



**TWG 3 Innovative Training
BUILD UP Skills - 9 EU Exchange Meeting**

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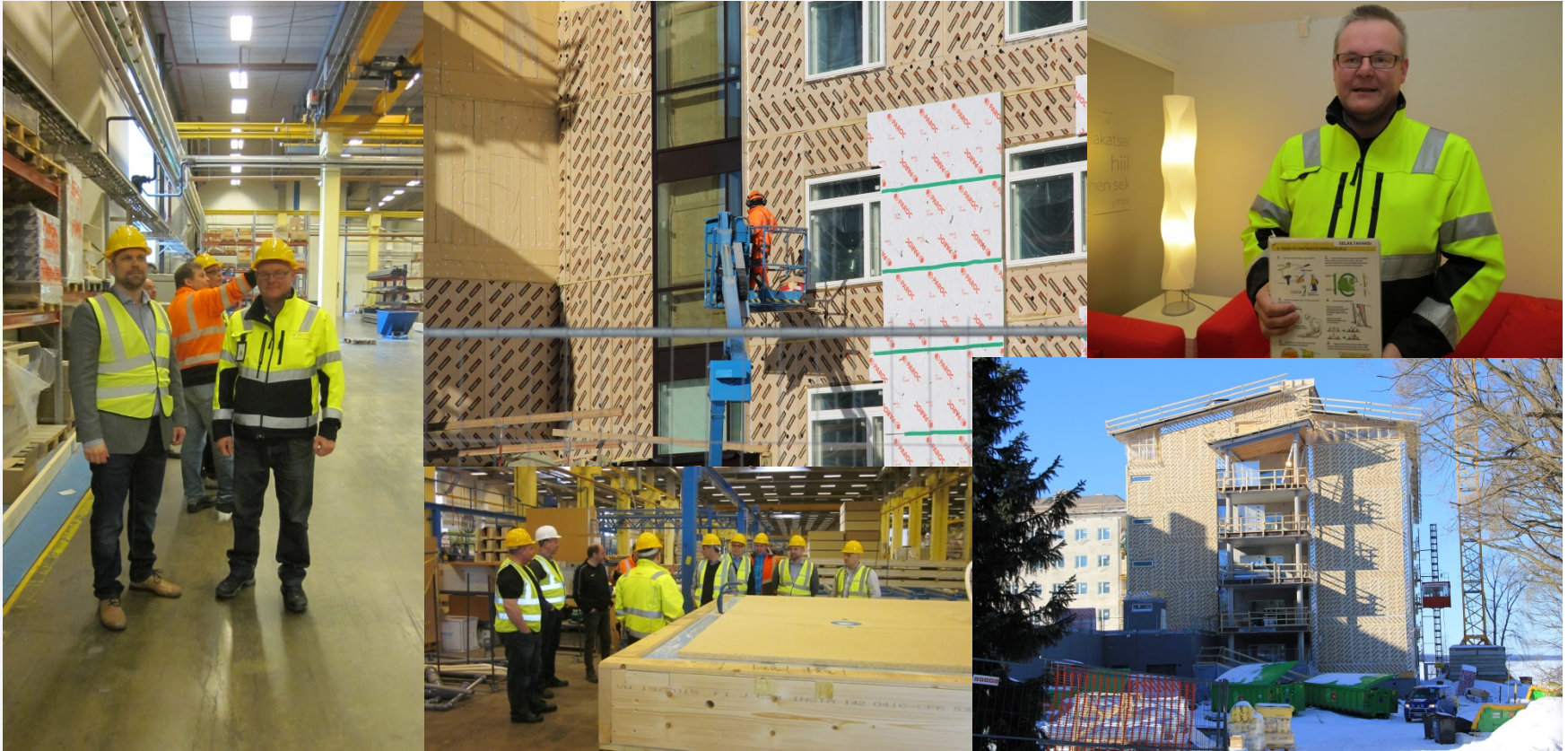


BUILD UP SKILLS

ENERGY TRAINING FOR BUILDERS

FINLAND

On-site training scheme and pilot trainings



6-7 December 2016

BUILD UP Skills – 9. EU Exchange Meeting

On-site training concept

- development of the training scheme for short duration training
 - consultation of trainers, trade union and construction companies
 - tested at training sessions
 - further developed based on the feedback and experiences from pilot trainings and in-practice use by a construction company
- focus on new and innovative methods supporting on-the-job learning, self-learning, and utilisation of information technology in training and learning (e-learning, videos)
- short duration training
- development of training methods on learners' terms
- material in five languages: FI-SE-EE-RU-EN
- attitude change



Energy Efficient Construction and Training Practices: Basics



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Energy and moisture of building site

- Introduction
- Heat transfer
- Humidity and condensation point
- Correlation between heat and moisture

Three ways of heat transfer

Operation: Why are the floors of old houses often cold?

Air humidity and condensation point

Example

- In December the temperature is 10°C outside.
- The roof work is slightly behind schedule.
- The roof insulation is not finished.
- The heating has been just started.
- The floor slab is still not heated (condensation point).

Example

- When making concrete, about 180 litres of water is used per cubic metre of concrete.
- 60-70 litres of water condense with concrete.
- In concrete, concrete contains 30-40 litres of water.
- There are 70-80 litres of water to be evaporated.
- Evaporated water amounts to 10-15 litres.

