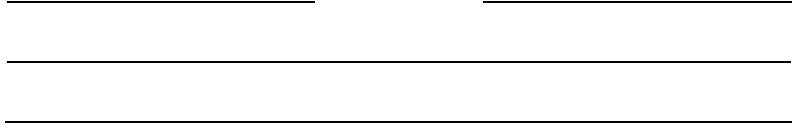

1

2

3



1.

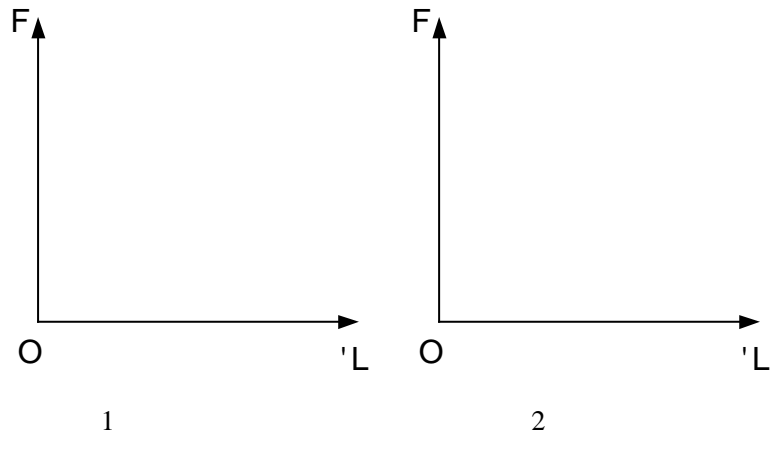
1

Q235

2

d_0 (mm)			d_1 (mm)		
A_0 (mm ²)			A_1 (mm ²)		
L_0 (mm)			L_1 (mm)		

	F_s (kN)	F_b (kN)	V_a (MPa)	V_b (MPa)	σ (%)	l (%)
	—		—			



2.

1

Q235

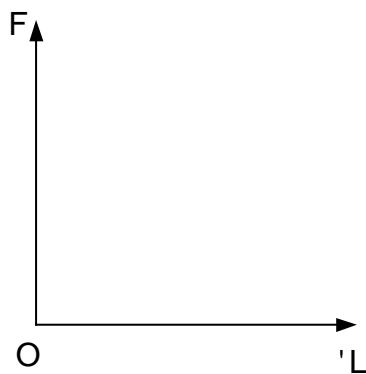
2

d_0 (mm)				
A_0 mm ²				

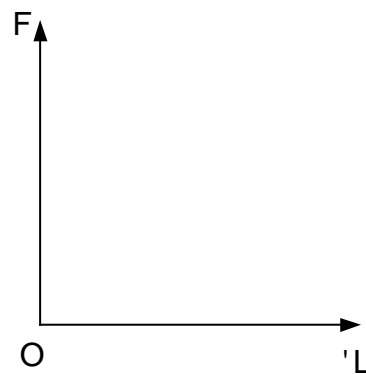
	F_s (kN)	F_b (kN)	V_a (MPa)	V_b (MPa)
		—		—
	—		—	

$$V_s \frac{F_s}{A_0}$$

$$V_b \frac{F_b}{A_0}$$



1



2

E

	b mm	h mm	S b h mm ²
1			
2			

N	$h_1 \cdot 10^6$	$h_2 \cdot 10^6$
F	h_1	h_2
500		
500		
500		
500		
500		
	$H_1 =$	$H_2 =$

$$E = H \frac{H_1}{2} \quad H_2 \frac{H_2}{2} \quad E = \frac{P}{H_0} \quad P \left| \frac{H_2}{H_1} \right|$$

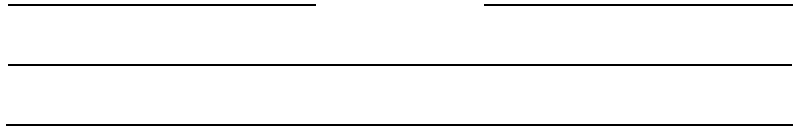
	(mm)									d ₀ (mm)
	1			2			3			
	1	2		1	2		1	2		

	—	—		

	d= mm	h= mm	a= mm	E= GPa	K=
/N	$\mu 10^6$				
	1	2	3	4	5
$F_1=500$					
$F_2=500$					
$F_3=500$					
/ 0					
1 /MPa					
1 /MPa					
$G \frac{V}{V} \mu 100\%$			/		

L_1		d	
L_2		E	
D			

		$\mu 10^6$		
	(N)	$\theta(-45^\circ)$	$\theta(0^\circ)$	$\theta(45^\circ)$
1	100			
2	100			
3	100			



	h(mm)	b(mm)	L(mm)

F	§ F	μ10 ⁶	
		φ	φ

F-0

		L(mm)	E	I_z	$F_{cr}(N)$	$F_{jx}(N)$	$f(\%)$