



**ГОСУДАРСТВЕННЫЙ СТАНДАРТ**

**11383-75**

**6-92**

---

Thin-walled copper and brass tubes  
Specifications

**tl 383-75**

18 4560

01.01.77

1.1

. 1 2.

©

, 1975 \*

©

, 1993

| <5<br>3 | -     |       | 0.15   |          | 0.20    |         | 0J5    |          | 0.30   |          |
|---------|-------|-------|--------|----------|---------|---------|--------|----------|--------|----------|
|         | -     | -     | 96     | 68<br>63 | 96      | 68      | 96     | 68<br>63 | 96     | 68<br>63 |
| 1,5     |       |       | 5,550  | 5,404    |         |         |        |          |        |          |
| 1,6     |       |       | 6,079  | 5,805    | 7.823   | 7,472   | —      | —        | —      |          |
| 1,7     |       |       | —»     | —        | 8.384   | —       | —      | —        | —      |          |
| 1,8     |       |       |        |          |         |         |        |          |        |          |
| 2,0     |       |       | 7,756  | 7,393    | 10.062  | 9.608   | 12,229 | 11,679   | 14,254 | 13,612   |
| 2,2     |       |       | 8,595  | 8,207    | 11,178  | 10,675  | 13,623 | 13,010   |        |          |
| 2,4     |       |       | 9,433  | 9. 7     | 12.295  | 1.1.843 | 15,020 | 14,345   | —      | —*       |
| 2,5     |       |       |        |          | 1*2,854 | 12.276  | 15,718 | 15,012   | —      | —        |
| 2,6     |       |       | —      | —        | 1'3,412 | 12.809  | 16,700 | 15,947   |        |          |
| 19 7S1  |       |       |        | -        |         |         |        |          |        | —*       |
| 2 8     |       |       |        |          |         |         | 17,818 | 17,001   | —      | —        |
| 3,0     |       |       | 11.948 | 1.1.407  | 15.646  | 14.943  | 19.215 | 18,351   | 22,633 | 21,615   |
| 3,2     | ±0,10 | ±0,05 | —      | —        | 16.766  | 16.013  | —      | —*       | —      |          |
| 3,4     |       |       |        | —        | 17,889  | 17,085  | —      | —        | —      |          |
| 3,5     |       |       |        |          |         |         | 22,685 | —        | —      | **       |
| 3,6     |       |       | —      | —        |         | —       | 23,407 | 22,355   | —      | —        |
| 3 8     |       |       |        |          |         |         |        |          |        |          |
| 4,0     |       |       | 16,144 | 15,410   | 3U235   | 2 281   | 26,202 | 25.024   | 31,016 | 29,622   |
| 4 <5    |       |       |        | -        |         |         | 29,690 | 28,356   | —      | —        |
| 4 8     |       |       |        |          |         |         |        |          | 37,724 | 36.029   |
| 5,0     |       |       | 20.333 | 19.414   | 26.835  | 25,619  | 33,188 | 32.546   | 39,400 | 37,630   |
| 5,5     |       |       |        |          |         |         |        | —        | —      | —        |
| 6,0     |       |       | 24,526 | 23.418   | 32,414  | 30.957  | 40.175 | 38.369   | 47.784 | 45.636   |
| 7,0     |       |       | 28.718 | 2J7.421  | 38.003  | 36,295  | 45,897 | 43,834   | 56.168 | 53.644   |
| 7,5     |       |       | 30,814 | 29.424   |         | —*      |        |          |        |          |

