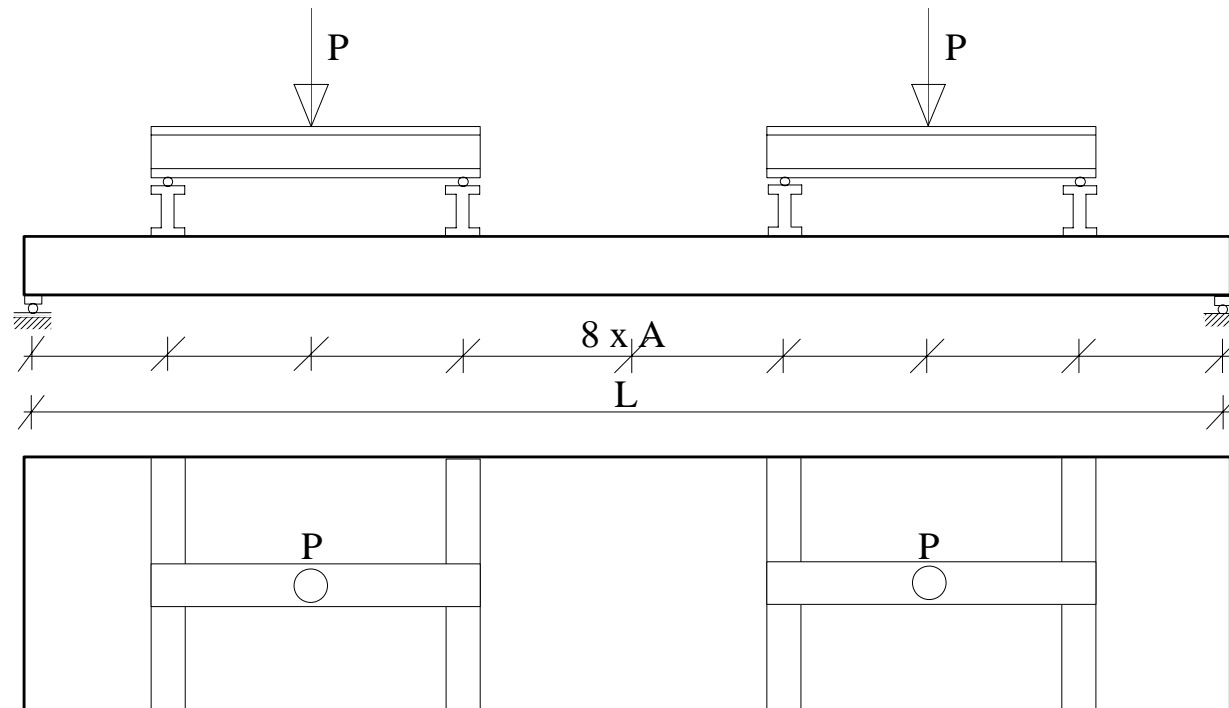
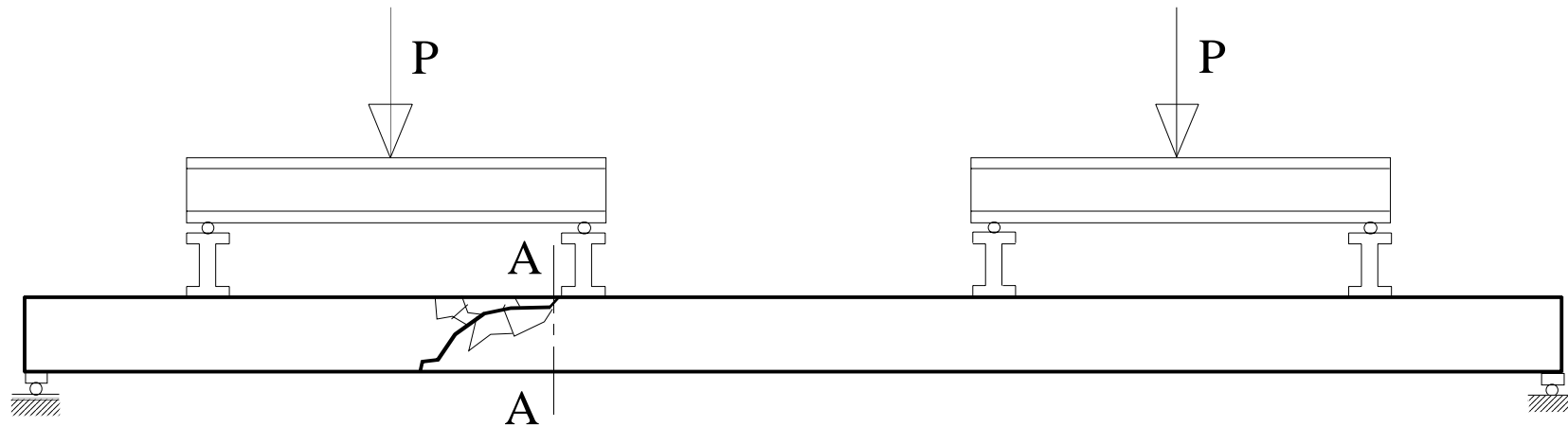


## 500 mm slabs: Test arrangement for EC2, 6.2a



*Fig. 1. Test arrangements.*

## Shear compression failure before yielding of strands



*Fig. 2. Failure mode and critical cross-section A - A.*

*Table 1. Data about tests.  $V_{obs}$  refers to the shear resistance observed in the test and  $V_{pre}$  to the resistance predicted by 6.2.a with  $\gamma_c=1.0$ .*

Test	Strands	$\sigma_p$ MPa	$f_{ck,cyl}$ MPa	$L$ m	$b_w$ mm	$g_{slab}$ kN/m	$V_{obs}$ kN	$V_{pre}$ kN	$\frac{V_{obs}}{V_{pre}}$
1	13 $\phi$ 12.5	1000 <sup>3</sup>	59.1 <sup>1</sup>	9.9	320 <sup>1</sup>	6.59 <sup>1</sup>	173.9	258.7	0.67
2	13 $\phi$ 12.5	1000 <sup>3</sup>	51.3 <sup>1</sup>	8.5	350 <sup>2</sup>	6.69 <sup>2</sup>	195.1	270.2	0.72
3	18 $\phi$ 12.5	1000 <sup>4</sup>	51.3 <sup>4</sup>	10.9	340 <sup>2</sup>	6.69 <sup>2</sup>	189.4	285.8	0.66

<sup>1</sup> Measured value

<sup>2</sup> Nominal value

<sup>3</sup> Estimated from initial prestress 1050 MPa

<sup>4</sup> Used in calculation but ought to be checked

## Conclusion:

**EC2, 6.2a is not adequate for zones with high bending moment**