

EXERCISE BAT 3 & 4: COMPOSITE BEAM AND CONNECTION

Problem 1

Data

We take the building floor from problem 1 in the previous series. As a reminder, this is a simple span 2nd beam with a 10 m span; Figure 1.1 below shows the cross-section with the connection.

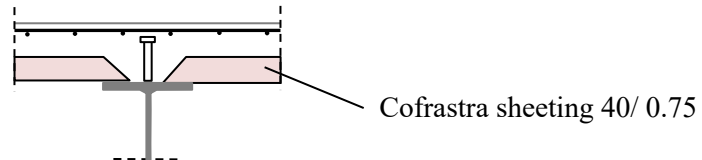


Figure 1.1 - Cross-section of the 2nd beam

Questions

1. Design the total connection of this composite beam
2. Check the longitudinal shear (use a compression strut angle of 30°)
3. If applicable, design the composite beam as a partial connection.

Problem 2

Data

We take the data for the building floor from problem 2 in the previous series, where the dimensioning the continuous main beams was carried out.

Questions

1. Design the total connection of the composite main beams
2. Check the longitudinal shear (use a compression strut angle of 30°).