

# SOLIDO COMPANY TRAINING – 1 DAY

(standard program, can be tailored on request)

## 1. Introduction & practical arrangements

- Physibel software introduction and status
- Physibel Portal for user and licence management
- How to use the online Physibel Knowledge Base?
- File transfer: SOLIDO training files

## 2. Introduction to heat transfer theory

- Concepts of conduction – convection – radiation
- Implementation in the Physibel software
- Link to the European standards (with focus on EN ISO 10211 and EN ISO 6946)

## 3. Geometric modelling in the Physibel software

- Prepared CAD drawing via TriscoDXF
- Unprepared CAD drawing as underlayer in Trisco2D (and from Trisco2D to TRISCO)
- Creating solids within SOLIDO
- Importing STL files via SOLIDO
- Predefined frequently used boundary conditions and materials (Colour database)

## 4. Exercises on SOLIDO

- Basic colour types
- Exercise 1: 1D heat transfer, wall U-value.
- Exercise 2: Modelling a mushroom column by using solids
- Exercise 3: Rainscreen cladding wall with brackets via STL files
- Exercise 4: Defining air cavities in STL- imported geometries Structural Glazing

## 5. Derived thermal properties and reporting

- Linear thermal transmittance ( $\psi$ -value) (using roof junction exercise)
- Point thermal transmittance ( $\chi$ -value) (using exercise 3 above)
- Mean thermal transmittance ( $U_m$ -value) (repetitive thermal bridges)

## 6. SOLIDO output

- SOLIDO graphic output and text output

## 7. Air cavities: non-ventilated, slightly ventilated, strongly ventilated

- About global surface heat transfer coefficients: horizontal, upwards, downwards.
- Air cavities in international standards implemented in TRISCO: EN ISO 6946 and EN ISO 10077-2

## 8. Exercises (on files delivered by company): DXF and/or SLD files sent by company (week in advance)

## 9. SOLIDO miscellaneous topics:

- Material template maintenance: Colour database
- Parameter variations – batch calculations
- Detailed radiation on surfaces (RADCON type BC\_SKY as alternative for BC\_SIMPL)
- Calculation parameters.

## 10. Questions, conclusions & File transfers.