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What is thermal insulation?

Thermal insulation is a process to reduce the heat losses occurring during winter mounts and heat gain occurring during summer mounts.
The Advantages of Thermal Insulation
It allows better warming in winter and provides to cool off in summer by saving average of 50% of expenditure for heating and cooling.
Fuel consumption reduce, through prevent environmental pollution and global warming.
Thermal insulation reduces foreign dependency of our country and provides productivity.
Thermal insulation prevent condensation that cause fungi, mould growth and black taint.
Irons prevent rust in concrete, it protects earthquake resistance of the buildings.
Thermal insulation creates balanced room temperatures so constitutes comfortable and healthy places in living space.
Points to Consider in Thermal Insulation
Thick of thermal insulation plate should be use at least 3 and above.
At least 6 number/metre$^2$ insulating boards fixing anchor should be used in performed thermal insulation applications.
Use materials should adjust with one another and quality of materials should fit international standards.
Sequences of thermal insulation plates should be accepted form. Thorough, prevent the formation of thermal bridges.
Heat insulation applications must realize in exteriors for wanted result and make saving. Though, construction materials will be taken advantage of heat storage feature and construction materials will be protected from external effects.
Heat insulation applications in interior wall of housing damage buildings that cause mould growth and dampness in time.
Application Area of the Thermal Insulation
- Terrace and gable
- Wall facing outwards
- Cantilever floor
- Wall and floors contact with soil
- Wall and floors overlooking the unheating section as garage and storage
- Floors separating flats in heating buildings with combi boiler
- Installation elements are made to installation pipes, ventilation ducts, valves etc.
The Process of Thermal Insulation
1) Surface Preparation
2) Sub-basement profile placement
3) Thermal insulation boards paste
4) Thermal insulation boards dowelled joint
5) Corner bead placement
6) Netting plaster application
7) Decorative covering and siding
GENERAL FEATURES OF THERMAL INSULATION MATERIAL
The heat transmission coefficient of thermal insulation materials should be small.

Thermal insulation materials should be light.

Thermal insulation materials should be odorless.

Absorption properties of the materials should be water and moisture.

Materials should not be available to nest of bacterias and insects.

Materials should resist to decay.

Materials should be non-flammable materials.

Materials should be long life.

Materials should be suitable to carry and should not damage to human health.

Materials should be economic and obtainable.
Exterior Thermal Sheathing

There are 3 different methods. These are internally, externally and sandwich wall. The best application is jacketing application for heat bridges aren’t formed and provide insulation with continuity. Jacketing application is optimal thermal insulation system in terms of building physics.
Advantages of Exterior Thermal Sheathing

- Exterior thermal sheathing prevents cracks and damages which is formed with temperature differences in main material.
- Building exterior wall is protected all effects of external environment.
- Exterior thermal sheathing provides both heat and water insulation.
- Exterior thermal sheathing application continue between 1-4 weeks for medium size a building.
Exterior Siding

Exterior siding protect against exterior weather conditions like rain, wind, snow and sun. At the same time, it completes the architectural style of the building, aesthetically.
New housing must conceptualize the project to be applied thermal insulation and old buildings must get Energy Performance Certificate until 2017. The most important step of procure energy performs certificate was realized heat insulation application of housing.