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INTERSTATE COUNCIL FOR STANDARDIZATION, METROLOGY AND CERTIFICATION  
(ISC)

**21631—  
2019**



2020

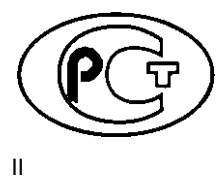
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3 ( 30 2019 . 123- )

| no ( 3166) 004—97 | ( 3166) 004—97             |  |
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|                   | BY<br>KG<br>RU<br>TJ<br>uz |  |

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|---|-------------------|----|
| 1 | .....             | 1  |
| 2 | .....             | 1  |
| 3 | .....             | 2  |
| 4 | .....             | 3  |
| 5 | .....             | 8  |
| 6 | .....             | 22 |
| 7 | .....             | 23 |
| 8 | , , .....         | 25 |
|   | ( ) 1 .....       | 26 |
|   | ( ) .....         |    |
|   | 1 .....           | 31 |
|   | ( ) ( 1,2,3)..... | 32 |

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Sheets of aluminium and aluminium alloys. Specifications

— 2020—06—01

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2

9.510

427

1131

1497

2789

3221

3749

90°.

4784

5009

5378

6456

6507

7502

7727

8026

11069

11701

11739.1

11739.2

11739.3

11739.4

11739.5

11739.6

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11739.20

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11739.23

11739.24

12697.1

12697.2

12697.3

12697.4

12697.5

12697.6

12697.7

12697.8

12697.9

12697.10

12697.11

12697.12

14192

19300

24047

24231

25086

26877

(www.easc.by)

**3**

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1)

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3)

4)

- ) 1) — ;
- 2) — ;
- 3) — 2;
- 4) — ;
- 5) — ;
- 6) — 1;
- 7) — TH;
- ) 1) — ;
- 2) — ;
- 3) — .

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 2 7, 6, 5, . 00, , 1, -  
 , 2,

3 4,0 ;

- ) 1) — ;
- 2) — ;
- .

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|     | 600   |       | . 600<br>1000 |       | . 1000<br>1400 |       | . 1400<br>1800 |       | 8. 1800<br>2000 |       |
|-----|-------|-------|---------------|-------|----------------|-------|----------------|-------|-----------------|-------|
|     | -     | -     | -             | -     | -              | -     | -              | -     | -               | -     |
| 0,3 | -0,04 | -0,05 | -0,06         | -0,08 |                |       |                |       |                 |       |
| 0,4 | -0,04 | -0,05 | -0,06         | -0,08 | -0,10          | -0,12 |                |       |                 |       |
| 0,5 | -0,04 | -0,05 | -0,06         | -0,08 | -0,10          | -0,12 | -0,10          | -0,12 |                 |       |
| 0,6 | -0,05 | -0,06 | -0,08         | -0,10 | -0,10          | -0,12 | -0,11          | -0,13 |                 |       |
| 0,7 | -0,05 | -0,06 | -0,08         | -0,10 | -0,10          | -0,12 | -0,11          | -0,13 |                 |       |
| 0,8 | -0,06 | -0,08 | -0,10         | -0,12 | -0,12          | -0,13 | -0,12          | -0,14 | -0,14           | -0,16 |

| *    | 600   |       | 600<br>1000 |       | 1000<br>1400 |       | 1400<br>1600 |       | 1800<br>2000 |       |
|------|-------|-------|-------------|-------|--------------|-------|--------------|-------|--------------|-------|
|      | -     | -     | -           | -     | -            | -     | -            | -     | -            | -     |
| 0,9  | -0,06 | -0,08 | -0,10       | -0,12 | -0,12        | -0,13 | -0,12        | -0,14 | -0,14        | -0,16 |
| 1,0  | -0,08 | -0,10 | -0,12       | -0,15 | -0,14        | -0,16 | -0,15        | -0,17 | -0,16        | -0,18 |
| 1,2  | -0,08 | -0,10 | -0,12       | -0,15 | -0,14        | -0,16 | -0,15        | -0,17 | -0,18        | -0,20 |
| 1,5  | -0,10 | -0,15 | -0,14       | -0,20 | -0,18        | -0,22 | -0,20        | -0,25 | -0,24        | -0,26 |
| 1,6  | -0,10 | -0,15 | -0,14       | -0,20 | -0,18        | -0,22 | -0,22        | -0,25 | -0,24        | -0,26 |
| 1,8  | -0,10 | -0,15 | -0,16       | -0,20 | -0,20        | -0,22 | -0,22        | -0,25 | -0,24        | -0,26 |
| 1,9  | -0,10 | -0,15 | -0,16       | -0,20 | -0,20        | -0,22 | -0,22        | -0,25 | -0,24        | -0,26 |
| 2,0  | -0,10 | -0,15 | -0,16       | -0,20 | -0,20        | -0,24 | -0,24        | -0,26 | -0,25        | -0,27 |
| 2,5  | -0,12 | -0,20 | -0,18       | -0,25 | -0,22        | -0,28 | -0,26        | -0,29 | -0,28        | -0,30 |
| 3,0  | -0,14 | -0,25 | -0,20       | -0,30 | -0,26        | -0,30 | -0,28        | -0,34 | -0,33        | -0,35 |
| 3,5  | -0,16 | -0,25 | -0,22       | -0,30 | -0,28        | -0,32 | -0,30        | -0,35 | -0,34        | -0,36 |
| 4,0  | -0,18 | -0,25 | -0,24       | -0,30 | -0,32        | -0,35 | -0,34        | -0,36 | -0,35        | -0,37 |
| 4,5  | -0,20 | -0,25 | -0,26       | -0,30 | -0,34        | -0,35 | -0,34        | -0,36 | -0,35        | -0,37 |
| 5,0  | -0,24 | -0,30 | -0,30       | -0,35 | -0,34        | -0,36 | -0,35        | -0,37 | -0,36        | -0,38 |
| 5,5  | -0,24 | -0,30 | -0,30       | -0,35 | -0,34        | -0,36 | -0,35        | -0,37 | -0,36        | -0,38 |
| 6,0  | -0,28 | -0,30 | -0,35       | -0,40 | -0,38        | -0,41 | -0,40        | -0,42 | -0,41        | -0,43 |
| 6,5  | -0,28 | -0,30 | -0,35       | -0,40 | -0,38        | -0,41 | -0,40        | -0,42 | -0,41        | -0,43 |
| 7,0  | -0,28 | -0,30 | -0,35       | -0,40 | -0,40        | -0,42 | -0,41        | -0,43 | -0,42        | -0,44 |
| 7,5  | -0,28 | -0,30 | -0,35       | -0,40 | -0,40        | -0,42 | -0,41        | -0,43 | -0,42        | -0,44 |
| 8,0  | -0,33 | -0,35 | -0,40       | -0,45 | -0,44        | -0,46 | -0,45        | -0,47 | -0,46        | -0,48 |
| 8,5  | -0,33 | -0,35 | -0,40       | -0,45 | -0,44        | -0,46 | -0,45        | -0,47 | -0,46        | -0,48 |
| 9,0  | -0,33 | -0,35 | -0,40       | -0,45 | -0,45        | -0,47 | -0,46        | -0,48 | -0,47        | -0,49 |
| 9,5  | -0,33 | -0,35 | -0,40       | -0,45 | -0,45        | -0,47 | -0,46        | -0,48 | -0,47        | -0,49 |
| 10,0 | -0,38 | -0,40 | -0,45       | -0,50 | -0,48        | -0,50 | -0,48        | -0,50 | -0,48        | -0,50 |
| 10,5 | -0,38 | -0,40 | -0,45       | -0,50 | -0,48        | -0,50 | -0,48        | -0,50 | -0,48        | -0,50 |

