

## Topic 11 INSULATION OF PIPES

### Part 1: Clean and waste water plumbing

The water that comes into our buildings must meet the water supply requirements and standards. At the same time, we must comply with the requirements for wastewater disposal. That is why, individual pipe systems for water supply and sewerage are made. The pipes have different diameters and profiles.

**Clean water plumbing:** it comprises of hot water pipes and cold-water pipes; there are separate installation pipes for these two subsystems.

**Waste water plumbing:** it drains wastewater outside the building. To prevent water leakage, the systems should be made with extra care.

#### Points to consider in clean water plumbing

- The right type of pipe should be chosen (appropriate diameter, material from which the pipe is made). It must be installed correctly
- Pipes outside the building must be laid at a minimum depth of 60 cm below the ground against frost
- Due precautions should be taken to increase the durability of water pipes installed in areas with heavy traffic
- Materials that can corrode should not be used. PP pipes and galvanized materials are recommended
- Teflon tape are used to prevent water leakage
- Direct contact of pipes with concrete or lime must be avoided
- In places where hot and cold-water pipes are laid at the same time, the cold-water pipe should be installed to the right in the direction of the water
- Cold pipes are placed under hot water pipes
- After being installed, the drinking water pipes are subjected to tests

#### Points to consider in waste water plumbing

- Pipes should be as short as possible and with as few bends as possible
- Attention should be paid to the joints of the pipes
- Fittings are used for pipe bends
- The main drainage pipes should be directed out of the building in the shortest possible way
- Cleanouts for inspection access are placed in strategic places
- Underground pipes must be protected from solid objects
- Leaks must be repaired
- The drain of the installation must be prepared carefully in accordance with the materials

#### Prevention of water leakage

When there is water leakage, it should be prevented, and when that is not possible, it must be repaired. To avoid leaks, suitable pipes should be selected; the insulation should be made correctly, and suitable materials and seals should be used as well.