|          |       | , / . , |        |        |        |        |        |        |         |          |
|----------|-------|---------|--------|--------|--------|--------|--------|--------|---------|----------|
| fl*<br>3 | -     |         | 0.13   |        | 0,20   |        | 0 5    |        | 0.30    |          |
|          | -     | -       | 96     | 68     | 96     | 68     | 96     | 68     | 96      | 68<br>63 |
| 8<br>vs* |       |         | 32,911 | 31,227 | 43,602 | 44,636 | 54,139 | 5W2    | 64,564  | 61.653   |
| 9 0      | -0,15 | -0,10   | —      | —      | —      | —      | —      | —      | 68,757  | 65,657   |
| 95       |       |         | 37,095 | 35 128 | 49,181 | 46,971 | 61,134 | 58.386 | 72,936  | 69,653   |
| 10,0     |       |         | 41,287 | 39,432 | 54,771 | 52,309 | 64.623 | 61,718 | —       | —        |
| (10.1)   |       |         | —      | —      | —      | —      | 68,121 | 63,059 | 81,319  | 77,665   |
| 10,2     |       |         | —      | —      | —      | —      | —*     | —*     | —       | —        |
| (11.1)   |       |         | 45,479 | 43,435 | 60,360 | 57,647 | 75,107 | 71,732 | 89,703  | 85,672   |
| 120      |       |         | 49,671 | 47,428 | 60,949 | 62,985 | 82.089 | 78,428 | 93,087  | 93,678   |
| 130      |       |         | 50,089 | 47,838 | —      | —      | —      | —      | —       | —        |
| (13 \    | -0,20 | -0,15   | 54,708 | 52,250 | • *    | —      | 89,080 | 85.070 | 106,471 | 1.686    |
| 12       |       |         | —      | —      | —      | —      | —      | —      | —       | —        |
| M>V      |       |         | —      | —      | —      | —      | 96,067 | 91.749 | 114,855 | 109,692  |
| 16,0     |       |         | —      | —      | —      | —      | —      | —      | 123.238 | 117,700  |
| 17,0     |       |         | —      | —      | —      | —      | —      | —      | 131.622 | 125,706  |
| 18,0     |       |         | —      | —      | —      | —      | —      | —      | —       | —        |
| 19,0     |       |         | —      | —      | —      | —      | —      | —      | —       | —        |
| 20,0     |       |         | —      | —      | —      | —      | —      | —      | —       | —        |
| 21,0     | -0,24 | -0,20   | —      | —      | —      | —      | *—     | —      | —       | —        |
| 22,0     |       |         | —      | —      | —      | —      | —      | —      | —       | —        |
| 24,0     |       |         | —      | —      | —      | —      | —      | —      | —       | —        |
| 28,0     |       |         | —      | —      | —      | —      | —      | —      | 232,228 | 221,791  |



|         |       | . ? .   |         |         |         |         |          |          |         |
|---------|-------|---------|---------|---------|---------|---------|----------|----------|---------|
|         |       | 0.35    |         | 0.40    |         | 0.43    |          | 0.50     |         |
| 3 *     | -     |         |         |         |         |         |          |          |         |
| 4       | -     | «       |         |         |         |         |          |          |         |
| 5       | *     |         | 68      |         | 68      |         | 68       |          | 68      |
| X       | *     | 96      | N 63    | 96      | 68      | 96      | 63       | 96       | 53      |
| •iM     |       |         |         |         |         |         |          |          |         |
| 8.0     |       | 74,822  | 71,464  | 84,959  | 81,141  | 94 945  | 90,678   | 104,798  | 100,087 |
| 8,5     |       |         |         |         |         |         |          | —        | —       |
| 9,0     |       | 84,603  | 80,801  | 96,138  | 91,817  | 107,521 | 102,683  | 118.7.70 | 113,432 |
| 9,5     | —0,15 |         | —«      |         |         | —       | —        |          |         |
| 10,0    | —0,10 | 94,384  | 90,142  | 107,316 | 102,493 | 120,097 | 114,699  | 132,744  | 126,778 |
| (10,1)  |       | 95,364  | 91,078  | —       | —       | —       | —        | —        | —       |
| 10.2    |       | —       | —       | 109,548 | 109,540 | —       | —        | —*       | —       |
| 11,0    |       | 104,166 | 99,484  | 118,495 | 113,160 | 132,672 | 126,714  | 146,716  | 140,122 |
| (11,15) |       | 105.634 | 100,886 | —       | —       | —       | —        | —        | —       |
| 12,0    |       | 113.947 | 108.825 | 129,673 | 123,845 | 145,248 | 138,720  | 160,690  | 153,468 |
| (12,1)  |       |         |         |         |         |         |          | —        | —       |
| 13,0    | —0,20 | 123,728 | 118,176 | 140,851 | 134,521 | 158,180 | 151.07.1 | 174,662  | 166,812 |
| (13,2)  | -0,15 |         |         |         |         |         |          |          |         |
| 14,0    |       | 133,509 | 127,508 | 152.030 | 145,197 | 170,399 | 162,741  | 188,636  | 180,158 |
| 15,0    |       |         |         | 163,208 | 155,673 | 182,975 | 174,751  | 202,608  | 193,502 |
| 16,0    |       |         |         | 174,587 | 166,549 | 195,551 | 186,762  | 216,582  | 206,848 |
| 17,0    |       | 162,852 | 155,533 | —       | —       | —       | —        | 230,554  | 220,192 |
| 1810    |       | —       | —       | —       | —       | —       | —        | 244.528  | 233,537 |
| 19,0    |       |         |         |         |         |         |          | 258.501  | 246,882 |
| 20,0    |       | --      |         |         |         | —       |          | 272,474  | 260,228 |
| 21,0    | -0.24 | 1       |         |         |         |         |          | 286.447  | 273*572 |
| 22,0    | —0,20 |         |         |         |         |         |          | 300,420  | 286,917 |
| 24,0    |       |         |         |         |         |         |          | 328.366  | 313.607 |
| 28,0    |       | —       | —       | —       | —       | —       | —        | 384,258  | 366.988 |