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±5 %

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4.1.1

$$\sigma = \frac{\sqrt{s^2 + \frac{1}{2}}}{2} \cdot 1$$

8 — ;  
 $H_{mjn}$   $8_{min}$  — ;  
 , / 3.  
 .1— .5 ( ).  
 2.85 / 3, -

4.2

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|  |   |             |  |                                  |
|--|---|-------------|--|----------------------------------|
|  |   |             |  |                                  |
|  | 7, 6, 5.  | 10,5<br>5,0 | 600, 800, 900, 1000, 1200.<br>1400, 1500, 1600, 1800, 2000 | 2000                             |
|  | . 1. 00.  |             | 600, 800, 900, 1000, 1200.<br>1400, 1500, 1600, 1800, 2000 | 2000                             |
|  | 7, 6, 5. . . 1,<br>, , , , 2,<br>, 5.<br>1 . 16 , 95-1 . 95-2 .<br>1 . 8 1 , 1. |             | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000                | 2000<br>7000                     |
|  | 95<br><br>1915  |             | 1000, 1200, 1425, 1500, 2000<br><br>1200, 1500, 2000       | 2000<br>7000<br><br>2000<br>7000 |
|  | 7, 6, 5. . . 1,<br>,  | 0,3<br>10,5 | 600, 800, 900, 1000, 1200,<br>1400, 1500, 1600, 1800, 2000 | 2000                             |
|  | 7, 6, 5. . . 1,<br>, . . 2 , ,  | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                               | 2000<br>4000                     |
|  |   | 0,7<br>10,5 | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000                | 2000<br>7000                     |
|  | . 5, .  | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                               | 2000<br>7000                     |
|  |   | 0,7<br>10,5 | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000                | 2000<br>7000                     |
|  |   | 2,0<br>5,5  | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000                | 2000<br>7000                     |
|  | 1565  | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                               | 2000<br>7000                     |
|  |   | 0,7<br>10,5 | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000                | 2000<br>7000                     |
|  | 1580  | 1,0<br>10,5 | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000                | 2000<br>7000                     |



|  |                        |             |   |              |
|--|------------------------|-------------|---|--------------|
|  |                        |             |   |              |
|  | 12                     | 0,5<br>4,0  | 1200, 1500                                  | 3000<br>4000 |
|  | 1, 16, 16, 16          | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                | 2000<br>4000 |
|  |                        | 0,7<br>4,0  | 1000, 1200, 1400, 1500, 1600,<br>1800       | 2000<br>7000 |
|  |                        | 4,0<br>10,5 | 2000  | 2000<br>7000 |
|  | 16                     | 0,5<br>0,7  | 1200, 1500                                  | 2000<br>4000 |
|  |                        | 0,7<br>4,0  |   | 2000<br>7000 |
|  | 95                     | 0,5<br>0,7  | 1000, 1200, 1425, 1500                      | 2000<br>4000 |
|  |                        | 0,7<br>4,0  | 1000, 1200, 1425, 1500, 2000                | 2000<br>7000 |
|  |                        | 4,0<br>10,5 |   |              |
|  | 95-2, 95-2, 95-1, ,    | 1,0<br>10,5 | 1200, 1400, 1500                            | 2000<br>7000 |
|  | 1, 1, 1                | 0,8<br>10,5 | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000 | 2000<br>7000 |
|  | 1915                   | 0,8         | 1200  | 2000<br>5000 |
|  |                        | 1,0<br>4,5  | 1200, 1500                                  |              |
|  | 7, 6, 5, , , 1,<br>00. | 0,8<br>4,5  | 1000, 1200, 1400, 1500                      | 2000<br>4000 |
|  | , , 2,                 | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                | 2000<br>7000 |
|  |                        | 0,7<br>4,0  | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000 |              |
|  | 12                     | 0,5<br>4,0  | 1200, 1500                                  | 3000<br>4000 |
|  | 7, 6, 5, , 0, 1,       | 0,3<br>10,5 | 600, 800, 900, 1000                         | 2000         |
|  |                        | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                | 2000<br>7000 |
|  |                        | 0,7<br>4,0  | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000 |              |
|  |                        | 1,0<br>4,5  | 1000, 1200, 1400, 1500                      | 2000<br>4000 |
|  | , , 2                  | 0,5<br>0,7  | 1000, 1200, 1400, 1500, 1600                | 2000<br>7000 |
|  |                        | 0,7<br>4,0  | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000 |              |
|  | 1, 1, 1,               | 0,8<br>4,0  | 1000, 1200, 1500                            | 2000<br>7000 |

