



Murfor® Pro: Design Program

Wall on bending floors

1. Project Info

Project:

Owner:

Designer:

Contractor:

2. Project inputs

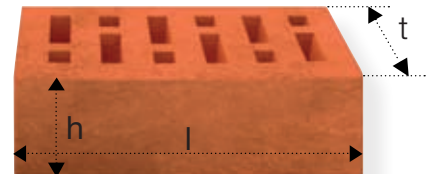
a. Materials

| | | |
|--|------------------------|-------------------|
| Block specification | Clay units | |
| Block length * width * height | 245 * 115 * 245 | mm |
| Mean vertical compressive strength of the blocks (f_b) | | |
| - Vertical | 15,4 | N/mm ² |
| - Horizontal | 2,8 | N/mm ² |
| Characteristic initial shear strength (f_{vk0}) | 0,20 | N/mm ² |
| Mean compressive strength of the mortar (f_m) | 5,50 | N/mm ² |



b. Loads

| | | |
|---------------------------------|-------------|-------------------|
| Wall length (l) | 4200 | mm |
| Wall thickness (t) | 115 | mm |
| Wall height (h) | 2750 | mm |
| Specific weight of masonry (sw) | 7,00 | kN/m ³ |



c. Safety factors

| | |
|---|-------------|
| Partial factor for permanent loads (γ_g) | 1,35 |
| Partial factor for variable loads (γ_q) | 1,50 |
| Safety factor for masonry (γ_m) | 2,50 |
| Safety factor for steel (γ_s) | 1,15 |

3. Results

| | | |
|-----------------------------|------|------|
| Self weight (g) | 2,21 | kN/m |
| Applied moment (M_{sd}) | 6,59 | kNm |
| Applied shear (V_{sd}) | 6,28 | kN |

4. Solution

| | | |
|---|-------------------------------|--------------------|
| Required number of Murfor® | | |
| First joint of the bottom layer + every 4 layers | Murfor® / RND / Z-4-80 | |
| Corresponding sectional area of the reinforcement (A_s) | 35,54 | mm ² |
| Selectional area of the reinforcement (A_s) per unit height corresponding to the minimum required percentage (ω) | 34,50 | mm ² /m |

Has to be placed in the first joint of the bottom layer of the wall.

| | |
|---|---|
| Ultimate Limit State: control of compressive stresses | ✓ |
| Ultimate Limit State: control of shear stresses | ✓ |
| Ultimate Limit State: crack control | ✓ |
| Serviceability Limit State | ✓ |

| | |
|--|---|
| For masonry with mortar joints | For masonry with thin bed (glued) joints |
| Murfor® RND/Z Murfor® RND/E Murfor® RND/S | Murfor® EFS/Z |