How much water evaporates from a slab 80 mm thick and 100 m² wide?

Working order of crawling space!

- How the wind shield board (S) should be installed to the Slaty?
- The shielding board must be resistant to water.
- Notice that the shielding board must cover all timber structures.
- The floor and junctions must be made airtight.

ENERGY EFFICIENT BUILDING - A GUIDE FOR CONSTRUCTION SITE

9 - WINDOW INSTALLATION

1. Required tools and protective gear.
2. The edges of the window opening are cleaned from dust before the window is fitted in place. Cement is applied by sanding lat.

8 - THROUGH HOLES FOR TECHNICAL BUILDING SERVICES

1. Required tools and protective gear.
2. The edges of the window opening are cleaned from dust before the window is fitted in place. Cement is applied by sanding lat.

4 - INSULATION OF THE ROOF WITH MINERAL WOOL SHEETS AND LOOSE-FILL WOOL INSULANT

1. Required tools and protective equipment.
2. Interface vapour barrier membranes at least 150 mm, subsections which cover the roof joists.

1 - INSULATING A WOODEN WALL WITH MINERAL WOOL

1. Required tools and protective equipment.
2. The wind shield board is attached to the building frame before installing the thermal insulation. The seams must be taped over with suitable tape. If required seam strength can be reinforced with battens.

Frame attachment points are measured and marked and holes are drilled if needed for the attachment screws.

The edges and wall 10 - 20 mm are attached to the frame.

The extra measure must be accurate so that the window frame fits snugly.

The seams must be removed before the installation of the window. For example, the seams are removed and packed with wool.

Water membrane.

Press the supports of the membrane into the freedom of movement if needed.

Using the collar tightly to the vapour barrier with using proper corner barrier tape.

It does not necessarily collect the dust and is responsible for any dust.



Motiva Oy

Motiva on asiantuntijayritys, joka kannustaa energian ja materiaalien tehokkaaseen ja kestävään käyttöön. Motivan palveluja hyödyntävät julkinen hallinto, yritykset ja yhteisöt sekä kuluttajat.

Show less

Uploads

<p>Информация о потреблении электроэнергии можно получить у энергосберегающих организаций</p> <p>6:09</p>	<p>Теплоизоляция трубопровод котельной</p> <p>6:21</p>	<p>Отопление и вентиляция по потребности</p> <p>2:52</p>	<p>Монтаж воздушных тепловых насосов</p> <p>3:25</p>	<p>Модернизация теплоизоляции повышает комфортность проживания в здании</p> <p>6:19</p>	<p>Рекуперация тепла экономит энергию</p> <p>7:14</p>
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Created playlists

<p>Планирование энергоэффективного ремонта</p> <p>7 VIDEOS</p>	<p>A comprehensive plan</p> <p>7 VIDEOS</p>	<p>Kestotalous-keino</p> <p>7 VIDEOS</p>	<p>Kuinka pienitalon energialasku puolitetaan?</p> <p>7 VIDEOS</p>	<p>Pohjoismaainen julkisten hankintojen viikko 11/2015</p> <p>3 VIDEOS</p>	<p>Energiansäästöväkko</p> <p>4 VIDEOS</p>
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Strengths / Successes

- extended target groups
 - pre-fabricated house manufacturing industry
 - housebuilders, supervisors, installers and salespeople
- three major construction companies have taken up the on-site training concept
 - one provides on-job-training for vocational building trainees
 - close collaboration with the construction companies is vital
- self-learning: instruction cards, videos
- change agents training their peers
- multi-lingual and descriptive training material
- on-site training ambassador

On-site training ambassador

- Motivator and messenger towards
 - construction companies
 - work force
 - stakeholder network
- Face of the BUILD UP Skills training scheme
 - easy to approach both the workers and the management
 - knows the product and the target groups
- Competence, personality and attitude
 - an experienced educator with long experience in construction sector
 - ideal personality and attitude for the job
 - excellent communication skills
 - respected by both the workers and the management in the companies



On-site training ambassador at work

Training of
trainers

Visits to
construction
sites

Present at
Building
Fairs and
Events

Training of
Change
Agents

Building
Authority
Events

Construction
and building
sector
seminars

Presentations
at meetings and
seminars

Interviews,
Articles



6-7 December 2016

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Challenges

- construction industry is very fast-paced with strict schedules
 - difficult to allocate training for workers
- strict on-site security rules
 - other companies' workers are not allowed to enter on the construction sites
- sub-contract chains
 - workers not directly employed by the main contractor
- workers not typically keen to attend training
- joint training of workers and supervisors

Recommendations

- Involve your target groups and all relevant stakeholders in the process at early stage
 - Joint events for the industry, interest groups and training providers
 - Endorsement of interest groups and authorities
- Facilitate both to the needs of the learner AND the needs of the industry
- Speak their language
 - On-site training ambassador was our "trump card"
 - Digital applications
- Pedagogical methods need to fit to modern tools
- Be (pro)active and consistent but allow time for the process
- Open communication
- BUILD UP Skills scheme and awareness should be integrated in quality and human resource management

Thank you!



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