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|                 |                              |                  |  |                |
|-----------------|------------------------------|------------------|--|----------------|
|                 |                              |                  |  |                |
|                 | , 1 . 16 , 16, 16            | 0,5<br>0,7 .     | 1000, 1200, 1400,1500. 1600                            | 2000<br>5000 . |
|                 |                              | . 0,7<br>10,5 .  | 1000, 1200, 1400, 1500, 1600,<br>1800, 2000            | 2000<br>7200 . |
|                 | 16                           | 0,5<br>4,0 .     | 1200. 1500   | 2000<br>7200 . |
|                 | 19                           | 0,5<br>10,5 .    | 600, 800, 900,1000, 1200,<br>1400.1500,1600,1800, 2000 | 2000<br>7200 . |
|                 | 95-2 , 1 . 1, 1 , 95-<br>1 , | 0,8<br>10,5 .    | 1000, 1200, 1500. 1600,1800,<br>2000                   | 2000<br>7000 . |
|                 | 1915                         | 1.0<br>4,5 .     | 1200, 1500   | 2000<br>5000 . |
| . 4.5<br>10,5 . |                              | 1200. 1500. 2000 | 2000<br>7000 .   |                |
|                 |                              | 0.5<br>0,7 .     | 1000. 1200, 1400,1500,1600                             | 2000<br>5000 . |
|                 |                              | . 0,7<br>10,5 .  | 1000.1200.1400.1500.1600.<br>1800, 2000                | 2000<br>7000 . |
|                 | 95                           | 0.5<br>0,7 .     | 1000, 1200, 1425. 1500                                 | 2000<br>5000 . |
|                 |                              | . 0,7<br>4,0 .   | 1000. 1200, 1425.1500. 2000                            | 2000<br>7200 . |
|                 |                              | . 4,0<br>10,5 .  | 1000, 1200, 1425.1500. 2000                            | 2000<br>7000 . |
| -<br>-          | 16 , 16, 16                  | 1,5<br>7,5 .     | 1000, 1200, 1400, 1500                                 | 2000<br>7200 . |

4.3

3.

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|                        |                      |               |             |
|------------------------|----------------------|---------------|-------------|
|                        |                      |               |             |
| 5,0 .                  | 1000 .               | +6.0          | +8.0        |
|                        | . 1000               | —             | +10         |
| . 5.0                  | 1000 .               | +10           | +12         |
|                        | . 1000               | —             | +15         |
| 1<br>4,0 —<br>2<br>5.0 | 40 .<br>2000<br>60 . | 4.0 —<br>25 . | -<br>2<br>- |

21631—2019

4.4  
2, 500 , 4.  
4

|              |             |      |       |
|--------------|-------------|------|-------|
|              |             |      |       |
| 0,3 3,5 .    | 2000 7200 . | +8,0 | +20,0 |
| . 3,5 10,5 . |             | —    | +25,0 |

4.5 -  
4.6 10 % , -  
10 %.  
4.7  
4.8 :  
1200 , 2000 , 2 0,7 , 0,7 ,  
2. 0,7 \*1200 \*2000 21631—2019.  
1, 5 , 1000 ,  
2000 , 15\*1000\*2000 21631—2019  
1, 5 , 1200 , 2000 ,  
1. 5\*1200\*2000 21631—2019.  
2000 , 1, 5 , 1000 ,  
1. 2 5 \*1000 \*2000 21631—2019.  
16 , 2 , 1200 , 2000 ,  
16. . 2\*1200\*2000 21631—2019.  
16 , 2 , 1200 , 2000 ,  
16. . 271\*1200\*2000 21631—2019.

**5**

5.1 -  
5.1.1 , 7, 6, 5,  
11069; 00, 1, ( -  
, 1) 4784.  
, 1 1131.  
5.1.2 4784, 8  
5.2 , 5. -

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|                      | . %   |             |      |      |      |       |     |      |      |      |     |      |
|----------------------|-------|-------------|------|------|------|-------|-----|------|------|------|-----|------|
|                      |       |             |      |      |      |       |     |      |      |      |     | -    |
|                      |       |             |      |      |      |       |     |      |      |      |     | -    |
| 1. 16.<br>'<br>1.    | 99,30 | —           | 0,30 | 0,30 | 0,02 | 0,025 | 0.1 | 0,15 | 0.05 | 0,02 | —   | 0,70 |
| 95,<br>95-1,<br>95-2 | -     | 0,9—<br>1.3 | 0,3  | 0.3  | —    | 0,025 | —   | 0,15 | —    | 0,05 | 0,1 | —    |

5.3

6.

6

|       |      |     |     |     |
|-------|------|-----|-----|-----|
| 0.5   | 1,9  | 1,5 | 4.0 | 8,0 |
| . 1.9 | 4.0  | 1.5 | 2.0 | 4,0 |
| . 4.0 | 10,5 | 1.5 | 2.0 | —   |

4,0 %

5.4

5.5

7.

5.6

8.

