# Test Scenario Document for Static Calculation

**Project Name:** Pfeifer-Suite-Hybridbeam
**Hybridbeam project name:** 0986_Neubau Logitiskzentrum Warehouse_Unna
**Position:** U10
**Tester Name:** Pawel Wojtanowicz
**Date:** 26.02.25

## Instructions

1. Follow each test step carefully.
2. Fill in the **Actual Result** column based on what happens.
3. Mark **Status** as ✅ Pass or ❌ Fail.
4. Add extra observations in the **Notes** section.
5. Attach screenshots if needed.

## Common Data

Common data for for all tests mentioned in this test document are teaken from document: 0986_Neubau
Logitiskzentrum Warehouse_Unna_STATIK BH_02-01-2025.pdf (see 'sources' folder).

The common data are as follows:

- static system:
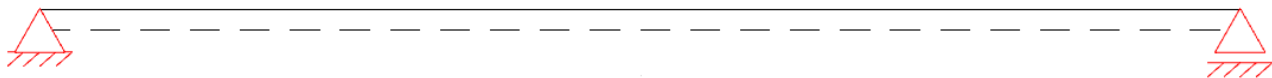


- L = 6m
- self-weight loads: 3kN/m (mounting state / final state)
- HC plate loads: 26,83kN/m (mountig/final)
- mounting loads: 7,25kN/m (mounting)
- installations loads: 12,33kN/m (final)
- live loads: 19,58kN/m (final)

## Test Cases

| Test case ID | Test name | Description | Steps | Expected result | Actual result | Notes | Status |
|---|---|---|---|---|---|---|---|
| TC001 | Bending moment - mounting state | Verification of the correctness of bending moment value in mounting state | 1. Open app 2. Enter valid data, see: common data above 3. Click calculate button 4. Extract | Mmax = 230,15kNm, Mmin = 134,23kNm (as in source file) | Mmax = 230,15kNm, Mmin = 134,23kNm | see: tc001-1 | ✅ Pass |

| Test case ID | Test name | Description | Steps | Expected result | Actual result | Notes | Status |
|---|---|---|---|---|---|---|---|
| | | | the bending moment value | | | | |
| TC002 | Bending moment - final state | Verification of the correctness of bending moment value in final state | 1. Open app 2. Enter valid data, see: common data above 3. Click calculate button 4. Extract the bending moment value | Mmax = 388,29kNm, Mmin = 189,72kNm (as in source file) | Mmax = 388,29kNm, Mmin = 189,72kNm | see: tc002-1 | ✅ Pass |
| TC003 | Shear force - mounting state | Verification of the correctness of shear force value in mounting state | 1. Open app 2. Enter valid data, see: common data above 3. Click calculate button 4. Extract the shear force value | Vmax = 153,44kN Vmin = 89,49kN (as in source file) | Vmax = 153,44kN Vmin = 89,49kN | see: tc003-1 | ✅ Pass |
| TC004 | Shear force - final state | Verification of the correctness of shear force value in final state | 1. Open app 2. Enter valid data, see: common data above 3. Click calculate button 4. Extract the shear force value | Vmax = 258,86kN Vmin = 126,5kN (as in source file) | Vmax = 258,86kN Vmin = 126,48kN | see: tc004-1 | ✅ Pass |

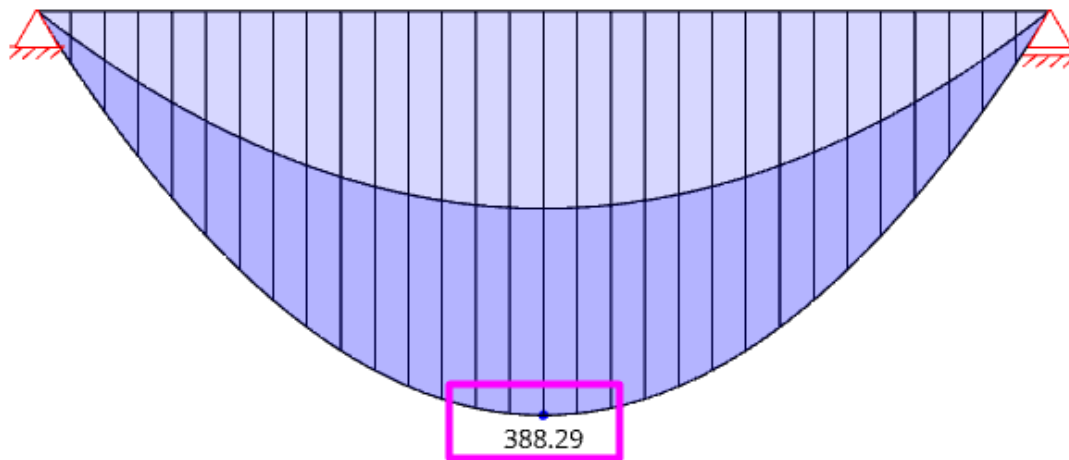| Test case ID | Test name | Description | Steps | Expected result | Actual result | Notes | Status |
|---|---|---|---|---|---|---|---|
| TC005 | Deformation - mounting state | Verification of the correctness of deformation value in mounting state | 1. Open app 2. Enter valid data, see: common data above 3. Click calculate button 4. Extract the deformation value | wmax = 27,38mm (as in source file) | wmax = -4,16mm | see: tc005-1 value & graph direction - to discuss with @WojciechRadkiewicz first | ❌ Fail |

