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INTERSTATE COUNCIL FOR STANDARDIZATION, METROLOGY AND CERTIFICATION
(ISC)

33857
2016

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Федеральное агентство
по техническому регулированию
и метрологии

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по техническому регулированию
и метрологии

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по техническому регулированию
и метрологии

Pipeline valves. Welding and quality control of welded joints. Technical requirements

—2018—01—01

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	2.312—72			-
	2.314—68			-
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	12.4.021—75	.		
	2246—80		2601—84	
	5264—70	.		-
	6032—2003	-		
	6996—66	.		
	7512—82	.		
	8050—85	.		
	8713—79	.		
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	9466—75			-
	9467—75			-

10052—75

10157—79
11533—75

11534—75

16037—80

16442—60
20295—85

23055—78

24297—2013

24856—2014
33260—2015

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10 2 . 08 1 . 10 1 (54... 65)	
12 ,12 .12 1 .15 .20 .20 2 .20	
12X13.20X13.20 13	
08X13.12X17.14 17 2	
10 14 14 4 .08 18 10 .08 18 12 .10 17 13 2 .03 20 16 6. 0 17 14 (66).12 18 12 .12 18 10 .12 18 9 .10 18 9 . 12 18 9 .12 18 9 .12 18 9.10 18 9.10 18 9- .10 18 9- . 12 18 12 .10X17H13M3T(432).10 17 13 2 (448), 08 17 15 (580)	
06 28 (943).0 28 .07 20 25 2 . 32 8,12 35 (612).12 35 - (612-). 60 (868). 70 - (814 -). 65 (567). 65 (760). 65 - (982-)	
08 22 6 . 08 21 6 2 . 16 18 12 4 (654). 15 18 12 4 (654). 07 16 4 . 07 16 4 - . 10 14 14 4 (711). 07 21 7 5 (222). 03 22 6 2 (67). 08 22 6 (53). 08 21 6 2 { 54). 09 14 16 (694).09 16 4 - .09 14 19 2 (695)	(Ni<8%)
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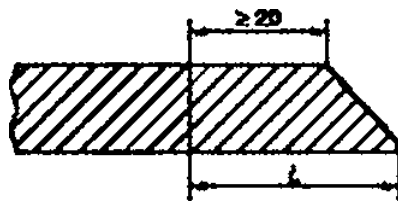
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(375 * 400 '). 6.2.3.5

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42. 42 , 46. 46 . 50 9467 (-13/45. -13/45 . -13/55')	350—400	1—2	5
-09 1 . -09 1 . 9467 (-1 . - -39. -20)	340—380	2	
-12 13 10052 (- 13)	380—420	2.5	15
-17 (7)	190—210	1	
-07 19 11 2 10052 (-400/10 , -400/10)	120—150	2	15
-08 19 10 2 10052 (-400/13. -902/14. -898/21 [8]) -1. -1 . -2, -2 (8)	120—150	2—2.5	
-10 15 25 6 2 10052 (-395/9)	200—250	2—2.5	15
-10 25 13 2 10052 (-6. -8)			
-08 19 10 2 10052 (-15)	310—350	1.5	

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150* .

100* 120' .

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-348 . -45. -32. -26 . -26	380—420	3	5
-6 [9]	905—930	5	15
-43	380—450	2—2.5	15
-201 [10]	400—500	2	15
—	100* 120* .	150* .	

6.3.4
100 *

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2 3.

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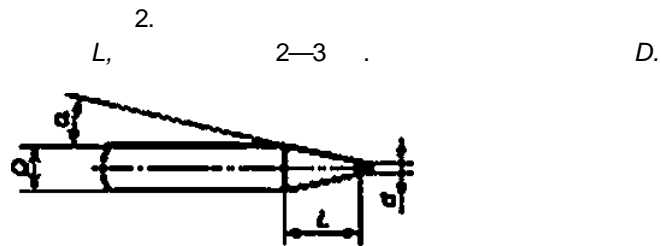
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2.5	0.2—0.3
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12 35 (35) , 03X17H14M3, 60 . 10 17 13 2 . 10X17H13M3T, 12 18 12
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3 20

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 11.2.1 , 5.

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10.10895 (12)	42. 42 . 46. 46 9467 (-13/45/ -13/45 . -16)	30	- 600" 660* . 2

	{ .)	*	
15 . .20 .25 . 20.20 .22	42. 46 9467 (-4. -5. -6. -6)	15	-
15 . .20 .25 , 20.20 .22	50 . 42 . 46 9467{ -13/45. -13/55. -2. -11)	30	9
20 .25 .20.20 . 22	50 9467 (-13/55)	40	* ** — -
20	50 9467 (-13/55) 70- (48 -1)	70	9 -
	-10 25 13 2 10052 (-6)		-
20 ,20 , 09 2 .10 2 . 10 .10 2 . 06 1 .10 1 . 15 2 .10 2 . 09 2	50 . 55. 60 9467 (-13/55, -13/65)	60	9 -
09 2 .10 2 . 10 ,10 2 . 08 1 .10 1 15 2 .10 2 09 2		70	" — 60* -
09 2 .10 2 . 10 .10 2 . 08 1 .10 1 15 2 .10 2 09 2	350 , 55. 60 9467 (-4. -6. -24)	70	9 -
16 .17 .17 1 . 20 ,20	342. 42 .346. 46 9467 (-13/45. -13/45)	30	9 -
	50 9467 (-13/55)	40	9 -
20 .20 .	-09 1 9467 (-1) 3-09X1 9467 (- . -29. -20)	40 450	9 -
20 .20 . 12 .15 .		40 560	
12 1		20 560	

	(. (.	
20 13 . 20X13.	-12 13 10052 (- 13) 3-11X15 25 6 2 10052	40 450	- 9. -11 15 25 6 2.
08X13. 12X13	(-5. -395/9) -10 25 13 2 10052 (-6)	40 420	-10 25 13 2 , - -
12X17	-08 19 10 2 10052 { -898/21. -898/21 .[8]}	20 300	8 — 800 ° . 775* 800* .2 -
14 17 2		70 350	— 680 * 700 ° 4 5 : 2 3 -
12 18 9 . 08 18 10 . 12 18 9 . 12 18 10 . 08 18 10 -	-07 19 11 2 10052 (-400/10 , -400/10 .[8])		350 -
	-08 19 10 2 10052 (-898/21. -898/21 .[8]). -08 19 10 2 (-15)		450* -
12 18 9 . 08 18 10 , 12X18 9 . 12 1 10 . 08 18 10 -	-09 19 10 2 2 10052 (-400/13. -902/14(8))	253 600	500* -
12 18 9 . 08 18 10 . 10 18 9.10 18 9 . 12 18 9 . 12X18 9 . 12 1 10	-04 20 9. -07 20 9 10052 (-8. -12. -36)		-
10 18 9. 12 18 9	48 -2.48 -2 .48 -1.48 -1 (8)		— 970 ° 1020* -
	-07 19 11 2 10052. (-400/10 . -400/10 (10))	350	-
12 18 12 , 10X17H13M3T. (432) 10 17 13 2 . (448)	-07 19 11 2 10052 { -400/10 . -400/10 (8)) -09 19 10 2 2 10052 (-13)	196 600	350* -

	{ .)	*	
12 18 12 . 10 17 13 . (432) 10 17 13 2 . (448)	-09 19 10 2 2 10052 (-400/13. -902/14 (8))	Or 196 600	500* -
15 18 12 4 (654)	- (-654)[14]	70 300	50 ° 950 ° 1050* -
06 26 { 943)	-17 [7]	196 400	1050 ° 1080* -
07 20 25 2		70 300	950* -
06 26 { 943)	-07 19 11 2 10052 (-400/10 . -400/10 [8])	196 400	(3—5) -17
08 17 15 (580)	-02 20 14 2 2 10052 (-20) -02 19 18 5 10052(-20)	Or 196 600	1020* 1060* 300* ;
03X17H14M3(66)		196 400	
03 22 6 2 (67)			
08 21 6 2 (54)	-07 19 11 2 10052 (-400/10 . -400/10 [8])	40 300	950 ° 1050* -
	-09 19 10 2 2 10052 (-400/13. -902/14. [])		-
	-04 20 9. -07 20 9 10052 (-8, -12. -36)		-
08 22 6 (53)	-0 19 10 2 10052(-898/21. -898/21 [8])	Or 196 500	950 ° 1050* -
10 14 14 4 (711)	-08 19 10 2 10052(-15)		
08 22 6 (53)	-04 20 9. -07 20 9 10052	40 300	-
10 14 14 4 (711)	(-8. -12. -36)	196 500	-

