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□

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1. ~~1~~ <sup>1</sup> ~~1~~ <sup>1</sup>

6 = ~~1~~ <sup>1</sup> ~~1~~ <sup>1</sup>

~~1~~ <sup>1</sup> ~~1~~ <sup>1</sup>

~~1~~ <sup>1</sup> ~~1~~ <sup>1</sup>

=B

1

Q235

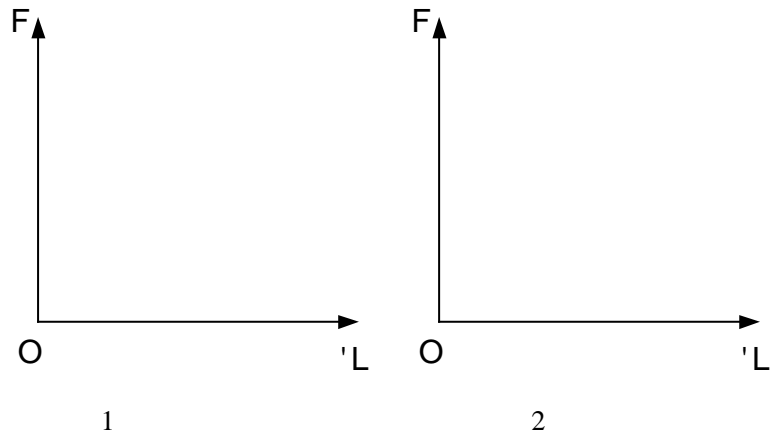
2

$d_0$ (mm)			$d_1$ (mm)		
$A_0$ (mm <sup>2</sup> )			$A_1$ (mm <sup>2</sup> )		
$L_0$ (mm)			$L_1$ (mm)		

图 10

	$F_s$ (kN)	$F_b$ (kN)	$V_a$ (MPa)	$V_b$ (MPa)	$\sigma$ (%)	$l$ (%)
	—		—			

Figure 1



2. H " † Ĩ Á5\_ ÔPÂ

6=Ô\$

Â ÔÂÆ

2ÔÆ

=B

1

Q235

2

$d_0$ (mm)				
$A_0$ mm <sup>2</sup>				

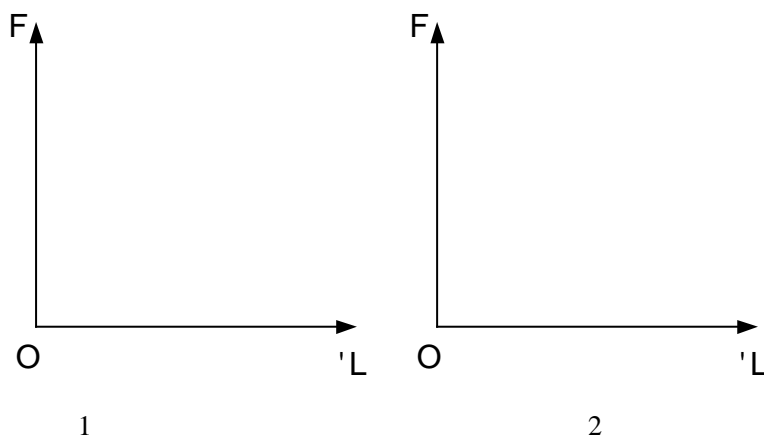
EN 100

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

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

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

EN 100



III

E Â ÔPÂ

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6=DAE

ADAÆ

DAE

=

	b mm	h mm	S b h mm <sup>2</sup>
1			
2			

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

ÊÛ

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



□

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6- $\hat{D}_S$

$\hat{A}_{PA}$  E

$\hat{D}_{DE}$

$\hat{D}_E$

	(mm)									$d_0(\text{mm})$
	1			2			3			
	1	2		1	2		1	2		

ÊÛ

	—	—		

□

_____	_____
_____	_____
_____	_____

6-~~DAE~~<sup>DAE</sup>

~~ADA~~<sup>ADA</sup> E

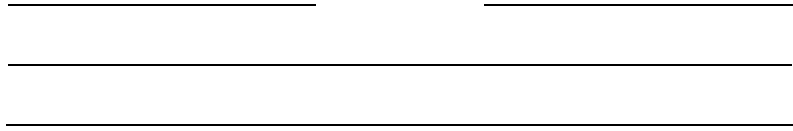
~~DAE~~<sup>DAE</sup>



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



□



6-~~DAE~~

~~ADA~~ E

7- ~~DAE~~

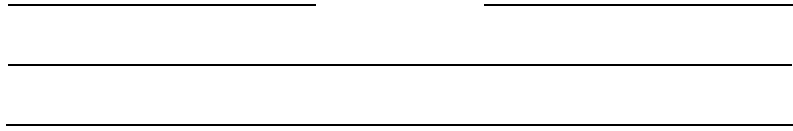
= 

$L_1$		$d$	
$L_2$		$E$	
$D$			

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

ÊÔÊ

□



6-~~0~~Æ

7-~~0~~Æ

8-~~0~~Æ

=  $\hat{D}_A$

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

F	S F	$\mu 10^6$	
		$\theta$	$\theta$



EP

F- 0(45 4 μ

		L(mm)	E	I <sub>z</sub>	F <sub>cr</sub> (N)	F <sub>jx</sub> (N)	f(%)