## Screenshots

- tc001-1



| | $M_{y,d,-}$ [kNm] | $M_{y,d,+}$ [kNm] | $V_{z,d,-}$ [kN] | $V_{z,d,}$ |
|---|---|---|---|---|
| | 0.00 | 134.23 | -89.49 | |
| | 0.00 | 183.17 | -122.12 | 1 |
| | 0.00 | 138.96 | -92.64 | |
| | 0.00 | 187.90 | -125.27 | 1 |
| | -0.00 | 176.49 | -117.66 | 1 |
| | 0.00 | 225.43 | -150.29 | 1 |
| | 0.00 | 181.22 | -120.81 | 1 |
| | -0.00 | 230.15 | -153.44 | 1 |

230.15
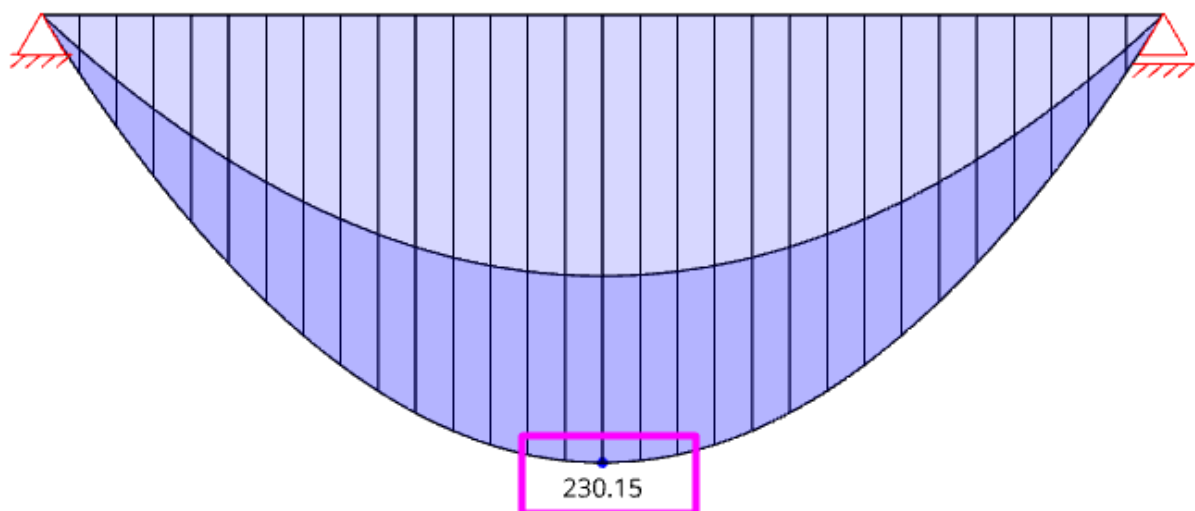
- tc002-1

| | $M_{y,d,-}$ [kNm] | $M_{y,d,+}$ [kNm] | $V_{z,d,-}$ [kN] | $V_{z,d,+}$ [kN] |
|---|---|---|---|---|
| | -0.00 | 189.72 | -126.48 | 126.48 |
| | -0.00 | 321.88 | -214.59 | 214.59 |
| | 0.00 | 194.44 | -129.63 | 129.63 |
| | -0.00 | 326.61 | -217.74 | 217.74 |
| | 0.00 | 231.98 | -154.65 | 154.65 |
| | -0.00 | 364.14 | -242.76 | 242.76 |
| | 0.00 | 209.14 | -139.43 | 139.43 |
| | 0.00 | 341.30 | -227.54 | 227.54 |
| | 0.00 | 251.40 | -167.60 | 167.60 |
| | 0.00 | 383.56 | -255.71 | 255.71 |
| | 0.00 | 236.70 | -157.80 | 157.80 |
| | -0.00 | 368.87 | -245.91 | 245.91 |
| | 0.00 | 213.86 | -142.58 | 142.58 |
| | 0.00 | 346.03 | -230.69 | 230.69 |
| | 0.00 | 256.12 | -170.75 | 170.75 |
| | 0.00 | **388.29** | **-258.86** | **258.86** |



