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6.2 Design effects

Bending moment at the centreline of opening 4 ($x_{0,4} = 1.95$ m) is:

$$M_{Ed} = 190 \times 1.95 - 12.69 \times 3 \times 1.95^2/2 = 299 \text{ kNm}$$

Similarly, the moment at opening 3 is $M_{Ed} = 347 \text{ kNm}$

Shear force at edge of equivalent opening 4 (at $x_{0,4} - 0.135/2$) is:

$$V_{Ed} = 190 - 12.69 \times 3 \times (1.95 - 0.135/2) = 119 \text{ kN}$$

Shear force midway between the openings: (at $x_{3,4} = 2.175$) is:

$$V_{Ed} = 190 - 12.69 \times 3 \times 2.175 = 107 \text{ kN}$$

6.3 Section classification