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	(.)	.	
09 16 4 07 16 4 07 16 4 -	-10 16 4 10052 (-13/ 56) -08 19 10 2 10052 (-898/21. -898/21 (0)) -08 19 10 2 10052 (-15)	70 400	11
09 14 16 (694) 09 14 19 2 (695)	-08 19 10 2 10052 (-898/21. -898/21 [8]) -08 19 10 2 10052 (-15)	650	
03 20 16 6	-02 19 15 4 382 10052 (-20(15))	269	1050 950 ®
XH60BT (868)	-02 20 60 1563 10052 (-21)	800	1070* 1050 °
12 35 (612) 12 35 - (612-)	-27 15 35 2 2 10052 (-7)	100 650	— 11 -
70 - (814 -)	- 70 29 (03 -23)(16).	70	
65 - (982-)	-10 20 70 2 2 2 10052 (-25)	300	1070 1050 °
65 (567) 65 (760)	-02 20 60 1583 10052 (-21)	70 500	

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11.3.4 8

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10,10895(312)	-08 2 10157		30	600* 660* .2
20.20 .22 .15 .20 . 25	-08 2 10157. 8050			9
20.20 .22 .20 .25		40		* 30*
20 .15 .20 . 10 .14 .09 2 . 16 .20 .20		40	(9
20 .20 . 09 2 .10 2. 10 .10 2 . 08 1 .10 1 15 2 .10 2 09 2	6-08 2 10157. 8050		60	9
09 2 .10 2. 10 .10 2 . 08 1 .10 1 15 2 .10 2 . 09 2	-08 2 (18). - 119]. 10157. 8050		70	9
09 2 .10 2. 10 .10 2 . 08 1 .10 1 15 2 .10 2 09 2				
20 .20 .	-08 . -0 . -10 2 8050. 10157		40	
20 .20 .12 . 15 .			450	
12 1			40	560
			20	560

	2246» . -	-	
20 13 ,20X13.08X13. 12X13	-06X14 -08 14 -12 13 10157	40 420	8 9 -
14 17 2***	-08 19 10 2 -07 19 10 10157	70 350	: 680 ° 700 * . 3—5 (.12.22) -
08 18 10 .12 18 9 . 12 18 10 . 12 18 9	-04 19 11 10157	270 600	350 * -
	-08 19 10 2 -07 19 10 10157		450 * -
08 18 10 12 18 9 12 18 10 12 18 9	-08 19 10 10157		500' -
12 18 9 08 18 10 10 18 9 10 18 9- 10 18 9- 10 18 9 12 18 9 12 18 9 12 18 10	-01 19 9 -04 19 9 10157		- -
10 18 9. 10 18 9- . 10 18 9- 12 18 9	-02 17 10 2- {20}. 10157		450
10 18 9. 10 18 9- . 10 18 9- 12 18 9	-04 17 10 2 {21}. 10157	600	— 970 ° 1020 * -
12 18 12 10X17H13M3T(4 2) 10 17 13 2 (448)	-04 19 11 10157	196 600	350 * -
	-08 19 10 10157		500 * -
15 18 12 4 (654)	-15 18 12 4 (654) {22}. 10157	70 300	50 * - 950° 1050 * .
07 20 25 2	-01 23 28 10157		1050 * 1080 * . -
06 28 (943)		196 400	950 * -

	2244, . -	*	
07 20 25 2	-10 16 25 6 C8-04X19H11W3 10157	70 300	- - - -
06 28 (943)		196 400	(3—5) -17 -01 23 28
07 21 7 5 (222)	-08 21 10 . 10157	196	196 * - - 950 ° 1050 * ,
Q8X17H15M3T (580)	-01 X19 18 10 4 (690) {23J. 10157	196 600	- - 1020 ° 1060 * , 300 * .
03X17H14M3 (66)		196 400	2 .
0 22 6 2 (67)		40 300	- 950 ° 1050 * .
08 21 6 2 (54)	-04 19 11 . 10157 -08 19 10 . 10157		
08 22 6 (53);	-08 19 10 2 -07 19 10 . 10157	196 500	- -
10 14 14 4 (711)			
08 22 6 (53):	-01 19 9 -04 19 9. 10157	40 300	- -
10 14 14 4 (711)		196 500	
09 16 4 07 16 4 07 16 4 -	-09 16 4 (56) (24). 10157	70 400	
09 14 16 (694) 09 14 19 2 (695)	-08 19 10 2 0- 7 19 1 . 10157	650	*>
32 8	-08 32 9 -08 32 8 (25). 10157	100 650	- - 1080 ° 1120 * . 270 ° 300 * 2—4 450 ° 500 * (2—4) . HRC24...30

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	2246. . *	*	
60 (868)	(868) (22). 10157	800	1050° 1060'
70 - < 014 -)	65 - (982-) (26) 70 (495) (27). 10157	70 300	
65 - (982-)			
65 (567) 65 (760)	65 (760) (28) 10157	70 500	940° 960'
* **	9.		
11.4.			11.3

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11.3.9

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- 12 —
08 18 10 12 35 (358 -). 03X17H14M3, 08 18 12 , 12 35 (35), 12 35 - (35 -).
60 . 06 28 (943). 07 20 25 2 *

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11.4.3

* : (92—95) % . — (85—92) % . -

- ; : (75—85) % . — . -

11.4.4

(15—20)

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&	2346. . - 9067	.	
15 . . . ,20 . 25 ,20,20 .22	-08, -08 . -348 . -45. -1	20	- -
	- -348 . -45. -1	30	9
20 .25 .20.20 .22	-08 . - . -348 . -45. -1. -43. -16	40	, ** — - 30"
20	8-10 [19]. -22. -47		- 9
20 ,20 .15	-10 , -08 . -348 . -45. -43. -1. -16	60	* " — - 40'
20 .20	- , -08 . [19]. -22. - 47. -348	60	9
	- . -201 [10]		

	2246. , - 9067		
09 2 , 10 2.10 14	8-10 [19]. -08 4 , - -22. -47. -348 - -201 [10]	60	9
54	-08 2 . -348 . -45, -1. -43. -348 - -201 [10]	70	“ 60*
16 , 20 . 20	-348 , -45 -08 -348 . 45, -1. -43. -16	30 40	9 30 " S 24 **,*
09 2 . 10 2. 20 , 20 54 60	-10 1 . -201 [29]	60	9
0 2 , 10 2. - 54 65			
20 13 , 20X13. 08X13. 12X13	- 13. -12 13. -26	40 420	
20 , 20		40 450	
20 . 15	-08 , -08 -22. -42. -11	40 560	8 9
12 1	-04 2 . -16	20 560	
12 18 9 08 18 10 12 1 9 12 18 10 08 18 10 -	-04 19 11 -6 [9] -08 19 10 2 -6 [9] -08 19 -6 [9]	350 450 500	350* 450* 500*
12 18 9 12 18 9 08 1 9 10 18 9- 10 18 9-	-01 19 9 -04 19 9 -6 [9]	253 600	

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	2246. . - 9087	.	
12 18 12 10X17H13M3T (432) 10 17 13 2 (448)	8-04 19 11 -6 [9]	350	350 * -
	-08 19 10 -6 [9]	500	500 * -

[17].