|                                      |   |                               |   |             |
|--------------------------------------|---|-------------------------------|---|-------------|
| 9                                    | f?  | <p>1<br/>« ®<br/>5<br/>?"</p> | <p>* 00<br/>1 1 11 11 11 1 1 1 1 1 1 1 iSi 1 1 1 1 1 1 1 1</p>  | 136,335     |
| 5<br>X<br>£                          | «5<br>;                                     |                               | <p>1 1</p>  | 1 1 1       |
| X<br>G<br>*<br>£<br>£                | !<br>-<br>*«<br>X 1                         |                               | <p>3<br/>1 1</p>  | 1 1 1       |
| S<br>2<br>01<br>X0<br>X              | * !<br>»<br>«3                              |                               | <p>1 1</p>  | 1 1 1       |
| X<br>X<br>X<br>X<br>i<br>8           | .8<br>£*8<br>*<br>«®<br>*                   |                               | <p>1 1</p>  | 1 1 1       |
|                                      | 8«5<br>sh<br>s*£<br>5                       |                               | <p>\$ 8 - to<br/>1 Mill 11 1 1 ig 151 1 1 S1 iB 12 1 1</p>  | ><br>Si 1   |
| X<br>X<br>d<br>X<br>5<br>«<br>3<br>X | SC<br>h<br>8<br>U<br>vs<br>7<br>X<br>Q<br>X |                               | <p>+1<br/>+1</p>  | *<br>1<br>1 |
| «<br>9<br>X                          | v<br>3<br>X<br>5<br>X<br>X<br>X             |                               | <p>IO &lt; b.aOON^UO&lt;Or*QOOC4?*UO&lt;QOGIOaOOUOO<br/>—* * 4 - of *fcfc4 ** *f ^ *t &lt;fS io &lt;©* **</p> | oaotfcf     |

