

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 beam joist with a 10 m span; Figure 1.1 below shows the cross-section with the connection.

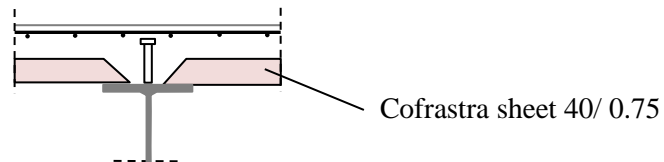


Figure 1.1 - Cross-section of a joist

Questions

1. Design the total connection of the composite beam
2. Check the longitudinal shear (use a compression rod 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, dimensioning the continuous struts, from problem 2 in the previous series.

Questions

1. Design the total connection of the mixed slat base
2. Check the longitudinal shear (use a compression rod angle of 30°).