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11.7.2	10		6
11.7.3	10	(6±2)	*
(9±2)			*
11.7.4	6		
(3±1)		(9±2)	
11.7.5			9. *
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		()	224\$	
. 10. 20. 20 . 22 . 20 . 10895(312). 15 . 20 . 25	20 . 20 . . 17 . 17 1 . 09 2 . 10 2 . . 15 . 20 . 20 . 20 . 20 . 10 2 . 08 1 . 10 1 . 12 . 12 . 12 1 . 15 . 20 . 20X2 . 20 .	-46 9467 (-13/45) -50 9467 (-13/55)	-08 . -08 . -08 2	- 9
16 . 17 . 17 1 . 09 2 . 10 2 . . 15 . 20 . 20 . 20 . 20 . 14 . 10 2 . 08 1 . 10 1	20 . 20 . 20 . 12 . 12 . 12 1 . 15 . 20 . 20	-50 9467 (-13/55)	-08 . - . -08 2 . - [19]	- 9
. 10. 20. 20 . 22 . 20 . 10895(312). 15 , 20 . 25 . 20 , 20 . 16 . 17 , 17 1 . 09 2 , 10 2 . . 15 . 20 . 20 . 20 . 20 . 10 2 , 08 1 . 10 1 , 14 . 12 . 12 . 12 1 . 15 . 20 . 20	20 13 . 20X13. 08X13. 12X13	3-10X15 25 6 2 10052 (-395/9). -10 25 13 2 10052 (-6. -8)	-10 1 25 6, -07 25 13	- - 9

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—	10895(312)	-855/51 [31]	03 15 35 7 6 (655) [32]	- -
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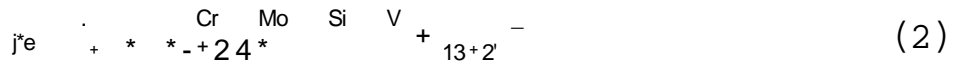
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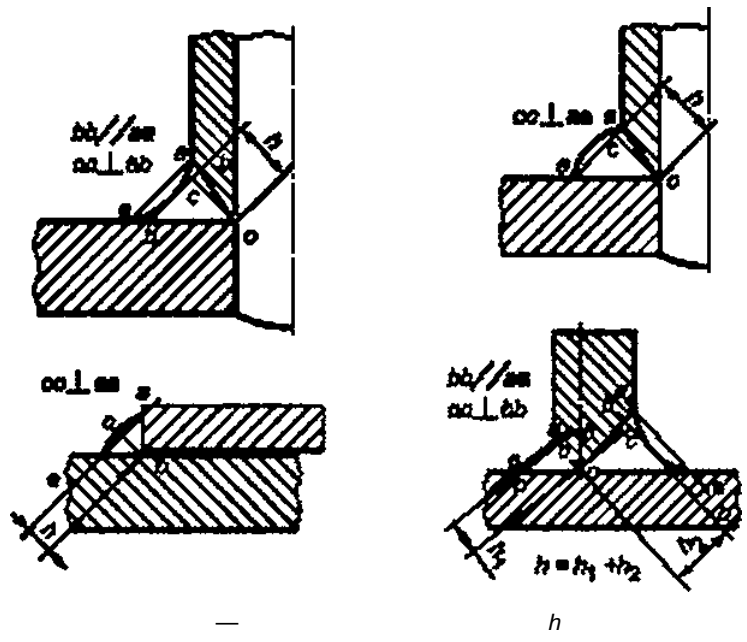
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5 6 »	0.5	0.6	0.8	2	3	4
6 8 »	0.6	0.8	1.0	3	4	5
8 10 »	0.8	1.0	1.2	3	4	5
10 15 »	1.0	1.2	1.5	3	4	5
15 20	1.2	1.5	2.0	4	5	6
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40 100 »	1.5	2.0	2.5	5	6	7
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» 2.0» 2.5 »	0.1	0.4	0.6	10	0.6	3.0	0.4	1	
» 2.5» 3.0 »	0.1	0.5	0.8	10	1.0	3.0	0.5	1	
» 3.0» 4.5 »	0.1	0.6	1.0	10	1.4	3.0	0.6	1	
» 4.5» 6.0 »	0.2	0.8	1.2	11	2.5	3.0	0.8	1	
» 6.0» 7.5 »	0.2	1.0	1.5	11	4.0	3.0	1.0	1	
» 7.5» 10.0 »	0.2	1.2	2.0	12	5.5	3.5	1.2	1	
» 10.0» 12.0 »	0.2	1.5	2.5	12	7.5	3.5	1.5	1	
» 12.0» 14.0 »	0.3	1.5	2.5	13	9.0	4.0	1.5	1	
» 14.0» 16.0 »	0.3	2.0	3.0	13	11.0	4.0	2.0	1	
» 16.0» 21.0 »	0.3	2.0	3.0	14	14.0	4.0	2.0	1	
» 21.0» 24.0 »	0.4	2.0	3.0	14	17.5	5.0	2.0	1	
» 24.0» 27.0 »	0.4	2.5	3.5	15	20.0	5.0	2.5	2	
» 27.0» 30.0 »	0.4	2.5	3.5	15	23.0	6.0	2.5	2	
» 30.0» 35.0 »	0.5	2.5	4.0	16	26.0	6.0	2.5	2	
» 35.0» 40.0 »	0.5	3.0	4.5	17	30.0	7.0	3.0	2	
» 40.0» 45.0 »	0.6	3.0	4.5	18	34.0	8.0	3.0	2	
» 45.0» 50.0 »	0.6	3.0	4.5	19	38.0	9.0	3.0	2	
» 50.0» 55.0 »	0.6	3.0	4.5	20	42.0	10.0	3.0	2	
» 55.0» 65.0 »	0.75	3.5	5.0	21	48.0	10.0	3.5	2	
» 65.0» 75.0 »	0.75	3.5	5.0	22	56.0	10.0	3.5	2	
» 75.0» 85.0 »	1.0	4.0	6.0	23	64.0	10.0	4.0	2	
» 85.0» 100 »	1.0	4.0	6.0	24	72.0	10.0	4.0	2	
» 100 » 115 »	1.25	4.0	6.0	25	85.0	10.0	4.0	2	
» 115 » 125 »	1.25	5.0	7.0	25	100.0	10.0	5.0	2	
» 125 » 135 »	1.5	5.0	7.0	24	100.0	11.0	5.0	2	
» 135 » 150 »	1.5	5.0	7.0	24	115.0	11.0	5.0	2	
» 150 » 175 »	2.0	5.0	7.0	23	130.0	11.0	5.0	2	
» 175 » 200 »	2.0	5.0	6.0	23	150.0	11.0	5.0	2	
» 200 » 250 »	2.5	5.0	8.0	22	160.0	12.0	5.0	2	
» 250 » 300 »	3.0	6.0	9.0	21	220.0	12.0	6.0	2	
» 300 » 350 »	3.5	7.0	10.0	20	260.0	13.0	7.0	2	
» 350 » 400 »	4.0	8.0	12.0	19	300.0	13.0	6.0	2	
» 400 » 450 »	4.5	9.0	14.0	18	340.0	13.0	9.0	2	
» 450 » 500 »	5.0	10.0	15.0	17	380.0	14.0	10.0	2	
» 500 » 550 »	5.5	11.0	16.0	16	420.0	14.0	11.0	2	
» 550	6.0	12.0	18.0	15	460.0	14.0	12.0	2	

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2.5 .5	0.1	0.6	1.0	11	1.7	4.0	0.6	1
» 3.5 5.0	0.2	0.8	1.2	11	3.0	4.0	0.8	1
5.0 6.5	0.2	1.0	1.5	12	4.5	4.0	1.0	2
6.5 8.5	0.2	1.2	2.0	12	6.5	4.0	1.2	2
8.5 10.0	0.2	1.5	2.5	13	8.5	4.0	1.5	2
10.0 12.0	0.3	1.5	2.5	13	10.0	5.0	1.5	2
12.0 15.0	0.3	2.0	3.0	14	12.0	5.0	2.0	2
15.0 18.0	0.3	2.0	3.0	14	15.0	5.0	2.0	2
18.0 21.0	0.4	2.5	3.5	15	18.0	6.0	2.5	2
21.0 24.0	0.4	2.5	4.0	15	21.0	6.0	2.5	2
24.0 28.0	0.5	3.0	4.5	16	24.0	7.0	3.0	2
28.0 32.0	0.5	3.0	4.5	16	28.0	7.0	3.0	2
32.0 38.0	0.6	3.0	4.5	18	32.0	8.0	3.0	2
38.0 44.0	0.6	3.5	5.0	20	37.0	9.0	3.5	2
44.0 52.0	0.75	3.5	5.0	21	43.0	10.0	3.5	2
52.0 60.0	0.75	4.0	6.0	22	50.0	12.0	4.0	3
60.0 70.0	1.0	4.0	6.0	23	56.0	12.0	4.0	3
70.0 80.0	1.0	4.0	6.9	24	67.0	12.0	4.0	3
80.0 100	1.25	4.0	6.0	25	81.0	12.0	4.0	3
100 120	1.5	5.0	7.0	26	100.0	12.0	5.0	3
120 140	1.75	5.0	7.0	25	115.0	12.0	5.0	3
140 160	2.0	5.0	8.0	24	135.0	13.0	5.0	3
160 200	2.5	6.0	9.0	24	160.0	13.0	6.0	3
200 240	3.0	6.0	9.0	23	200.0	14.0	6.0	3
240 280	3.5	7.0	10.0	22	235.0	14.0	7.0	3
280	4.0	8.0	12.0	22	250.0	14.0	8.0	3
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22.0 24.0	0.5	3.0	4.5	16	25.0	7.0	3.0	3
24.0 28.0	0.6	3.0	4.5	18	25.0	8.0	3.0	3
28.0 32.0	0.6	3.5	5.0	18	31.0	8.0	3.5	3
32.0 35.0	0.6	3.5	5.0	20	35.0	9.0	3.5	3