5.7

NaOH 50 °C

1 3

30 %-

5—6 %-

HNO<sub>3</sub>.

|                        |   |       |  |                 | ( / 2)          | (Tq 2> / 2) | 1/0=11.3^5, % |      |                |           |   |     |
|------------------------|---|-------|--|-----------------|-----------------|-------------|---------------|------|----------------|-----------|---|-----|
|                        |   |       |  |                 |                 |             |               |      |                |           |   |     |
| 7. 6, 5. ,<br>. 1. 00, | 7 , 6 , 5 . . .                             | 1 , . |  | 0.3<br>0.5 .    | 60 (6,0)        | —           | 20.0          |      |                |           |   |     |
|                        |   |       |  | . 0,5<br>0,9 .  | 60 (6,0)        | —           | 25.0          |      |                |           |   |     |
|                        |   |       |  | . 0,9<br>10,5 . | 60 (6,0)        | —           | 30,0          |      |                |           |   |     |
|                        | 7 2, 6 2, 5 2.<br>0 2. 0 2. 1 2,<br>00 2, 2 |       |  |                 | 0.8<br>4,5 .    | 100(10,0)   | —             | 6.0  |                |           |   |     |
|                        |   |       |  |                 | 7 , 6 , 5 . ,   | 1 . 00 ,    |               |      | 0.3<br>0,8 .   | 145(15,0) | — | 3.0 |
|                        |   |       |  |                 |                 |             |               |      | . 0,8<br>3,5 . | 145(15,0) | — | 4,0 |
|                        | 7. 6, 5, , ,<br>1, 00.                      |       |  |                 | . 3,5<br>10,5 . | 130 (13,0)  | —             | 5,0  |                |           |   |     |
|                        |   |       |  |                 | 5,0<br>10,5 .   | 70 (7,0)    | —             | 15.0 |                |           |   |     |
|                        |   |       |  |                 | 0.5<br>0.7 .    | 90 (9,0)    | —             | 18,0 |                |           |   |     |
|                        |   |       |  |                 | . 0,7<br>3,0 .  | 90 (9,0)    | —             | 22.0 |                |           |   |     |
| . 3,0<br>10,5 .        |   |       |  |                 | 90 (9,0)        | —           | 20,0          |      |                |           |   |     |
| 2, 2                   |   |       |  |                 | 0,5<br>3,5 .    | 145 (15,0)  | —             | 5,0  |                |           |   |     |
|                        |   |       |  |                 | . 3,5<br>4,0 .  | 145(15,0)   | —             | 6.0  |                |           |   |     |

|    |  |      |  |             | ( ' / 2 )              | ( < / 02- 2 ) | / = 11.3^Fq, 8. % |
|----|--|------|--|-------------|------------------------|---------------|-------------------|
|    |  |      |  | 0.5         | 185(19,0)              | —             | 1.0               |
|    |  |      |  | 0.5<br>0.8  | 185(19,0)              | —             | 2.0               |
|    |  |      |  | 0.8<br>1,2  | 185(19,0)              | —             | 3,0               |
|    |  |      |  | 1,2<br>4,0  | 185(19,0)              | —             | 4,0               |
|    |  |      |  | 5,0<br>10,5 | 100(10,0)              | —             | 10,0              |
|    |  |      |  | 1,0<br>4,5  |                        |               |                   |
| 12 |  | 12   |  | 0,5<br>4,0  | 155(16,0)              | —             | 14,0              |
|    |  | 12 2 |  | 0,5<br>4,0  | 220 (22,5)             | —             | 3,0               |
| 2  |  | 2    |  | 0,5<br>1,0  | 165(17,0)              | —             | 16,0              |
|    |  |      |  | 1,0<br>10,5 | 165(17,0)              | —             | 18,0              |
|    |  | 2 2  |  | 0,5<br>1,0  | 235-314<br>(24.0-32,0) | 145(15,0)     | 5.0               |
|    |  |      |  | 1,0<br>4,0  | 235-314<br>(24.0-32,0) | 145(15,0)     | 6.0               |
|    |  | 2    |  | 0,5<br>1,0  | 265 (27,0)             | 215(22,0)     | 3,0               |
|    |  |      |  | 1,0<br>4,0  | 265 (27,0)             | 215(22,0)     | 4,0               |

|             |  |   |  |             | ( ' / 2)    | ( / 02' 2) | /0 = 11, 6,% 0. |      |
|-------------|--|---|--|-------------|-------------|------------|-----------------|------|
| 2           |  | 2 |  | 5.0<br>10.5 | 175 (18,0)  | —          | 7,0             |      |
|             |  |   |  | 0.5<br>0.6  | 195 (20,0)  | 90 (9,0)   | 15,0            |      |
|             |  |   |  | 0.6<br>4.5  | 195 (20,0)  | 100(10,0)  | 15,0            |      |
|             |  |   |  | 4.5<br>10,5 | 185(19,0)   | 80 (8,0)   | 15.0            |      |
|             |  | 2 |  |             | 0.5<br>1,0  | 245 (25,0) | 195 (20,0)      | 7,0  |
|             |  |   |  |             | 1.0<br>4.0  | 245 (25,0) | 195 (20,0)      | 7.0  |
|             |  |   |  |             | 5.0<br>6,0  | 185(19,0)  | 80 (8.0)        | 12,0 |
| 6.0<br>10,5 |  |   |  |             | 185 (19,0)  | 80 (8.0)   | 15.0            |      |
| 5           |  | 5 |  | 0.5<br>0,6  | 275 (28,0)  | 135(14,0)  | 15.0            |      |
|             |  |   |  | 0,6<br>4.5  | 275 (28,0)  | 145(15,0)  | 15.0            |      |
|             |  |   |  | 4,5<br>10,5 | 275 (28,0)  | 130 (13,0) | 15,0            |      |
|             |  | 5 |  |             | 5.0<br>6.0  | 275 (28,0) | 130(13,0)       | 12.0 |
|             |  |   |  |             | 6.0<br>10,5 | 275 (28,0) | 130 (13,0)      | 15.0 |

