any pipes found to be out of tolerance are tagged accordingly and quarantined until corrective action has been agreed with the client.

Repairs to the paint coating are carried out in accordance with QA procedures prior to the foaming operation. When cleared for coating, the pipes are marked up to show the location of shear keys.

The area marked out for the shear key is then grit blasted with garnet. The shear keys are immediately adhered on to the pipe using a suitable cryogenic adhesive.

1.2 Preparing for Spraying

Once cleared for spraying, the pipe is wrapped with 12mm fibre glass matt with the ends secured with tape.

Next, a crack arrest reinforcement layer consisting of a layer of No. 10 locked weave glass cloth is spirally wound over the resilient glass blanket with 5mm overlaps.

1.3 Foam Spraying & GRE Coating

The pipes are then transferred to a spray section and rotated whilst the foam spray head of a computer controlled spray foam dispensing unit is traversed parallel to the pipe axis, depositing the first layer of foam at a controlled 50mm thickness. The process is repeated two (2) more times with a crack arrester between the second and third layers,

The last layer is then machined to give a smooth even finish prior to the application of glass reinforced epoxy which consists of five (5) layers of random chopped strand mat, epoxy and a final layer of polyester cloth followed by a flow coat.

1.4 Curing

The finished pipe is then transferred to another rotator for infra-red curing. Curing takes approximately two (2) hours @ 90°C.