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. 10 » 20 »	2.0	2.5	3.5	4.0	5.0	7.0	5	6	8
» 20 » 40 »	2.0	2.5	3.5	4.0	5.0	7.0	6	7	9
» 40 » 60	2.5	3.5	5.0	5.0	7.0	10.0	7	8	10
» 60 » 80 1»	3.5	5.0	7.5	7.0	10.0	15.0	7	9	11
» 80 » 100 »	5.0	7.5	10.0	10.0	15.0	20.0	7	9	11
» 100 » 120	5.0	7.5	10.0	10.0	15.0	20.0	8	10	12
» 120 » 200 1»	7.5	10.0	15.0	15.0	20.0	30.0	8	10	12
» 200 » 300 »	15.0	20.0	25.0	30.0	40.0	50.0	9	11	13
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		539 (55)	343(35)	16	30		20	950' 1050*
		431 (44)	294 (30)	—	—	—	350	
-898/21		588(60)	343(35)	22	34	70(7.0)	20	850 870*
		441 (45)	294 (30)	—	—	—	350	
		539(55)	343(35)	16	30	40(4.0)	20	
		441 (45)	245 (25)	10	20	—	350	
-1 (46 -1). -1 (48 -1), -2 (48 -1). -2 (48-1)	539 (55)	294 (30)	30	45	100(10)	20	950° 1050*	
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13/45*	9466. 9467. (36)	410 (42)	—	22	—	140(14)	20	
		353 (36)	216(22)	22	55	140(14)	20	
		314 (32)	176 (16)	20	55	—	350	
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		353 (36)	216(22)	22	60	160(16)	20	
		314 (32)	176 (18)	22	55	—	350	
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: . -04 19 11	2246. 10157	539(55)	343(35)	23	30	50(5.0)	20	375° 400° . 6—10
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*06 19 10 2		539 (55)	343 (35)	22	35	70(7,0)	20	8
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		539 (55)	343 (35)	16	30	—	20	850* 870 °
		372(38)	225 (23)	10	20	—	350	
-02 17 10 2- CS-04X17H10M2	[20].[21]. 10157	539 (55)	294 (30)	30	45	120(12)	20	950® 1050°
	343 (35)	196 (20)	20	45	—	530		
:	246. 9087	343(35)	216(22)	22	55	90(9.0)	20	630* 660°
		314 (32)	216(22)	16	—	—	350	
		353 (36)	216(22)	22	55	90 (9.0)	20	
		314 (32)	176 (18)	13	50	—	350	
-08 . -08 2	2246. 1057	412(42)	255 (26)	14	55	80(8.0)	20	630° 660“
		—	216(22)	14	—	—	350	
		431 (44)	245(25)	18	55	80(8.0)	20	
		392(40)	225 (23)	13	50	—	350	

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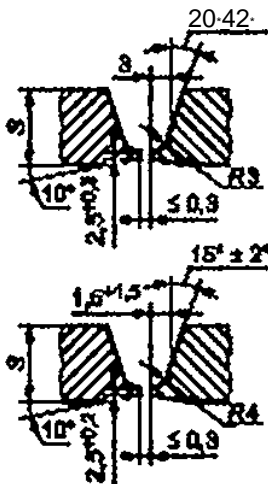
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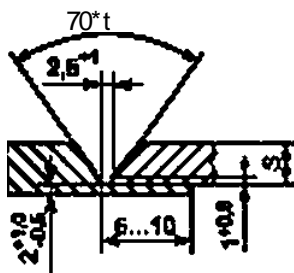
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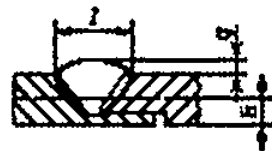
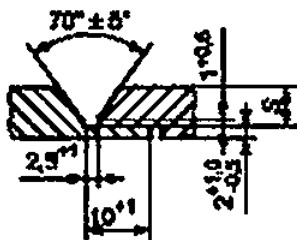
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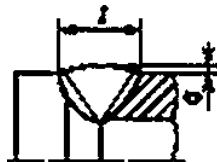
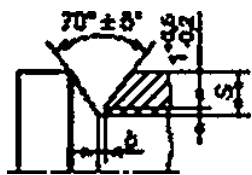
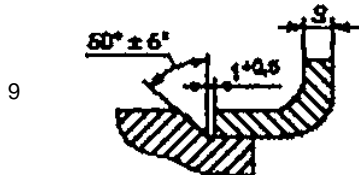
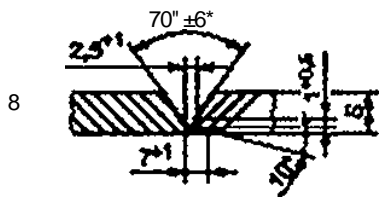
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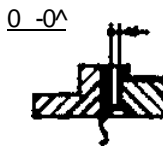
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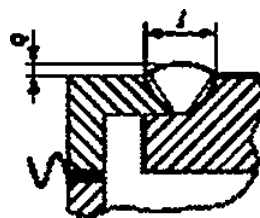
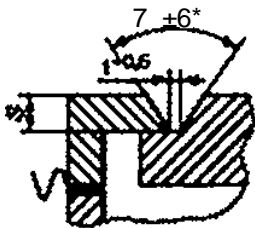
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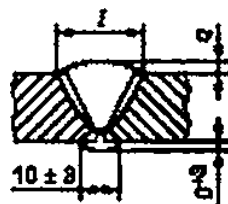
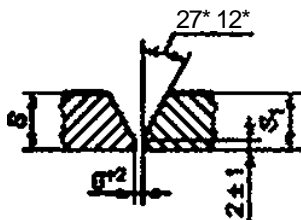
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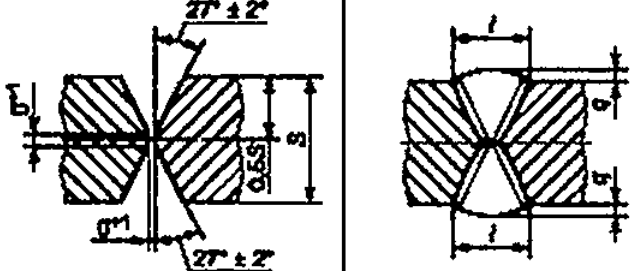
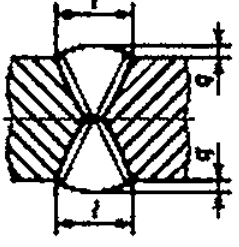
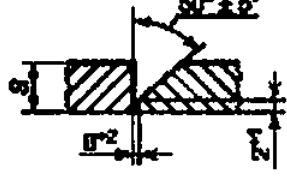
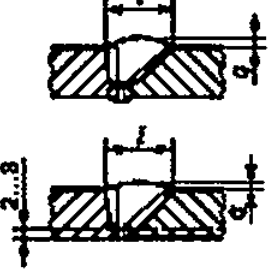
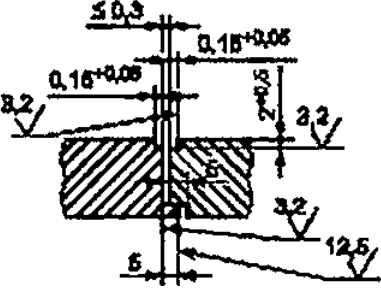
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Условное обозначение	Конструктивные элементы		Способ сварки	S, мм	f, мм		q, мм	
	подготовленных кромок свариваемых деталей	выполненного сварного шва			Номинальное значение	Предельное отклонение	Номинальное значение	Предельное отклонение
С16			МП АЛГ АФ МФ	60	48	±8	3.0	+2.5 -2.0
				65	50			
				70	52			
				75	54			
				80	58			
				90	60	±10	3.5	±2.5
				100	66			
				110	70			
				120	74			
				130	78	±12	4.0	+3.0
				140	82			
С17			МП АЛГ АФ МФ	30	34	±6	2.5	+2.5 -1.5
				32	35			
				34	36			
				36	37			
				38	38			
				40	39	±8	3.5	+2.5 -2.0
				42	42			
				45	44			
				50	47			
				55	50	±10	3.5	+2.5
				60	63			
				65	66			
				70	69			
				75	63			
80	66							