|      |  |        |  |               | ( ' / 2)   | ( / <sup>02</sup> 2) | ( ' ' ' ) . % |
|------|--|--------|--|---------------|------------|----------------------|---------------|
|      |  |        |  | 0.5<br>0,6 .  | 305 (31,0) | 145(15,0)            | 15,0          |
|      |  |        |  | 0.6<br>10,5 . | 315(32,0)  | 155(16,0)            | 15,0          |
|      |  |        |  | 5,0<br>10.5 . | 315(32,0)  | 155(16,0)            | 15,0          |
|      |  |        |  | 2.0<br>5.5 .  | 275 (28,0) | 130(13,0)            | 15,0          |
| 1565 |  | 1565   |  | 0.5<br>2,0 .  | 335 (34,0) | 160(16,5)            | 15,0          |
|      |  |        |  | 2.0<br>6,0 .  | 335 (34,0) | 170 (17,5)           | 15,0          |
|      |  |        |  | 6,0<br>10.5 . | 335 (34,0) | 175(18,0)            | 15,0          |
|      |  | 1565   |  | 3,5<br>10.5 . | 335 (34,0) | 175(18,0)            | 15,0          |
|      |  | 1565 2 |  | 2,0<br>5,0 .  | 360 (36,5) | 255 (26,0)           | 10,0          |
| 1580 |  | 1580   |  | 0.5<br>2,5 .  | 360 (36,5) | 260 (26,5)           | 15            |
|      |  |        |  | 2,5<br>6 .    | 380 (39,0) | 280 (29,0)           | 12            |
|      |  |        |  | 6<br>10.5 .   | 360 (36,5) | 260 (26,5)           | 15            |
|      |  | 1580 2 |  | 1,5<br>6,0 .  | 400 (41,0) | 310 (32,0)           | 10            |



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|   |  |   |  |              | ( / 2)                 | ( / 2)     | 0 = 11, 6, % 0. |      |
|---|--|---|--|--------------|------------------------|------------|-----------------|------|
|   |  |   |  | 0,5<br>5,0   | 145<br>(15,0)          | —          | 20,0            |      |
|   |  |   |  | 0,5<br>10,5  | 145<br>(15,0)          | —          | 15,0            |      |
|   |  |   |  | 0,5<br>0,6   | 195 (20,0)             | —          | 18,0            |      |
|   |  |   |  | 0,6<br>3,0   | 195 (20,0)             | —          | 20,0            |      |
|   |  |   |  | 0,3<br>5,0   | 195 (20,0)             | —          | 18,0            |      |
|   |  |   |  | 0,5<br>10,5  | 175 (18,0)             | —          | 16,0            |      |
|   |  | 1 |  |              | 0,5<br>5,0             | 295 (30,0) | —               | 10,0 |
|   |  |   |  |              | 0,5<br>10,5            | 295 (30,0) | —               | 8,0  |
|   |  |   |  | -            | 5,0<br>10,5            | 175 (18,0) | —               | 14,0 |
|   |  |   |  | -            | 5,0<br>10,5            | 295 (30,0) | —               | 7,0  |
| 1 |  | 1 |  | 0,5<br>1,9   | 145—225<br>(15,0—23,0) | —          | 12,0            |      |
|   |  |   |  | 0,19<br>10,5 | 145—235<br>(15,0—24,0) | —          | 12,0            |      |
|   |  | 1 |  |              | 0,5<br>1,9             | 365 (37,0) | 185(19,0)       | 15,0 |
|   |  |   |  |              | 0,19<br>10,5           | 375 (38,0) | 195(20,0)       | 15,0 |

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|         |   |         |   |               | ( / 2)                 | ( / <sup>0.2</sup> 2) | / <sub>0</sub> = 11.3 ' 0.<br>% |      |
|---------|---|---------|---|---------------|------------------------|-----------------------|---------------------------------|------|
| 1       |   | 1       | - | 5.0<br>10,5   | 355 (36,0)             | 185(19,0)             | 12,0                            |      |
| 16 . 16 |   | 16 , 16 |   | 5.0<br>10,5   | 145—235<br>(15,0—24,0) | —                     | 10,0                            |      |
|         | - | 16 . 16 | - | 0,5<br>1,5    | 440 (45,0)             | 290 (29,5)            | 13,0                            |      |
|         |   |         |   | . 1,5<br>6,0  | 440 (45,0)             | 290 (29,5)            | 11,0                            |      |
|         |   |         |   | . 6.0<br>10,5 | 440 (45,0)             | 290 (29,5)            | 10,0                            |      |
|         |   | 16 . 16 |   |               | 1.5<br>3,0             | 475 (48,5)            | 360 (36,5)                      | 10,0 |
|         |   |         |   |               | . 3,0<br>7,5           | 475 (48,5)            | 360 (36,5)                      | 8,0  |
| 16      |   | 16      |   | 0,5<br>1,9    | 145—225<br>(15,0—23,0) | —                     | 10,0                            |      |
|         |   |         |   | . 1.9<br>10,5 | 145—235<br>(15,0—24,0) | —                     | 10,0                            |      |
|         |   | 16      |   |               | 0.5<br>1,9             | 405(41,5)             | 270 (27,5)                      | 13,0 |
|         |   |         |   |               | . 1,9<br>6,0           | 425 (43,5)            | 275 (28,0)                      | 11,0 |
| 16      |   | 16      | - | . 6,0<br>10,5 | 425 (43,5)             | 275 (28,0)            | 10,0                            |      |
|         |   |         |   | 5.0<br>10,5   | 415(42,0)              | 255 (26,0)            | 10,0                            |      |

|                                |    |                                |             |               | -                      |            |                     |
|--------------------------------|----|--------------------------------|-------------|---------------|------------------------|------------|---------------------|
|                                |    |                                |             |               | ( / 2)                 | ( / 2)     | $\rho_0 = 11,8, \%$ |
| 16                             | -  | 16                             |             | 1,5<br>1,9    | 425 (43.5)             | 335 (34.0) | 10,0                |
|                                |    |                                |             | . 1,9<br>7,5  | 455 (46.5)             | 345 (35.0) | 8.0                 |
| 16                             |    | 16                             |             | 0.5<br>1,9    | 130-225<br>(13,0-23,0) | —          | 10,0                |
|                                |    |                                |             | . 1,9<br>4,0  | 130-235<br>(13.0-24,0) | —          | 10,0                |
|                                |    | 16                             |             | 0,5<br>1,9    | 365 (37,0)             | 230 (23,5) | 13.0                |
|                                |    |                                |             | . 1,9<br>4,0  | 405(41,5)              | 270 (27.5) | 13,0                |
| 95                             | -  | 95                             |             | 0.5<br>10.5   | 245<br>(25.0)          | —          | 10,0                |
|                                |    | 95 1                           |             | 0.5<br>1,9    | 480 (49,0)             | 400 (41.0) | 7.0                 |
|                                |    |                                |             | . 1,9<br>6,0  | 490 (50,0)             | 410 (42,0) | 7.0                 |
|                                |    |                                |             | . 6.0<br>10.5 | 490 (50,0)             | 410 (42,0) | 6,0                 |
|                                | 95 |                                | 5.0<br>10.5 | 490 (50,0)    | 410 (42,0)             | 6,0        |                     |
| 95-2 , 95-2 ,<br>95-1 . ,<br>, |    | 95-2 , 95-2 ,<br>95-1 . ,<br>, |             | 1.0<br>10.5   | 245<br>(25.0)          | —          | 10,0                |
|                                |    |                                |             | 0.8<br>4,0    |                        |            |                     |

