

## Topic 11 INSULATION OF PIPES

### Part 3: Types of pipe insulation

#### Insulation of cold-water pipes

Due to the flow of cold liquids through the pipes, the surface of the pipe is also cold. The water vapours around the pipe condense as soon as they come into contact with it. Condensation can cause corrosion, rust and energy loss (pressure). For the insulation of cold water pipes the following products are used: synthetic rubber-based materials, polyurethane-based prefabricated pipe insulation materials, prefabricated pipe glass wool, prefabricated pipe Styrofoam. When a vapor barrier is required, these materials are covered with aluminium foil.

#### Insulation of hot water and heating pipes

Generally used materials for the insulation of such pipes are glass wool, stone wool mattresses, prefabricated pipe insulation materials with high temperature resistance, prefabricated pipe polyethylene, rubber foam and polyurethane-based thermal insulation materials. The prefabricated polyethylene and elastomeric rubber-based pipe insulation materials should be firmly adhered at the joints.

#### Insulation of steam and hot water pipes

Prefabricated glass wool can be used in pipe insulations whose operating temperature does not exceed +250°C. These materials are coated with aluminium or PVC or are galvanized. If glass wool with cardboard is used, we should take into account the fact that cardboard is highly flammable.