|  |                              |       | 0.60                                 |                              |                                      |  | 0.7                                  |                                      |
|--|------------------------------|-------|--------------------------------------|------------------------------|--------------------------------------|--|--------------------------------------|--------------------------------------|
|  | *                            | -     | 96                                   | 63 <sup>6</sup>              | 96                                   |  | 96                                   | 63 <sup>68</sup>                     |
|  | 9.5<br>10,0<br>( .1)<br>10,2 | -0.15 | —                                    | 157.615                      | —<br>—*                              | —<br>—                                 | —<br>—                               | —<br>—                               |
| 11.0<br>(J1.15)<br>12,0<br>(12J)<br>13.0<br>(13,2)<br>14,0<br>15,0<br>16.0<br>17,0<br>18.0 |                              |       | —<br>—<br>—<br>—<br>—<br>—<br>—<br>— | —<br>—<br>**<br>**<br>—<br>— | —<br>—<br>—<br>—<br>—<br>—<br>—<br>— | —<br>—<br>**•<br>—<br>—<br>—<br>—<br>— | —<br>—<br>—<br>—<br>—<br>—<br>—<br>— | —<br>—<br>—<br>—<br>—<br>—<br>—<br>— |
| 19,0<br>20.0<br>22,0<br>24,0<br>28,0   | -0.24                        | -0.20 | —<br>**<br>—<br>—                    | —<br>—<br>—<br>—             | —<br>—<br>—<br>—                     | —<br>—<br>Z<br>—                       | —<br>—<br>—<br>•**<br>—              | —<br>—<br>—<br>—<br>—                |

1. , ,  
 2. ( , . 2).  
 3. 1  
 :  
 96—8.9 / ' ;  
 68 63—8,5 / ' .  
 ( , . 5).



| Точность изготовления | Толщина пленки       | Предельное отклонение |
|-----------------------|----------------------|-----------------------|
| Нормальная            | 0,15<br>0,20         | ±0,03                 |
|                       | 0,25<br>0,30<br>0,35 | ±0,04                 |
|                       | 0,40<br>0,45         | ±0,05                 |
|                       | 0,50                 | ±0,06                 |
|                       | 0,60                 | ±0,08                 |
|                       | 0,65<br>0,70         | ±0,10                 |
|                       | Повышенная           | 0,15<br>0,20          |
| 0,25<br>0,30<br>0,35  |                      | ±0,03                 |
| 0,40<br>0,45          |                      | ±0,04                 |
| 0,50                  |                      | ±0,05                 |
| 0,60                  |                      | ±0,06                 |
| 0,65<br>0,70          |                      | ±0,08                 |

3

(  
1.2.

10%

, . 1, 2),

0,5 1

1 3 .



— ;  
— ;  
— .

0,25 , ' 2000 , ' 5 ,  
' , ' 2: ,  
' , ' 2 11383—75

0,5 , ' , ' 11 ,  
' , ' 1500 ,  
63: ,  
11 0,5 1500 63 11383—75

0,40 , ' , ' 3 ,  
' , ' MI:  
3x0,40 MI 11383—75  
( , . 2).

2.

2.1 . , -  
-

( , . 2).  
2.1. MI, 2, MJ  
859—78 96, 68, 63  
15527—70.

2.2. MI 2. :  
96;

68 63;  
2.3. 20.

1 , ' , ' .  
0,25 -  
10% .

0,20

2%

(  
2.4. , . 3).

1 —  
2 —

10 ;  
10

2.5.

»

1/20

0,5 1/20

1/20

(  
2.6 0,25 1/20 , . 3).

|                      |                   |              |
|----------------------|-------------------|--------------|
|                      |                   |              |
|                      |                   | i            |
| 1,5 6<br>1,5 6<br>.6 | 0,15 0,25<br>0,30 | 5<br>8<br>10 |

(<sup>1</sup> , . <sup>3</sup> 3, 4).

2.7.

. 3.

3

|              |  | ( / 1),  | , %, |
|--------------|--|----------|------|
| Ml, 2, 3, 96 |  | 210 (21) | 35   |
| 68           |  | 340 (35) | 2    |
|              |  | 290 (30) | 40   |
| 63           |  | 440 (45) | 10   |
|              |  | 290 (30) | 38   |
|              |  | 440 (45) | 10   |

68 63

390 (40 / 2)  
15%.

2.8.

63 2X0,25 -

48 ' 2

2%. -

0,5 63 4; 6; 8; 12 -

60 / 2 -

65 5%.

