

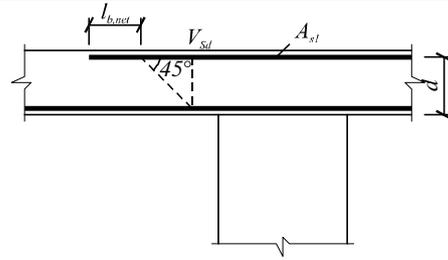
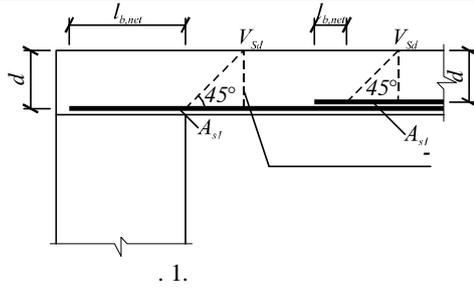
$(\mu k)_T (2),$  - 25 75,  $\psi_1 \psi_2$  2- 100 300; 8  
 12.  
 $R = 200$  ,  $L =$   
 $\mu k$  , - = 400 , -  
 $(\mu k)_T ($  -  $6,87 \cdot 10^4$  ,  $\nu = 0,3, \sigma_T = 1,47 \cdot 10^2$  , -  
 $)$ , -  $P = 55$  -  
 $($  -  $) \gamma = 1,96 \cdot 10^5$  / ,  
 $- k_\sigma \leq 1$  (3). -  
 $\mu k$  ,  
 $(\mu k)_T = 2,212,$   
 $\varphi_1 = 0,336, \varphi_2 = 6,1, \rho_1 = 46,7, \rho_2 = 176, \psi_1 = \psi_2 = 10,$   
 $h = 0,231$   
 $1,89 \times 2,08 \times 0,19$  116  
 $1,57 \times 1,73 \times 0,16$  9  
 1. , 1980. - 368 . -  
 2. : 5- ; .2).  
 $\varphi_1$  0,2 1,2;  
 $(2 \div 9)$   $(\varphi_2);$  12.01.81, 135-81. , 1980. - 23 . -

624.012.45

5.03.01698

98, 5.03.016  
 (2) (3)  
 [1]  
 $V_{Sd} \leq V_{Rd,1}$  (1)  
 $V_{Sd} \leq V_{Rd,2}$  (2)  
 $V_{Sd} \leq V_{Rd,3}$  (3)  
 $V_{Rd,1} = [\tau_{Rd} k (1.2 + 40 \cdot \rho_l) + 0.15 \cdot \sigma_{cp}] b_w d$  (4)  
 $: 1 < k = 1.6 \acute{o} d \leq 1.35 \acute{o}$  , 50 %  
 $\sigma_{cp} = \frac{N_{Sd}}{A_c}$   $\acute{o}$   
 $(d)$   
 $(1)$   $($  « »);  $\rho_l = \frac{A_{s1}}{b_w \cdot d} \leq 0.02 \acute{o}$

( ), , , , , 267.

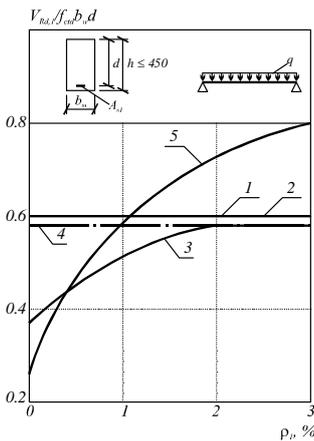


. 1.

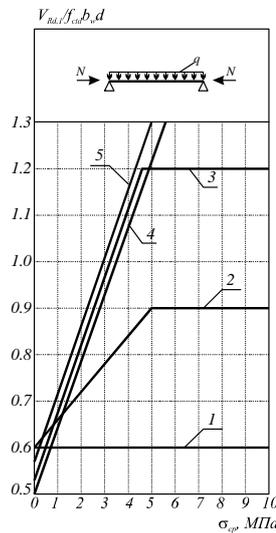
3.