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Условное обозначение	Конструктивные элементы		Способ сварки	S, мм	l, мм		q, мм	
	подготовленных кромок свариваемых деталей	выполненного сварного шва			Номинальное значение	Предельное отклонение	Номинальное значение	Предельное отклонение
C18			МП АПГ АФ МФ	20	16	±4	2.0	±1.5
				22	18			
				24	19			
				28	21	±5	2.5	+2.0 -1.5
				32	23			
				36	25			
				40	28	±4	2.5	+2.5 -1.5
				48	32			
				50	35			
				58	38			
				60	40			
C19			РД, РАД+ РД	4.0	8	+3	1.5	±0.5
				5.0	10			
				6.0	11			
				7.0	13	2	±0.5	
				8.0	14			
				9.0	16			
				10.0	18	3	±1.0	
				12.0	20			
				14.0	23	4	4	±1.0
				16.0	26			
C20			Электронно-лучевая					

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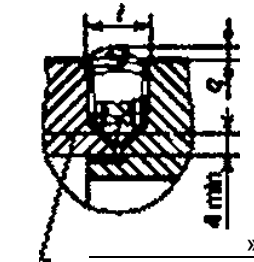
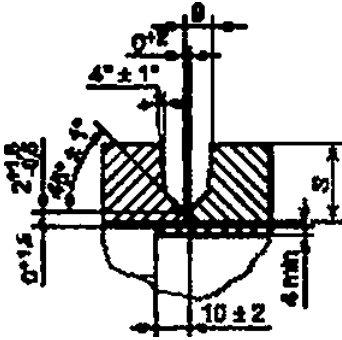
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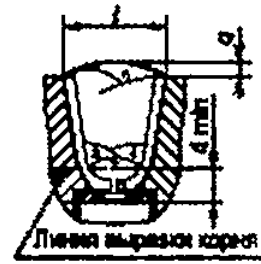
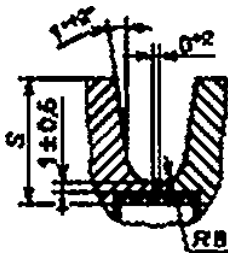
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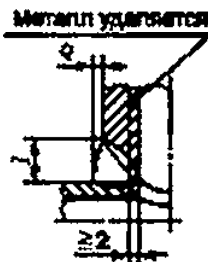
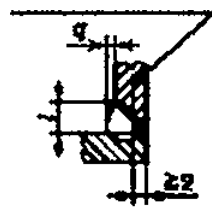
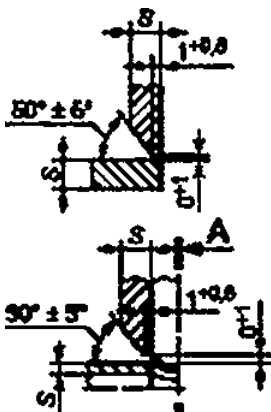
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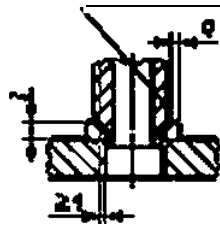
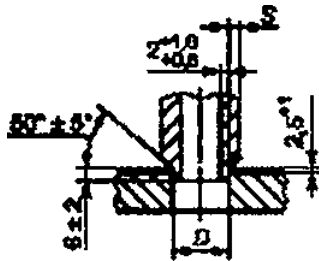
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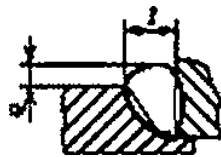
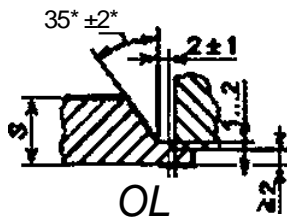
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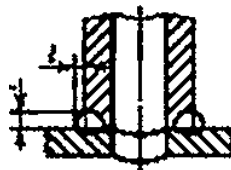
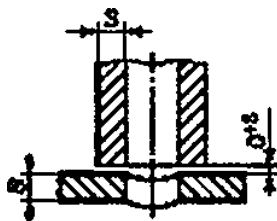
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16.0	23		11	
18.0	26	+4	13	+4
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7.0	12			+0.5
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9.0	14			
10.0	15			±1.0
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16.0	21	+4		±1.0
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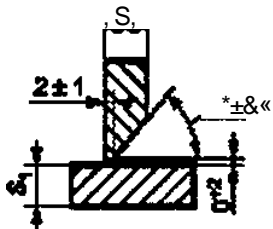
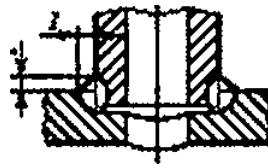
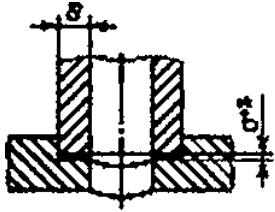
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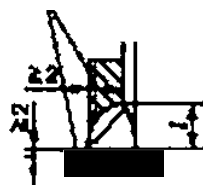
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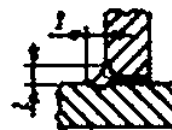
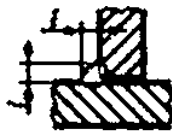
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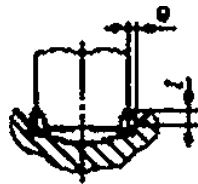
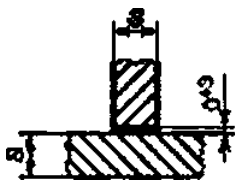
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18	28		14	
20	30		15	
22	34		±5	
25	37	18		-3
2	3	+1.0 -0.5		
3	3			
4	4			
6	4			
7	5			
8	5	+2.0 -1.0		
10	6			
30				

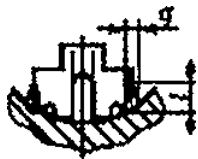
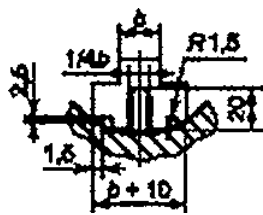
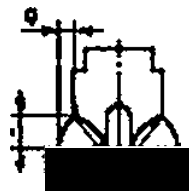
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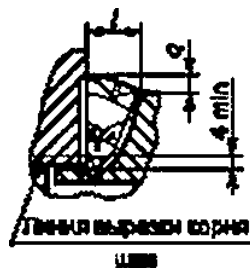
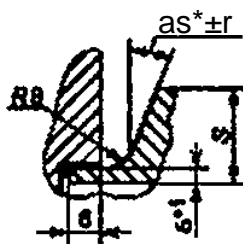


T9

$9 \pm *1$	



10



1. -

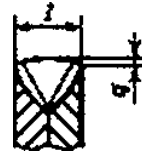
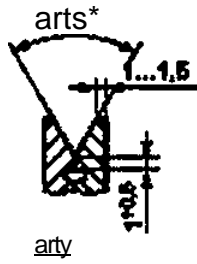
S.	/.		4.	
	II X	III S5	5 X	I? 1.5
2	3	+1.0 -0.5		
3	3			
4	4			
6	4			
7	5			
8	5			
10	6	+2.0 -1.0		
30	8			