|                         |  |               |            |             | ( ' / 2 )                | ( / <sup>02</sup> 2) | ( ' . ' ) . % |
|-------------------------|--|---------------|------------|-------------|--------------------------|----------------------|---------------|
| 95-2 , 95-2 ,<br>95-1 , |  | 95-2 , 95-1 , | -          | 1.0<br>10,5 | 315(32,0)                | —                    | 10,0          |
|                         |  | 95-2          |            | 5,0<br>10,5 | 315(32,0)                | —                    | 10,0          |
|                         |  | 95-1 ,        |            |             |                          |                      |               |
| 1915                    |  | 1915          |            | 1.0<br>4,5  | <sup>245</sup><br>(25,0) | —                    | 10            |
|                         |  | 1915          | -<br>30—35 | 1,0<br>10,5 | 315(32,0)                | 195 (20,0)           | 10            |
|                         |  | 1915          | -<br>2—4   | 1,0<br>10,5 | 275 (28,0)               | 165(17,0)            | 10            |
|                         |  | 1915          | -<br>30—35 | 5.0<br>10,5 | 315(32,0)                | 195 (20,0)           | 10            |
|                         |  | 1915          | -<br>2—4   | 5.0<br>10,5 | 265 (27,0)               | 165(17,0)            | 10            |
| 1 , 1 ,<br>1            |  | 1 , 1 , 1     |            | 0.8<br>10,5 | <sup>245</sup><br>(25,0) | —                    | 10,0          |
|                         |  | 1 , 1 , 1     | -          | 0.8<br>10,5 | 335 (34,0)               | —                    | 12,0          |
|                         |  | 1 , 1 , 1     |            | 0.8<br>4,0  |                          |                      |               |
|                         |  | 1, 1 , 1      |            | 5,0<br>10,5 | 335 (34,0)               | —                    | 12,0          |

1 : 7. 6. 5, . . . 1. 00.  
 108 (11 / ²).  
 2 1.0 4.0 147 (15.0 / ²) 196 (20.0 / ²).

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|    |  |              | ( / ²)       | ci02><br>( / ²) | /o=11.3^,<br>3.% |      |
|----|--|--------------|--------------|-----------------|------------------|------|
| 1  |  | 0.5 1.9 .    | 355 (36,0)   | 185(19,0)       | 15,0             |      |
|    |  | . 1.9 10,5 . | 355 (36,0)   | 195 (20,0)      | 15,0             |      |
| 16 |  | 0,5 1,5 .    | 425 (43,5)   | 275 (28,0)      | 13,0             |      |
|    |  | . 1,5 6,0 .  | 425 (43,5)   | 275 (28,0)      | 11,              |      |
|    |  | . 6,0 10,5 . | 425 (43,5)   | 275 (28,0)      | 10,0             |      |
| 16 |  | 0,5 1.9 .    | 390 (40,0)   | 255 (26,0)      | 15,0             |      |
|    |  | . 1.9 10.5 . | 410 (42,0)   | 265 (27,0)      | 12,0             |      |
| 16 |  | 0,5 1,9 .    | 350 (35,5)   | 220 (22,5)      | 13,0             |      |
|    |  | . 1,9 4,0 .  | 390 (40,0)   | 255 (26,0)      | 13,0             |      |
| 95 |  | 0,5 1,0 .    | 470 (48,0)   | 390 (40,0)      | 7,0              |      |
|    |  | . 1.0 6,0 .  | 480 (49,0)   | 400 (41,0)      | 7,0              |      |
|    |  | . 6,0 10.5 . | 480 (49,0)   | 400 (41,0)      | 6.0              |      |
|    |  | 0.5 0.6 .    | 175(18,0)    | —               | 18,0             |      |
|    |  | . 0,6 3,0 .  | 175(18,0)    | —               | 20,0             |      |
|    |  | . 3,0 5,0 .  | 175(18,0)    | —               | 18,0             |      |
|    |  | . 5,0 10,5 . | 155(16,0)    | —               | 16,0             |      |
|    |  |              | 0,5 5,0 .    | 275 (28,0)      | —                | 10,0 |
|    |  |              | . 5.0 10.5 . | 275 (28,0)      | —                | 8.0  |

5.8

2789 R<sub>a</sub> = 1.25 .  
 5.8.1 ) 20 ² 1 ²  
 1200 ; 50 ² 1 ²  
 ) ; 20 ² 1 ²  
 )  
 5 ²;

) 0,05 200\*200 ; 1200 0,02 1200 ,

) , 4 ;

) ;

) 0,5 0,8

: -1500 4000 ;

-1000 4000 ;

) 1% ;

) « » ( ) 50

) 5 , 1% ;

) 5.8.2 , , -

5.9 -

, , 2789  $R_a = 1,25$  .