2.1—2.2. ( , . 2).

2.9. 3

2.10.

2.9—2.16. ( , . 2).

3.

3.1.

500 .

:

- ;  
 ;  
 ;  
 ;  
 ;  
 ;  
 ( ) ;

( , . **2**).  
 3.2.

3.3.  
 3  
 100 .

3  
 3.4.  
 100 .

3.5. ( ) ,  
 100 68 63  
 96.

( , . **2, 5**).  
 3.5 .

( , . **2**).  
 3.6.

3.7.  
 .  
 .

4.  
 4.1.

( , . **3**).  
 .

4.2. « -  
20  
3 20  
150 .

4.3. -  
0,01 6507—90  
,

4.4. 3  
200 , 100 .  
4 5. :

1  
-

4 6. 10006—80  
, ,  
-

4 5—4.6. ( , . 2).  
4 7 25036—87,  
9717.2—82, 9717,3—82, 1652.1-77 —  
1652.13-77, 9716.1—79, 9716.3—79, 13938.1-78-  
13938.12-78 13938.13—77. -  
, , noiOA-

24231-80.

1652.1-77— 1652.13-77, 13938.1-78—  
13938.12-78.  
( , . 1, 2).  
4.8. , -

8695-75.

4.9.

0,69 (7 / 2) 5 , -  
( ) ,

4.8—4.9. ( , . 2).

5. , ,

5.1.

, -  
, -  
 , -

1, -1, -2 2991—85, -1 10198—91,  
8273—75 — 9569—79, 8828—89,  
21140—88

3000 .

1250 .  
( , . 2).

5.1 .

— 24597—81.

9557—87

50 ,

0,3x30 3 3282—74  
3560—73. -

( , . 5).  
5.2.

:  
- ;  
 ;  
 ;  
 ;  
 ;



5.3.

— 14192—77  
« ».

-

5.2—5.3. (

5.4. ( , . 2).

, . 2).

5.5.

-

-

,

-

-

,

-

.

3

,

(  
5.6.

, . 2).

-

-

,

,

-

(

, . 2, 5).

|     |      | , r/ .   |       |       |       |          |       |       |       |
|-----|------|----------|-------|-------|-------|----------|-------|-------|-------|
|     |      | Mt. 2 3, |       |       |       | MI. 2 96 |       |       |       |
|     |      | 96       |       | 63    |       | 3,       |       | 68    |       |
|     |      |          |       |       |       |          |       |       |       |
| 1,5 | 0,15 | 4,29     | 7,15  | 4,10  | 6,82  | 4,80     | 6,56  | 4,58  | 6,26  |
| 1,5 | 0,15 | 4,63     | 7,65  | 4,42  | 7,31  | 5,16     | 7,03  | 4,93  | 6,72  |
| 1,6 | 0,20 | 6,32     | 9,45  | 6,04  | 9,03  | 6,89     | 8,80  | 6,58  | 8,40  |
| 1,6 | 0,4  | 11,25    | 15,65 |       |       | 12,02    | 14,81 |       |       |
| 1,7 | 0,2  | 6,7!     | 10,06 | —     |       | 7,54     | 9,50  |       |       |
| 1,7 | 0,4  | 12,30    | 17,05 | —     |       | 12,86    | 16,21 |       |       |
| 1,8 | 0,35 | —        | —     | 11,47 | 15,74 | —        | —     | 12,21 | 14,87 |
| 2,0 | 0,15 | 5,97     | 9,66  | 5,70  | 9,23  | 6,62     | 8,94  | 6,32  | 8,53  |
| 2,0 | 0,20 | 8,22     | 12,03 | 7,85  | 11,48 | 8,91     | 11,26 | 8,51  | 10,75 |
| 2,0 | 0,25 | 9,92     | 14,68 | 9,48  | 14,02 | 10,64    | 13,86 | 10,16 | 13,23 |
| 2,0 | 0,30 | 11,92    | 16,73 | 11,39 | 15,98 | 12,68    | 15,87 | 12,11 | 15,16 |
| 2,0 | 0,35 | 13,78    | 18,65 | 13,16 | 17,81 | 14,58    | 17,74 | 13,93 | 16,94 |
| 2,0 | 0,40 | 15,17    | 20,76 | 14,49 | 19,83 | 16,00    | 19,81 | 15,28 | 18,91 |
| 2,0 | 0,45 | 16,78    | 22,37 | 16,02 | 21,36 | 17,65    | 21,37 | 16,86 | 20,41 |
| 2,2 | 0,15 | 6,64     | 10,67 | 6,34  | 10,19 | 7,34     | 9,89  | 7,01  | 9,44  |