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10 s,
3
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2
/* | S * 1
Q* 5 | 2

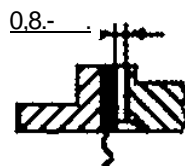
2.5			
3.0			
3.5		1.5	+ 0.5
4.0			
5.0	10	±1.0	
6.0	12	2.0	±1.0

.2—

11

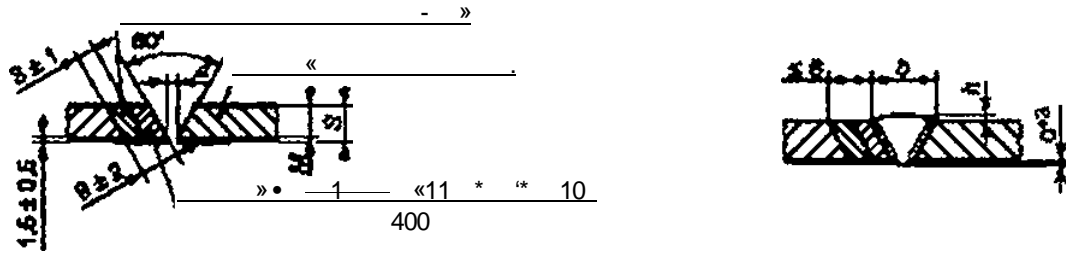


12



	d	g
16- -0.16*2		
18- -0.16*(2. 3)		
22- -0,16*(2.3. 4. 5)		
28- -0.16*(3. 6)		0.6
28- -0.16*7		
38- -0.2*(3, 4)		
38- -0.2*6		0.8
38- -0.2*8		1.0
4 - -0.2*(2. 4.6)		0.6
4841-0.2*10		0.7
4841-0.2*12		0.9
65- -0,2*(2, 4.)		0.6
6541-0.2*8		0.7
6541-0.2*10		0.9
6541-0.2*12		1.2
75- -0.2*(3, 4)		0.6
95- -0.25*(4. 6)		
9541-0.25*8		0.8
95- -0.25*10		1.1
125- -0.3*(4. 6)		△
125- -0.3*6		*
19041-0.3*4		0.6

13



2

				6.		
	. S.					
	. 12	3	+1	1.2SM+7	2	+1
	» 12 » 30	4	1	1.25 +8	2.5	+1.5



24

				6.	ft.	
	. S.					
	. 10 12	3	+1	1.25 +7	2	+1
	« 12 30	4	+i	1.25 +8	2.5	*1.5

Условное
обозначение

Способ сверления

			DN	S	L		
C25			АФ	150—1400	15—95	(28—39) ±3	2.5±1.5
C26			АФ	250—1400	20—100	(28—46) ±3	4±3
C27			МП	100	15—20	17±3	2±1
				700—1200	40—80	<30—60 ±5	(15—20) ±5

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	1, , mm	.	d. . min	.	1 . min	0.	4. , mm
20	10	16	8	80	32	75	65
25	10	20	14	100	36	95	85
32	15	27	20	125	40	120	110
40	18	35	25	150	48	144	134
50	20	45	35	200	60	192	180
65	22	60	50	250	70	240	228
70	30	65	55	300	86	290	278

()

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.1—

8-04 19 11 , -08 19 10 2 . -04 19 10 2 . -04 19 9	10 17 13 2 . 08 18 10 . 12 18 9 , 12 18 10 . 10X17H13M3T	2.0 2.5 3.0	80—100 100—140 120—160 150—180	12—14
-04 17 10 2 . -02 17 10 2-	12 18 9	2.0 3.0	180—200 200—220	
-06 15 35 7 6 (-582). -03 15 35 7 6 (855)	08 18 10 + 12 35 ()	2.0	100—120	
-08 2	.20 .25 .20, 20 .22	1.6 2.0 3.0	100—120 150—170 200—240	

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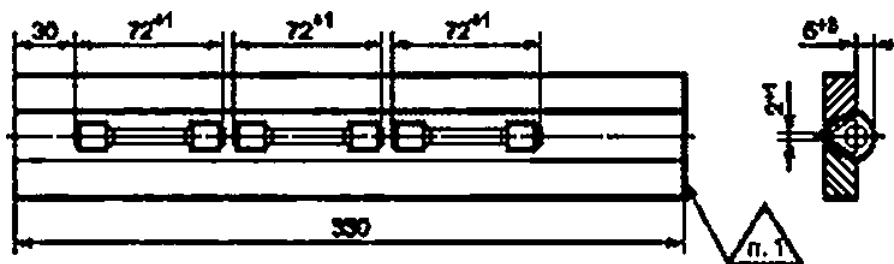
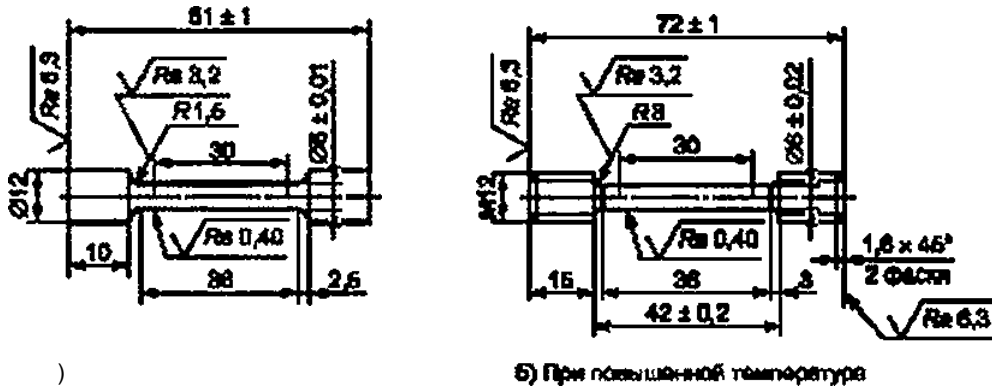


Рисунок В.2 — контрольное сварное соединение



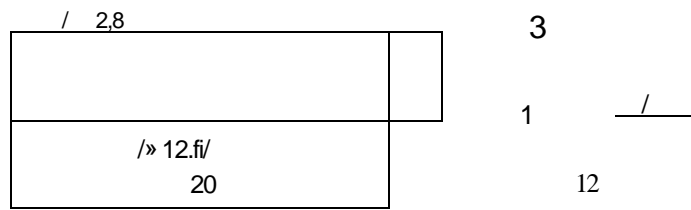
2.1

- 1)
- 2)
- 3)
- 4)
- 5)
- 6)

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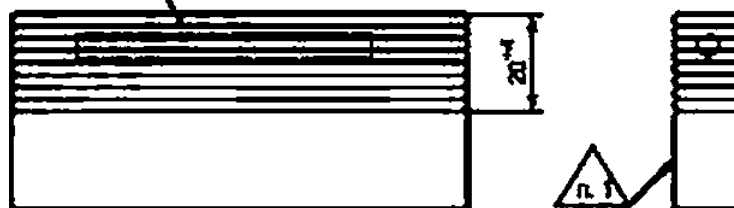
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Отбор стружки для химического анализа



5—

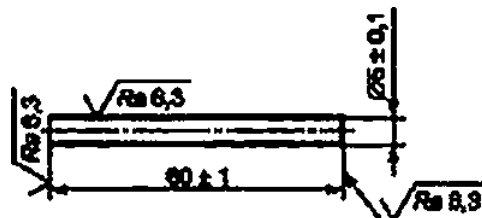


Рисунок В.6 — Образец для испытаний

3.1

- 1)
- 2)

4— 6:

—3 ()

- 3) — 08X18 1 12 18 10 ;
- 4) — 5:
- 5) :
- 6) :
- 7) 2 .(.6);
- 8) — 2246 (1).