5.9.1 : 50 <sup>2</sup> 1 <sup>2</sup>

) , 80 <sup>2</sup> 1 <sup>2</sup> ; ,

5, , ; 40 <sup>2</sup> 1 <sup>2</sup> -

) 10 <sup>2</sup> ;

) ;

) 0,05 . 8 -

, 200\*200 ; 5 ;

) ;

) ;

) 0,5 0,8 , : 4000 ;

- 1500 4000 ;

-1000 0,2 , -

) 5 , ;

) 2% ;

) « » ( ) 50 ,

) 5 , 3% ;

) ( ) , ;

) 0,5 0,8 ;

) ;

) « »

) 5% ;

) ( ) , ;

) 3% ;

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5.9.2 , , -

) 5.9.1, : 100 <sup>2</sup> 1 <sup>2</sup> ;

) 0,05 ( ) ;

) 5% ;

) 5% .

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5.10 -  
 , -  
 . 2789  $R_a = 1,25$  . -  
 , , , , , -  
 5 %  
 5.11 5.8.1,5.9.1 5.10.1 -  
 , , 1. 16, 95.1915, , 2,  
 , 5, , 1565 , 1580  
 5.8.1 5.9.1,  
 5.12 0,5 % — 1 % -  
 6456 6 5009  
 5.13 -  
 5.14 -  
 5.15 , 1, 95, 95-1,  
 95-2, 16, 1915, , 1,  
 , 9.

|               |               |               | ( ) |         |
|---------------|---------------|---------------|-----|---------|
|               |               |               | ( ) | ( 300 ) |
| 0,5<br>1,5    | 1200 .        | 7200 .        | 14  | 20      |
|               | . 1200 1600 . |               | 16  | 20      |
| . 1,5<br>4,0  | 1200 .        | 7200 .        | 18  | 30      |
|               | . 1200 1600 . |               | 18  | 30      |
| . 4,0<br>10,5 | 1200 .        | 7200 .        | 20  | 40      |
|               | . 1200 1600 . |               | 22  | 40      |
| 0,8<br>2,0    | . 1600 2000 . | 4000 .        | 20  | 40      |
|               | . 1600 2000 . | . 4000 7200 . | 23  | 45      |
| . 2,0<br>10,5 | . 1600 2000 . | 4000 .        | 24  | 50      |
|               | . 1600 2000 . | . 4000 7200 . | 25  | 50      |

5.15.1

10. ( , 5.15) -

|              |            |               | ( ) |         |
|--------------|------------|---------------|-----|---------|
|              |            |               | ( ) | ( 300 ) |
| 0.3<br>3.0   |            |               | 14  | 14      |
| .3,0<br>6.0  | 1000       | 2000          | 18  | 18      |
| .6,0<br>10,5 |            |               | 23  | 23      |
| 0.5<br>1.0   | .1000 1200 | 4000          | 15  | 20      |
|              | .1200 1600 |               | 16  | 25      |
|              | 1200       | .4000<br>7000 | 20  | 25      |
|              | .1200 1600 |               | 35  | 45      |
| .1,0<br>1,5  | 1000 1200  | 4000          | 20  | 25      |
|              | .1200 1600 |               | 25  | 30      |
|              | 1200       | .4000<br>7000 | 25  | 30      |
|              | .1200 1600 |               | 30  | 45      |
| .1,5<br>3,0  | 1000 1200  | 4000          | 25  | 30      |
|              | .1200 1600 |               | 25  | 35      |
|              | 1200       | .4000<br>7000 | 25  | 30      |
|              | .1200 1600 |               | 25  | 40      |
| .3,0<br>4,0  | 1000 1200  | 4000          | 25  | 40      |
|              | .1200 1600 |               | 25  | 40      |
|              | 1200       | .4000<br>7000 | 25  | 40      |
|              | .1200 1600 |               | 30  | 45      |
| .4,0<br>6,0  | 1000 1200  | 4000          | 25  | 40      |
|              | .1200 1600 |               | 30  | 40      |
|              | 1200       | .4000<br>7000 | 25  | 40      |
|              | .1200 1600 |               | 30  | 45      |
| .6,0<br>10,5 | 1000 1200  | 4000          | 25  | 40      |
|              | .1200 1600 |               | 30  | 40      |
|              | 1200       | .4000<br>7000 | 25  | 40      |
|              | .1200 1600 |               | 30  | 45      |
| .0,8<br>10,5 | .1600 2000 | 4000          | 35  | 50      |
|              |            | .4000<br>7000 | 50  | 55      |



5.15.2

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|-------------|---------------|--------|-------------|
|             |               |        | ( ) ,       |
|             |               |        | ( ) ( 300 ) |
| 5,0<br>10,5 | 1200 .        | 7000 . | 25 45       |
|             | . 1200 1600 . |        | 30 45       |
|             | . 1600 2000 . |        | 40 55       |
| —           |               |        | 5,          |
| 20 ,        |               |        |             |

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|  |   | , %, , |   |
|--|---|--------|---|
|  |   |        |   |
| 5, 1565, 1580                            |   | 10     | 5 |
| 7. 6, 5, 1, 00, , , 12                   |   | 5      | — |
| 2,                                       |   | 5      | 2 |
| .  |   | 5      | — |
| 2  |   | 5      | 5 |
|  |   | 5      | — |
| 16 . 16 , 16 . 16, 1915, 95 . 95-1, 95-2 | 1 | 10     | 5 |
| 16 , 16 , 16                             |   | 10     | 5 |