/			
1	II621675, . 3.30	<b>R</b>	$Q \leq 0.35R \cdot b \cdot h_0$ (10)
2	2.03.01684 . 3.30	$\varphi_{b1} = 1 \text{ ó } 0.01 R_b (R_b)$	$Q \leq 0.3 \cdot \varphi_{b1} \cdot R_b \cdot b \cdot h_0$ (11)
3	5.03.01698		$V_{Sd} \leq V_{Rd,2} = 0.5 \cdot v \cdot f_{cd} \cdot d \cdot b_w$ (12)
		$v = 0.7 - \frac{f_{ck}}{200} \geq 0.5$ ó	$(f_{ck} / ^2)$
4	Pr PN6 603264 . 5.4.2.		$V_{Sd} \leq V_{Rd,2} = 0.5 \cdot v \cdot f_{cd} \cdot d \cdot b_w$ (13)
		$v = 0.7 - \frac{f_{ck}}{200} \geq 0.5$ ≤ 50	
		$v \geq 0.4$ > 60	
5	DIN 104561 . 7.2.5. (4)		$V_{Sd} \leq V_{Rd,2} = 0.5 \cdot v \cdot f_{cd} \cdot d \cdot b_w$ (14)
		$v = 0.7 - \frac{f_{ck}}{200} \geq 0.5$ $f_{ck} \leq 50 / ^2$	
		$v = 0.45$ $^{56}/_{67}$	
		$v = 0.4$ $^{60}/_{75}$	

2.



. 2.



	S240	S400, W400	S500, W500
$12/15 \overset{1}{I}$ $20/25$	0.18	0.11	0.09
$25/30 \overset{1}{I}$ $30/37$	0.26	0.16	0.13
$40/45 \overset{1}{I}$ $50/60$	0.31	0.19	0.15
12			

$$\tau_{Rd} = \frac{0.25 f_{ctk,0.05}}{\gamma_c}; \quad (5)$$

$f_{ctk,0.05}$  ó ( ) -  
 $\gamma_c = 1.5$  ó ( ) -  
 $(\gamma = 1.35)$  .

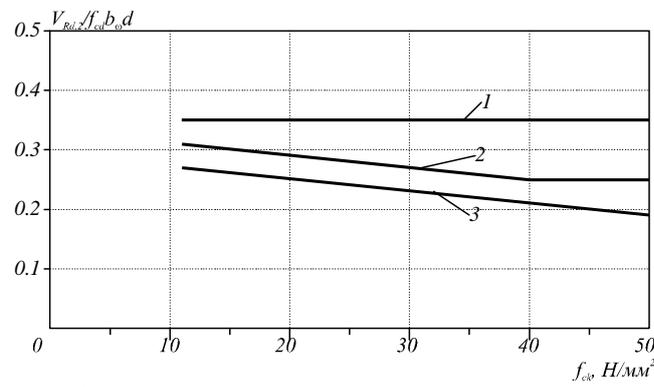
$\rho_I ( ) \sigma ( )$   
 1 ó II621675; 2 ó 2.03.01684;  
 3 ó 5.03.01698; 4 ó Pr6PN 603264;  
 5 ó DIN 104561.

$A_{sI} ( )$   
 $( . . 1); \frac{d + l_{b,net}}{l_{b,net}} \text{ ó } 5.03.016$   
 $(a/d > 3)$

98;  $\tau_{Rd}$  ó

1	И621675, . 3.31	$Q \leq k_I R_p b h_0$ (6)
2	2.03.01684, . 3.31	$Q \leq \varphi_{b3} (1 + \varphi_f + \varphi_n) R_{bt} b h_0$ (7)
3	Pr PN6 603264 . 5.4.2	$V_{Rd,1} = (2.0 k \cdot \tau_{Rd} + 0.15 \cdot \sigma_{cp}) b_w d$ (8)
4	DIN 104561 . 7.2.5	$V_{Rd,1} = [0.12 \cdot k (100 \cdot \rho_1 \cdot f_{ck})^{1/3} - 0.15 \sigma_{cp}] b_w \cdot d$ (9)

(4)  
 ( ),  
 ( ),  
 1 И621675, 2.03.01694, Pr PN6 603264  
 DIN 104561,  
 (6), (7), (8) (9)



2 (ρ<sub>1</sub>) ( )  
 (3)  
 1 ó И621675; 2 ó 2.03.01684;  
 3 ó 5.03.01698, Pr6PN 603264, DIN 104561

(1) ,  
 ( )  
 2. (1) (12) 300  
 150 (f<sub>ck</sub>)  
 (θ = 45°),  
 $f_c = v f_{cd}$  v ó  
 0.5 ≤ v ≤ 1.0.  
 15 %

