Views from the thermal insulation industry on quality of the works and data compliance

1st International QUALICHeCK conference
Brussels, 30 September 2014

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Eurima

Represents the interests of all major mineral wool producers throughout Europe:

- Fibran
- Flumroc AG
- Glava A/S
- Saint-Gobain Isover S.A.
- Izocam Ticaret Ve Sanayi A.S.
- Knauf Insulation S.A
- Paroc Group Holding Oy
- Rockwool International A/S
- Sager AG
- Ursa Insulation S.A.

EURIMA is supporting the following association:
The Challenge..

QUALITY of the work

- Clear communication (reliable data)
- Calculation
- Examples
- Certified installers
- Trainings

COMPLIANCE, Reliable input data
Design_Clear Communication

**Rocksilk Pitched Roof Slab**

<table>
<thead>
<tr>
<th>Caractéristiques</th>
<th>Code</th>
<th>Niveau</th>
<th>Unité</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductivité thermique</td>
<td>λD</td>
<td>0,03</td>
<td>W/(m.K)</td>
</tr>
<tr>
<td>Tol</td>
<td>Valore</td>
<td>Norma</td>
<td></td>
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<tr>
<td>Ré:</td>
<td>A1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab:</td>
<td>λₜ = 0,037 W/(mK)</td>
<td>UNI EN 13501-1</td>
<td></td>
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<tr>
<td>Pei</td>
<td>σₛₑ ≥ 50 kPa</td>
<td>UNI EN 826</td>
<td></td>
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<tr>
<td></td>
<td>Fₛ ≥ 600 N</td>
<td>UNI EN 12430</td>
<td></td>
</tr>
<tr>
<td></td>
<td>μ = 1</td>
<td>UNI EN 13162</td>
<td></td>
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<tr>
<td></td>
<td>Cₛ = 1030 J/(kgK)</td>
<td>UNI EN 12524</td>
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<tr>
<td></td>
<td>ρ = 150 kg/m³ cerca (210/130)</td>
<td>UNI EN 1602</td>
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</tbody>
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\( \lambda_{90}/90 \)
In many countries the U value calculation, is done under simplified rules, despite it should be in accordance with the ISO 6946.

The solution is NOT simplify the procedures BUT give the Designers the tools and the knowledge for address properly theses procedures!
Design Calculation

Thermal bridges calculation is normally supported by an abacus of pre-calculated solution that provides the users with the value to use as input for calculation.

However, considering that thermal bridging have a proportional effect on the thermal performance which increase with high energy performance Buildings, the tendency now is to require a detailed modeling of each Thermal Bridge when designing a A+
EURIMA Members provide:

- Clear Datasheet
- Calculation tools
- Construction details

What about compatibility of different components?
Product → Systems → Envelope
Construction Mistakes

Loft insulation:
- discontinuity at the eaves,
- missing insulation under loft mounted MVHR,
- displaced insulation due to inconsiderate installation of M&E

Cavity insulation:
- Use of off-cuts insulation in cavities
- Empty cavities,
- Misuse of the inherit fit ability of mineral wool
The **Cavity Insulation Guarantee Agency** is an independent body that provides 25 years guarantees for Cavity Wall Insulation fitted by registered installers in the UK and Channel islands. Before installation begins, a CIGA registered installer will carry out a pre-installation assessment to ensure that the property is suitable for Cavity Wall Insulation.

**NSAI (National Standards Authority of Ireland).** Responsible for national certification authority for CE marking. NSAI has developed a number of installer schemes whose aim is to verify the competency of installers carrying out improvements to dwellings. **Blown Loft Insulation | Cavity Wall Insulation | External Insulation**

**Reconnu Garant de l’Environnement.** From 1 July 2014, subsides will be granted just in case the company who carried out the works holds the EGR mention. To obtain the RGE certification, one needs two things

- Follow a FEEBat training (3-days training) on Energy Efficiency, SS, refurbishment, ...
- Qualibat certification, which includes controls on the financial and social management of the company, regular controls on quality of jobsites and trainings by manufacturers on specific systems and applications
EURIMA has published the “Design and Installation Principle”:
http://www.eurima.org/about-mineral-wool/design-installation-principles

Members, depending on application, provide:
• Detailed guidance for installers
• Video
• Frontal trainings
• Certified installers
Commissioning is a vital process to ensure that the building's systems are fully functional at construction completion. There are few examples of tests and measurements that could be done in this phase, such as:

- Blower Door Test (UK, PT, IR, DK, FR)
- Thermography

Support the USERS in “understanding the Building”!
Conclusion

- CE mark
- Provide technicians with the necessary knowledge and tools
- Check the feasibility of a project and compatibility of components / technique
- Provide installers with examples and «best practice»
- Check the installation/construction phase carefully

....Avoid the «Quis custodiet custodies» effect!