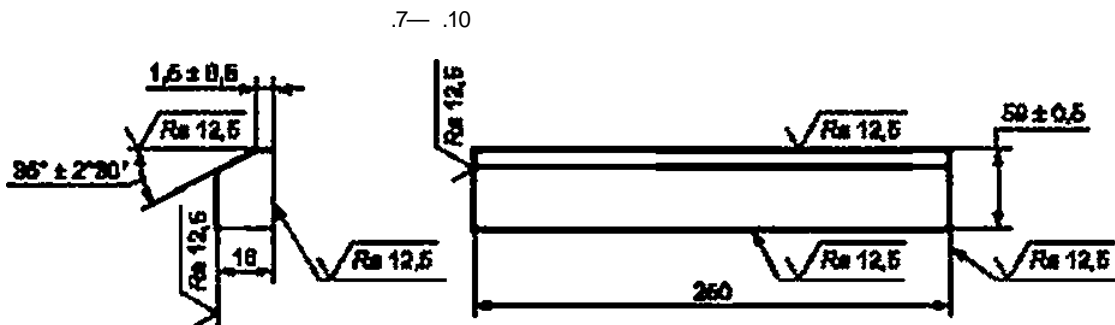


Рисунок В.7 — Заготовка под сварку

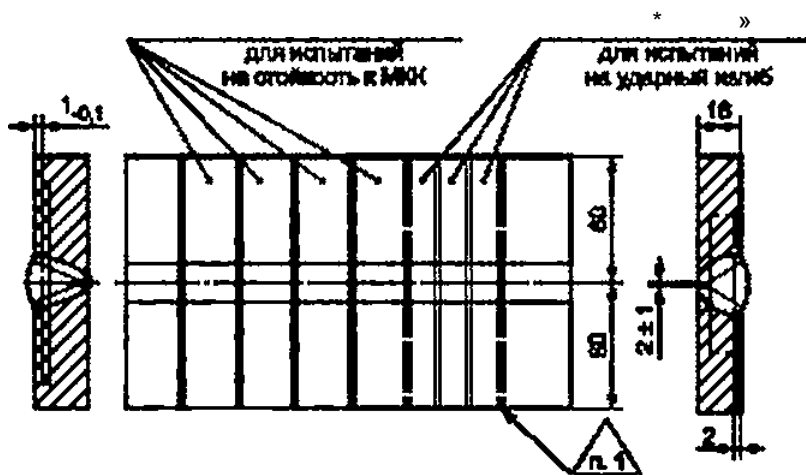
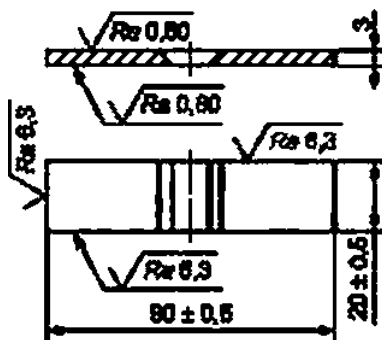
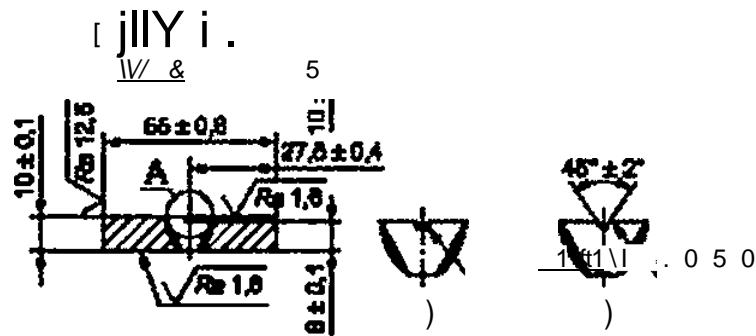


Рисунок В.8 — Контрольное сварное соединение





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- 4.1
- 1)
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)
- .10).
- 5

.7— .10:

—8 .{ .9).4
—3 . 6996 VI IX(

.11— .13.

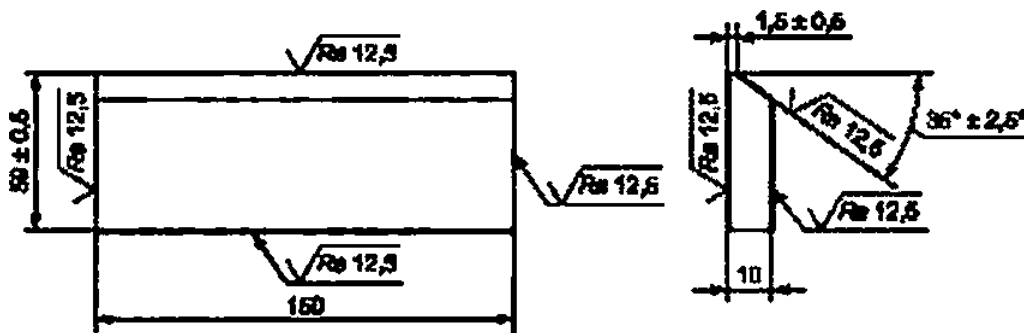


Рисунок В.11 — Заготовка под сварку

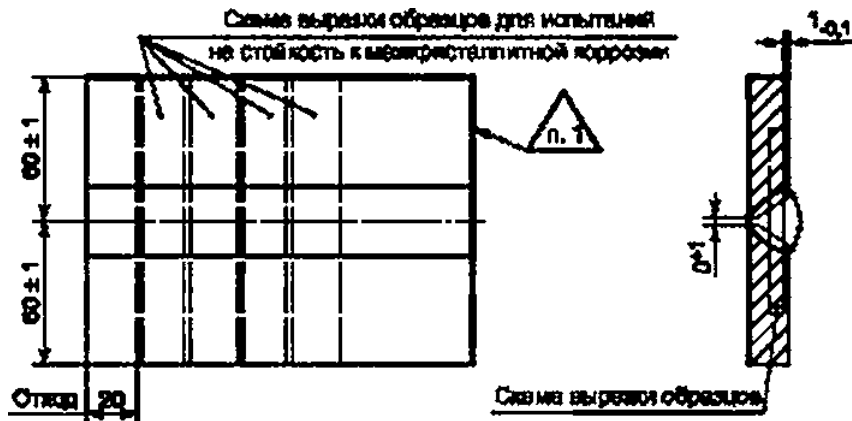
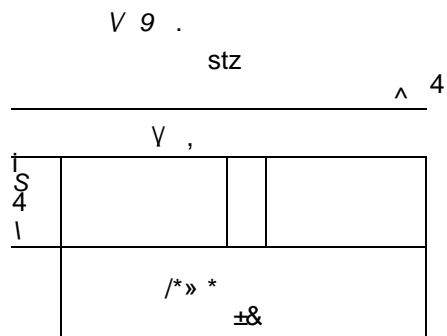


Рисунок В.12 — Контрольное сварное соединение



.13—

.5.1

.11— .13:

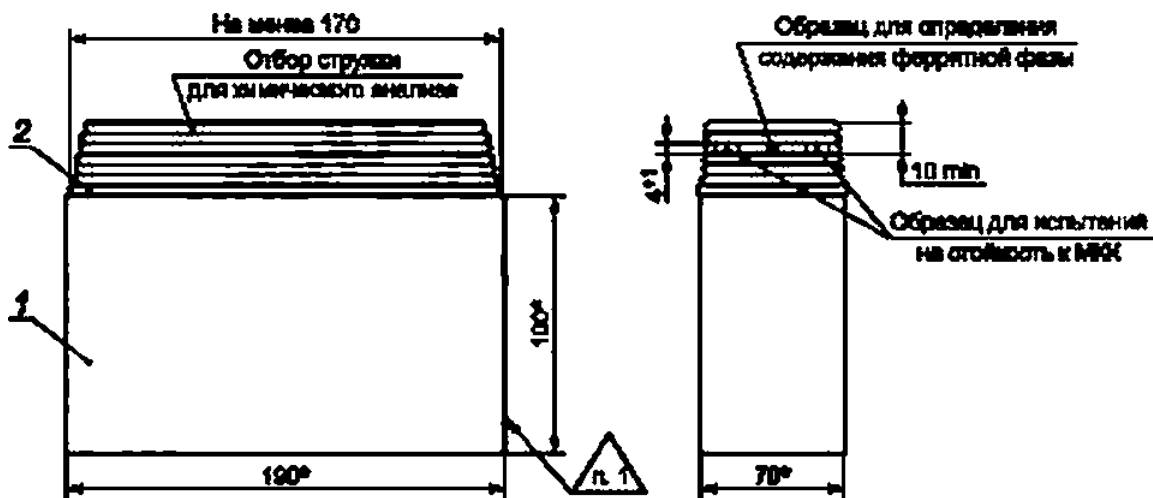
- 1)
- 2)
- 3)
- 4)
- 5)

6)

—8 .(.13).4

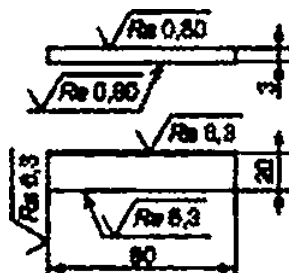
.6

.14— .16.

