



Structural Analysis & Design Software

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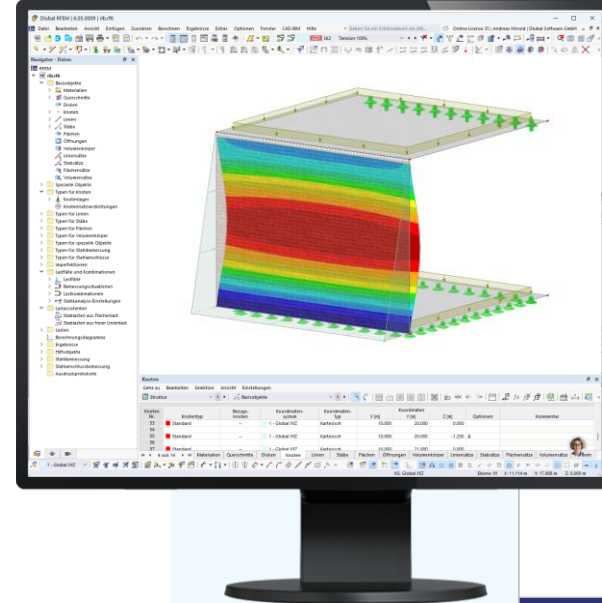


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Webinar

How to Consider Masonry in RFEM 6



Questions During the Presentation



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Questions

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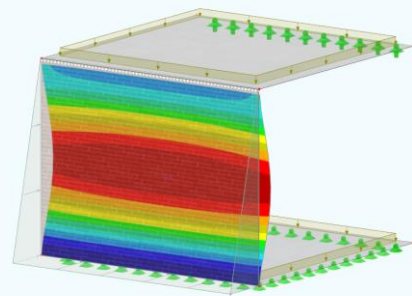


CONTENT

01 **Masonry material parameters**

02 **Differences in material models**

03 **Examples in RFEM 6**



Material Properties

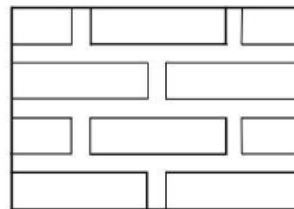
- **Modeling of masonry in RFEM**

Masonry -> Combination of bricks and mortar

Detailed micromodel

Creation of masonry through its individual components:

Bricks + Mortar joint



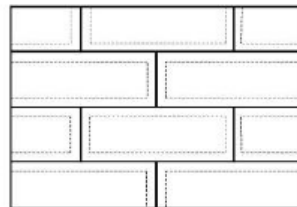
Material Properties

- **Modeling of masonry in RFEM**

Masonry -> Combination of bricks and mortar

Simplified micromodelling

Creation of masonry through blocks. Definition of contact conditions between the blocks.



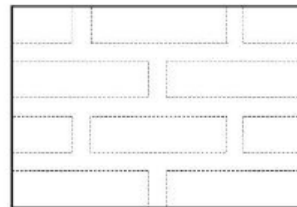
Material Properties

- **Modeling of masonry in RFEM**

Masonry -> Combination of bricks and mortar

Macromodeling

Creation of masonry through „smeard“ material parameters between bricks and mortar



Used in RFEM Surface Models



Material Properties

- Which parameters are required in RFEM?

Main | Material Values

Categories

Material type
Masonry

Material model
Isotropic | Linear Elastic

Basic Material Properties

Modulus of elasticity
E 1810.0 [N/mm²]

Shear modulus
G 766.9 [N/mm²]

Poisson's ratio
ν 0.180 [--]

Specific weight / Mass density
γ 7.47 [kN/m³]
ρ 747.00 [kg/m³]

Definition type
E | (G) | ν

Material Properties

■ Determination of elastic modulus / shear modulus

Basic parameters according Eurocode 6

Determination of Emodulus:

$$E = f_k \times 1000 \times \frac{d_h}{h_{ref}}$$

with d_h High of the brick

h_{ref} reference high (0,25m)

K_E	Clay	950 - 1250
	Calcium Silicate	800 - 1250
	Manufactured Stone	2050 - 2700

Determination of Shear modulus:

$$G = 0,4 \times E$$

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RFEM 6 Master Class

All you need to know for a start!



TO THE RFEM COURSE

Eurocode 2 Master Class

Deep Dive in Reinforced Concrete Design with RFEM 6!



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Course Package #1

Masterclass: Eurocode 2 - Eurocode 3
- Eurocode 5



TO THE PACKAGE #1

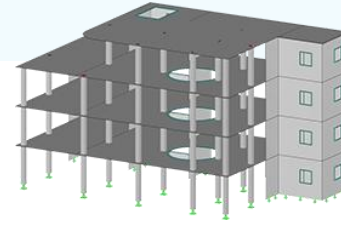
Course Package #2

Masterclass: RFEM 6 - Eurocode 2 -
Eurocode 3 - Eurocode 5



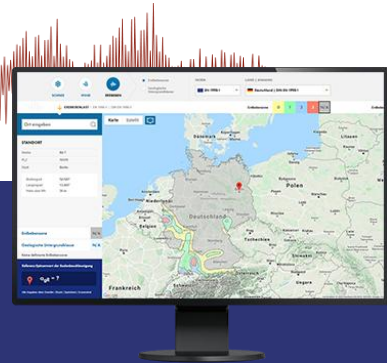
TO THE PACKAGE #2

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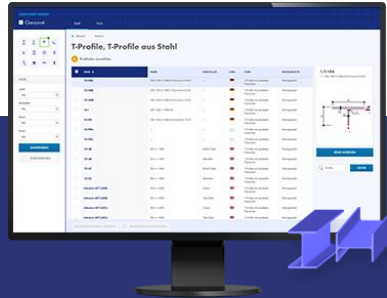
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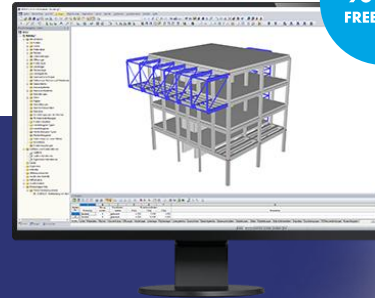
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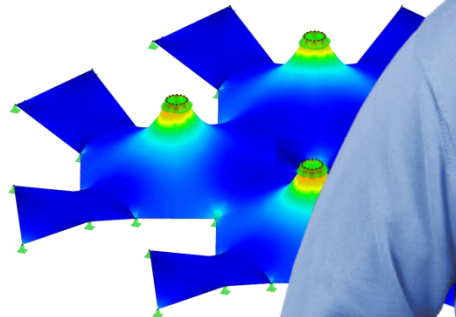
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