



ESTONIAN NATIONAL TRAINING

1ST MODULE

Title: Constructing insulation modular elements

Duration: 4 hours

Type: practical training in factory

Short description of the module:

Precise constructing of insulation modular elements is the presumption for correct multifunctional renovation elements for nZEB renovation. Passable construction quality may not be enough for nZEB renovation with multifunctional renovation elements for the total building envelope (façade and roof) and installation/building services.

This module is focused on training construction works to install insulation, water vapour barrier, wind shield, rain screen, window, using tapes for guaranteeing airtightness of building envelope etc.

During the training the workmans install insulation, water vapour barrier, wind shield, rain screen, window, using tapes for guaranteeing airtightness of building envelope etc. under supervising of quality controllers and researchers.

After completing this module individuals will be able to construct highly insulated multifunctional renovation elements for the total building envelope (façade and roof) and installation/building services.



2ND + 3RD MODULE

Title: Building air tightness and Thermal Bridges

Duration: 4 + 4 hours

Type: self-learning 4h class room / laboratory lectures & practice

Short description of the module:

Air-tightness and thermal bridges are important part of heat loss of building envelope for nZEB. All new modern buildings as well as renovated buildings should fulfill strict requirements for building envelope air-tightness level and thermal bridge free connections of thermal envelope. MORE-CONNECT retrofitting approach deals with prefabricated elements for the total building envelope (façade and roof) and installation/building services. The air-tightness and thermal bridges of panels' joints and connection between existing wall and panels plays significant role in overall building energy efficiency. Thus, correct tightening should be performed in order to avoid weak points and to make all necessary improvements during the modular retrofitting process.

In scope of this module the theoretical and practical aspects of building's air tightness and thermal bridges will be presented. Participants will learn how to identify critical points and avoid them. During the learning module attendees will get information on building preparation and blowerdoor unit set procedures to perform high quality airtightness test and make calculations for thermal brides

After completing this module individuals knows about airtightness and their measurements ad well thermal bridges and thermal bridges and their calculations.



ESTONIAN NATIONAL TRAINING

4TH MODULE

Title: Retrofitting Towards nZEB with prefabricated modular elements

Duration: 4 hours

Type: class room lectures + onsite visit

Short description of the module:

This module will focus on the way to address the existing building stock and its possibilities for transformation into nZEB considering the nZEB retrofit technical solutions with prefabricated modular elements.

It also aims at understanding the renovation process; the drivers and barriers associated to renovation works; and to understand and be able to offer solutions to the technical, practical and logistical challenges faced in cold climate in nZEB retrofit.

After completing this module, the individuals will be able to: present the renovation solutions for nZEB renovation for different types of dwellings; communicate the co-benefits associated to a renovation process; explain the drivers and barriers associated to renovation works; understand and be able to offer solutions to the technical, practical challenges faced in nZEB retrofit.