

The beam in the figure below is loaded by the constant distributed load (f) and two point loads (F_1, F_2). The elastic material of the beam is assumed.

For a given structure:

- Draw the diagrams for the internal forces, bending moments and torque.
- Draw and calculate the normal stress distribution in the clamp.

The checked values are:

- Values of internal forces and moments in the clamp and the free end [kN, kNm].
- Coordinates of intersection points of the neutral axis and the coordinate system in the clamp [m].
- Normal stresses at boundary points "1-4" in the clamp [kPa].