388.29

- tc003-1



-153.44

153.44

| V_z,d,- [kN] | V_z,d,+ [kN] |
|---|---|
| -153.44 | -89.49 |
| -153.44 | -89.49 |

- tc004-1



-258.86

258.86

| V_z,d,- [kN] | V_z,d,+ [kN] |
|---|---|
| -258.86 | -126.48 |
| -258.86 | -126.48 |
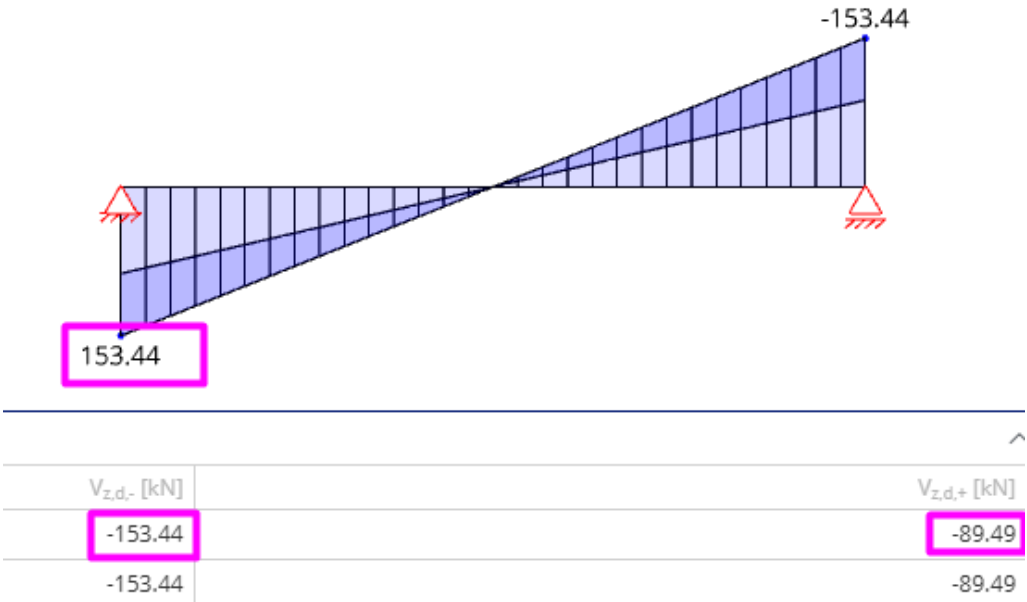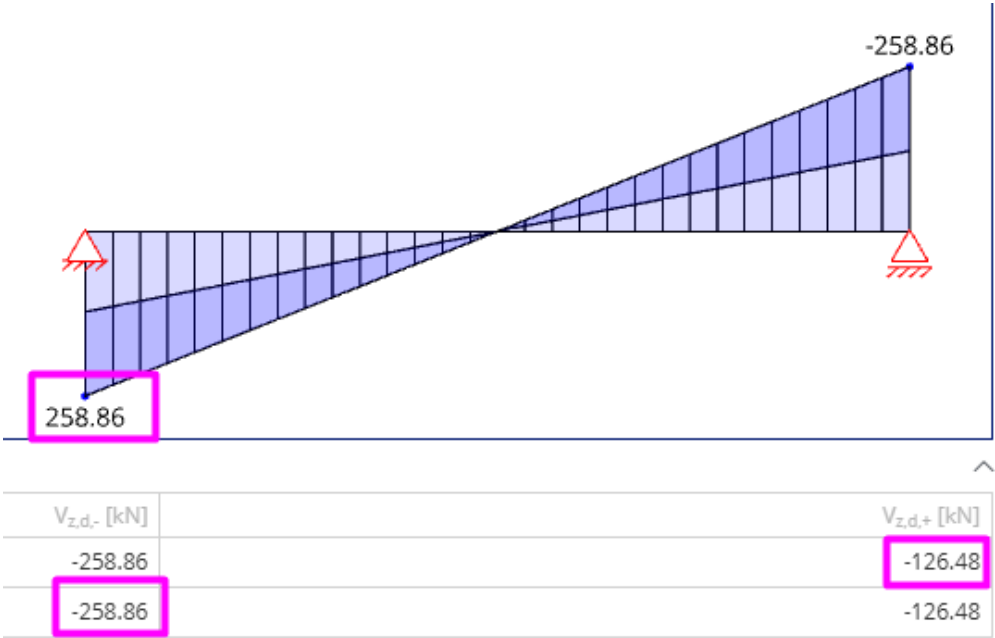
- tc005-1

| $R_{y,d,-}$ [°] | $R_{y,d,+}$ [°] | $D_{z,d,-}$ [mm] | $D_{z,d,+}$ [mm] |
|---|---|---|---|
| -0.13 | 0.13 | -4.16 | 0.00 |



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