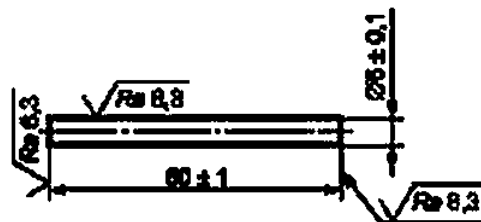


поз. 1 — Заготовка под наплавку, поз. 2 — Наплавленный металл

Рисунок В.14 — Контрольная наплавленная заготовка



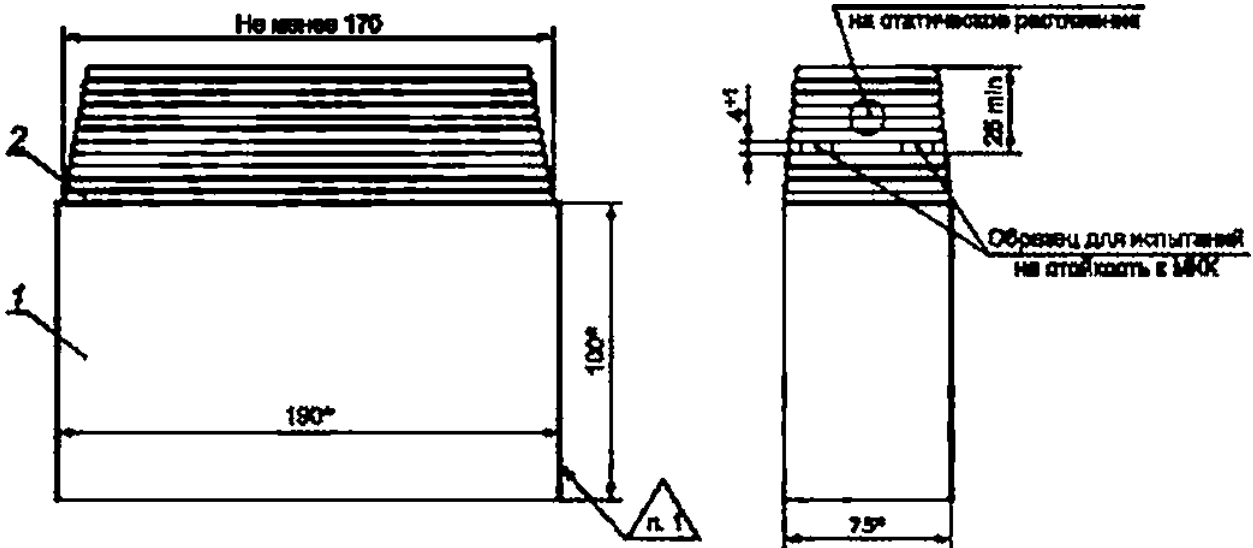
.15—



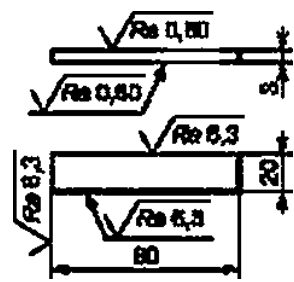
.16—

- 6.1
- 1) .14— .16:
- 2) — 08 18 10 12X18H10T —1 ;
- 3) 100° ;
- 4) :
- 5) :
- 6) —4 .(.15):
- 7) —2 .{ .16):
- 8) ' .
- 7

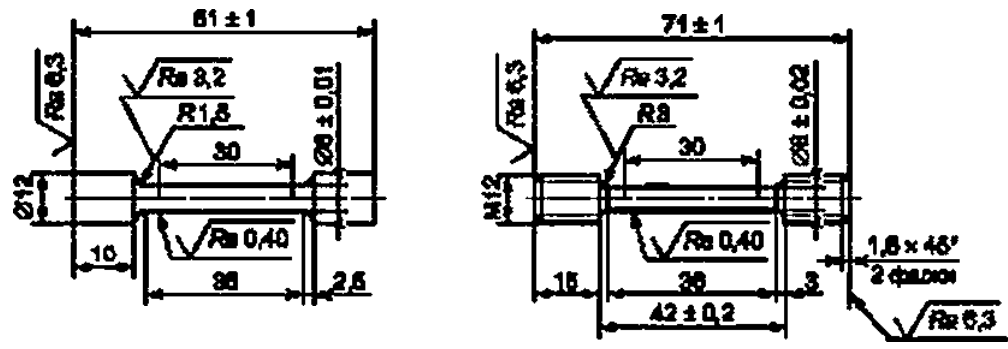
.17— .19.



.1— .2—
.17—



.18—



.19—

- .7.1 .17— .19:
- 1) ;
 - 2) (), -
 - 3) :
08 1 10 12 18 10
100° .
—1 ;
 - 4) :
 - 5) ;
 - 6) :
 - 7) —4 .(.18);
 - 8) —2 .(.19):
 - 9) ,

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-400/10 . -400 0 , -898/21. -698/21	10X17H13M3T. 10 17 13 2 . 08 18 10 . 12 18 9 . 12 18 10	3:4;5	70 90 120 140 140 160	28
-400/13. -902 4	10X17H13M3T. 10 17 13 2			
-8 -07 20 9 10052	12 18 9 , 12 18 10			
48 -2.48 -2 . 48 -1	12 18 9			
13/45 *. 13/55	.20 .25 .20. 20 .22		110 130 160 210 220 280	22 26

« 13»

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1,

.2—

S.				, /		
1.5—2	50—60	60—80	1.2	—	8—10	3—4
3—10	60—110 100—130	90—160	2.0	—		3—4
6—15	4 4 rt	160—170	3	* > 4	10—12	4 ⁴
		200—220			12—14	

- [1] 005-2003
- [2] 5 .9537-80
- [3] 013-2007
- [4] 03-613-03
- [5] 025
- [6] 016-2005
- [7] 14-4-715-75 -17
- [81] 5 .9370-2011 898/21 . -400 . -902/14. -8 -400/10 . -400/10 . -
- [91] 5 .9206-75
- [10] 17 18004-08-14253733-08 -201.
- [111] 03-614-03
- [12] -03-273-99
- [13] 03-615-03
- [14] 14-4-441—73
- [15] 14-4-597-75 -20.
- [16] 14-4-503-74 03 -23.
- [17] 026-2005
- [18] 14-1-3648-83 -08 2
- [19] 14-1-2219-77 : - -10 2 .
- [20] 14-1-2838-79 . -02 17 10 2- .
- [21] 14-1-1959-77 -04 17 10 2
- [22] 14-1-997-74
- [23] 14-1-4981-91 . () -0 21 7 (500), -
08 25 20 1 (532). -08 15 23 7 7 2 (88). -08 20 9 2
(156). -01 19 18 10 4(690).
- [24] 14-1-1692-76 -09 16 4 < 56).
- [25] 14-1-1467-75 -10 32 8- (263-) -10 32 8-
(263-).
- [26] 14-1-3281-81 65 - { -983-) 65 -
(-982-)
- [27] 14-1-683-72 65 (567). 70 (495). 70 - (495-)

- {28] 14-1-4727-89 65 (760)
- {29] 14-1-1549-76 -10 1 .
- {30] 14-1-1880-76 -06 15 35 7 6 (582). -
- {31] 5.965-11187-81 -855/51 -582/23.
- {32] 14-1-2143-77 -03 15 35 7 6 (855). -
- {33] 55724-2013 . .
- {34] 5 .0170-81 . . -
- {35] 03-495-02
- {36] 5.9224-75 *
- {37] 10-382-00
- {38] -020-2001 -

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