|        |       | , / ,    |       |       |       |         |       |       |       |
|--------|-------|----------|-------|-------|-------|---------|-------|-------|-------|
|        |       |          |       |       |       |         |       |       |       |
|        |       | Mt. 2 3» |       | 63 68 |       | 3, ML 2 |       | 96 68 |       |
|        |       | 96       |       | 63    | 68    | 3,      | 96    | 63    | 68    |
| 2,2    | 0,20  | 9.17     | 13,31 | 8,76  | 12,71 | 9,91    | 12,49 | 9,47  | 11.92 |
| 2,2    | 0,25  | 11,10    | 16.30 | 10,60 | 15,56 | 11,87   | 15,42 | 11,34 | 14,73 |
| 2,4    | 0,15  | 7,31     | 11.68 | 7,00  | 11,16 | 8,07    | 10,84 | 7,71  | 10,35 |
| 2,4    | 0,20  | 10.12    | 14.60 | 9.67  | 13.94 | 10,92   | 13,72 | 10.44 | 13,10 |
| 2,4    | 0,25  | 12,27    | 17,92 | 11.72 | 17,11 | 13,10   | 16,99 | 12,51 | 16,22 |
| 2,5    | 0,2   | 10,62    | 15.30 | 10.14 | 14,54 | 11,39   | 14,33 | 10,87 | 13.68 |
| 2,5    | 0,25  | 12,86    | 18,73 | 12,28 | 17,89 | 13,72   | 17,77 | 13,10 | 16,97 |
| 2,5    | 0,35  | 16,12    | 24,10 | 17,30 | 23,01 | 19,1)6  | 23,06 | 18,20 | 22,02 |
| 2,5    | 0,4   | 20,12    | 27.11 |       |       | 20,96   | 25,99 |       | —     |
| 2,5    | 0,5   | 24,03    | 31,86 | 22.95 | 30,43 | 25,15   | 30,74 | 24.04 | 29,36 |
| 2,6    | 0.20  | 11.07    | 15.88 | 10,58 | 15,17 | 11,93   | 14,95 | 11.39 | 14.27 |
| 2,6    | 0,25  | 13,45    | 19,54 | 12,84 | 18,66 | 11,33   | 18,55 | 13,69 | 17,72 |
| 2.6    |       | 20,96    | 28,22 | —     | —     | 22.08   | 27,11 | —     | —     |
| 2,6    | 0,50  |          |       |       |       | 26,42   | 32,29 | 25,23 | 30,84 |
| (2,75) | 0,45  | 25,16    | 32,85 | 24,03 | 31,37 | 26.25   | 31,65 | 25,07 | 30,22 |
| 23 '   | 0,25  | 14,62    | 21.16 | 13.96 | 20,21 | 15,56   | 20,12 | 14,86 | 19,21 |
| 3.0    | 0,15  | 9,33     | 14,70 | 8,91  | 14,03 | 10.25   | 13,69 | 9,79  | 13.Q7 |
| 3,0    | 0,20  | 12,98    | 18,46 | 12,39 | 17,62 | 13,94   | 17.41 | 13,32 | 16,63 |
| 3,0    | 0,25  | 15,79    | 22,78 | 15,09 | 21,76 | 16,79   | 24.69 | 16,05 | 20,72 |
| 3,0    | 6,30  | 19.19    | 26,24 | 18,33 | 25.06 | 20,23   | 25,10 | 19,32 | 23,97 |
| 3,0    | 0,35  | 22,45    | 29,55 | 21,44 | 28.22 | 23,53   | 28,37 | 22,47 | 27,09 |
| 3,0    | 0,40  | 24,95    | 33.34 | 23,83 | 31,84 | 26,07   | 32,11 | 24.90 | 30,66 |
| 3,0    | 1 0 5 | 27,96    | 36,35 | 26,70 | 34,71 | 29,12   | 35,07 | 27,81 | 33,49 |

|     |      | . r/ .         |       |       |        |         |       |       |       |
|-----|------|----------------|-------|-------|--------|---------|-------|-------|-------|
|     |      |                |       |       |        |         |       |       |       |
|     |      | MI. 2 3,<br>96 |       |       |        | MI. 2 9 |       | 63    |       |
|     |      |                |       |       |        |         | *     |       |       |
| 3,0 | 0.50 |                |       |       |        | 31,46   | 38,45 | 30,04 | 36.71 |
| 3,0 | 0.60 | 34.65          | 46.11 | —     | —      | 36,37   | 44,15 | —     | —     |
| 3.2 | 0,20 | 13.93          | 19,74 | 13,30 | 18.85  | 14,95   | 18,64 | 14,27 | 17,80 |
| 3.2 | 0.40 | 26.91          | 35.86 | 25.70 | 34.24- | 28,08   | 34,57 | 26,82 | 33,01 |
| 3.4 | 0,60 | 40.42          | 53,62 | 38,59 | 51,20  | 42,43   | 51,49 | 40,51 | 49,17 |
| 3,5 | 0.25 | 18,73          | 26.84 |       |        | >9.87   | 25,60 | —     | —     |
| 3.8 | 0.70 | 52,0»          | 69,34 | 49,66 | 66.22  | 54,26   | 66,95 | 51,81 | 63,94 |
| 4.0 | 0.60 | 49,14          | 65,02 | 46,93 | 62,09  | 51,49   | 62.56 | 49,17 | 59,74 |
| 4.0 | 0.65 | 51,52          | 70.25 | 49.19 | 67,08  | 58,87   | 67,76 | 51,44 | 64.71 |

( , . l, 2, 5).

1.

-

· · · , - , ; · · ) , · ,  
; · · ( )

2.

-

-

31.12.75 4116

3.

11383—65

4.

-

-

|             |             |     |
|-------------|-------------|-----|
| 859-78      |             | 2 1 |
| 1652 1-77—  | 1652 13-77  | 47  |
| 2991-85     |             | 5 1 |
| 3282-74     |             | 5 1 |
| 3560—73     |             | 5 1 |
| 6507-90     |             | 43  |
| 8273-75     |             | 51  |
| 8695—75     |             | 48  |
| 8828-89     |             | 5 1 |
| 9557-87     |             | 5 1 |
| 9569—79     |             | 51  |
| 9716 1—79   |             | 47  |
| 9716 3—79   |             | 47  |
| 9717 2—82,  | 9717 3-82   | 47  |
| 10006-80    |             | 46  |
| 10198-91    |             | 51  |
| 13938 1-78— | 13938 12-78 | 47  |
| 13938 13-77 |             | 4 7 |
| 14192-77    |             | 53  |
| 15527-70    |             | 2 1 |
| 21140-88    |             | 5 1 |
| 24231—80    |             | 47  |
| 24597—81    |             | 5 1 |
| 25086-87    |             | 4.7 |

5.

03.06.91 775

-

6. ( 1993 .) 1, 2, 3, 4, 5,  
1981 ., 1984 .,  
1987 ., 1988 ., 1990 . ( 11—81, 5—84,  
12—87, 12—88, 7—90)

. .  
. .  
. .

1005 93. , .02 09.93. .1.4 . \* - 1.4.  
.- . 1,23 1265 . 560.

« » \* » . ,107076, . 6. . 4 \* .. 14.  
. « .