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2—4 , — 30—35

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1% , . -

6.10 , . -

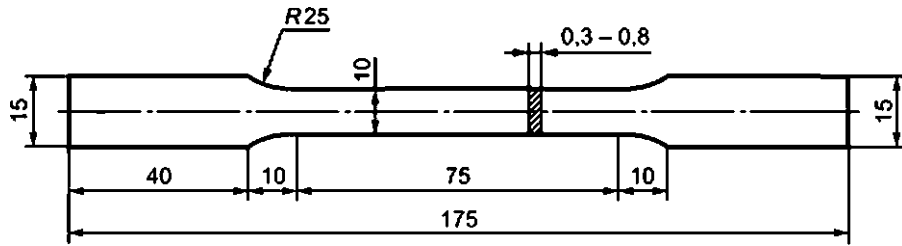
, . -

6.11 ( ) ( ) . -

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7.1 . -

|         |          |           |           |           |                         |        |          |
|---------|----------|-----------|-----------|-----------|-------------------------|--------|----------|
|         |          |           |           |           |                         | 19300  | -        |
|         | ( )      |           |           |           |                         | 19300. | -        |
| 7.2     |          |           |           |           |                         |        | -        |
|         |          |           |           |           | 115                     |        | 25       |
|         |          |           |           |           | 6507.                   |        |          |
|         |          |           |           |           | 7502.                   |        |          |
|         |          |           |           |           | 26877                   |        | 427      |
|         | 3749     |           |           | 5378.     |                         |        |          |
| 7.3     |          |           |           |           |                         |        |          |
|         | 24231.   |           |           |           |                         | 25086, | 12697.1— |
|         | 12697.12 |           |           | 3221,     |                         | —      | 11739.1— |
|         | 11739.8, | 11739.10— | 11739.16, | 11739.19— | 11739.24                |        | -        |
|         |          | 7727.     |           |           |                         |        |          |
| 7.4     |          |           |           |           |                         | 24047. |          |
|         |          |           |           |           | 0.8                     | 2,5    | 11701    |
|         |          |           | I         | II        |                         | = 20   | , I II.  |
|         | 3,0      | 10,5      | —         | 1497      |                         |        |          |
|         |          |           | ( $l_0$ ) |           |                         |        |          |
|         |          |           |           |           | $l_0 = 11,3^{\wedge}$ , |        | (2)      |
| $F_q$ — |          |           |           |           |                         |        |          |
| 0,8     |          |           |           |           | 1.                      |        | 0,3      |



|        |     |       |      |
|--------|-----|-------|------|
|        | 1 — | ( )   |      |
| 7.4.1  |     | ( )   |      |
| 7.5    |     | ( )   |      |
|        |     |       |      |
|        |     | 26877 | 8026 |
| 427.   | ( ) |       |      |
| 7.6    |     |       |      |
| 0,5 %- |     |       |      |
| 24     |     |       |      |

100 <sup>25</sup>/<sub>3</sub>

1,84 / <sup>1,34</sup>/<sub>3</sub> 0,5

10 <sup>3</sup> -

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|      | 600    | 800    | 900    | 1000   | 1200   | 1400   | 1425   | 1500   | 1600   | 1800   | 2000   |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0,3  | 0.473  | 0,596  | 0,670  | 0.715  | —      | —      | —      | —      | —      | —      | —      |
| 0.4  | 0.646  | 0.825  | 0,928  | 1.001  | 1,168  | —      | —      | —      | —      | —      | —      |
| 0.5  | 0.818  | 1.054  | 1,185  | 1,288  | 1,511  | 1,762  | 1,793  | 1,887  | 2,013  | —      | —      |
| 0.6  | 0.981  | 1.260  | 1,417  | 1,545  | 1,854  | 2,142  | 2,180  | 2,295  | 2,447  | —      | —      |
| 0.7  | 1.153  | 1.489  | 1,675  | 1,831  | 2.198  | 2.543  | 2,588  | 2,724  | 2,905  | —      | —      |
| 0.8  | 1.308  | 1,696  | 1,907  | 2.117  | 2,524  | 2,923  | 2,975  | 3,131  | 3,339  | 3.704  | 4,114  |
| 0.9  | 1.480  | 1,925  | 2,164  | 2.404  | 2,868  | 3,324  | 3,383  | 3,560  | 3,797  | 4,218  | 4,686  |
| 1.0  | 1.635  | 2.120  | 2,383  | 2.647  | 3,160  | 3,664  | 3,729  | 3,925  | 4,185  | 4,681  | 5,200  |
| 1,2  | 1.980  | 2.578  | 2,989  | 3.219  | 3,846  | 4,465  | 4,544  | 4,783  | 5,100  | 5,659  | 6,286  |
| 1.5  | 2,453  | 3,208  | 3,607  | 4,006  | 4,774  | 5,506  | 5,604  | 5,898  | 6,290  | 7,048  | 7.829  |
| 1.6  | 2,625  | 3,437  | 3,865  | 4,292  | 5,117  | 5,906  | 6,011  | 6,327  | 6,747  | 7,562  | 8,400  |
| 1.8  | 2,969  | 3,895  | 4,380  | 4,864  | 5,804  | 6,707  | 6,826  | 7,184  | 7,662  | 8,591  | 9,543  |
| 1.9  | 3,142  | 4.125  | 4,638  | 5,151  | 6,147  | 7.108  | 7,234  | 7,613  | 8,119  | 9,105  | 10,114 |
| 2.0  | 3,314  | 4,354  | 4,895  | 5,437  | 6,456  | 7.488  | 7,621  | 8,021  | 8,554  | 9,594  | 10,657 |
| 2.5  | 4.131  | 5.442  | 6,119  | 6,796  | 8,105  | 9,430  | 9,598  | 10,101 | 10,772 | 12,089 | 13,428 |
| 3.0  | 4,949  | 6,530  | 7.343  | 8,155  | 9,788  | 11,332 | 11,534 | 12,139 | 12,945 | 14,533 | 16,143 |
| 3.5  | 5,810  | 7.676  | 8,631  | 9,586  | 11,470 | 13,314 | 13,551 | 14,262 | 15,209 | 17,079 | 18,971 |
| 4.0  | 6.670  | 8,822  | 9,919  | 11,016 | 13,136 | 15,296 | 15,568 | 16,385 | 17,474 | 19,625 | 21,800 |
| 4.5  | 7.531  | 9,968  | 11.207 | 12,447 | 14,853 | 17,298 | 17,606 | 18,530 | 19,761 | 22,197 | 24,657 |
| 5.0  | 8,349  | 11,056 | 12,431 | 13,806 | 16,553 | 19,280 | 19,624 | 20,653 | 22,025 | 24,744 | 27,486 |
| 5.5  | 9,240  | 12,232 | 13,750 | 15,267 | 18,308 | 21,320 | 21,699 | 22,835 | 24,350 | 27,354 | 30,381 |
| 6.0  | 10,104 | 13,323 | 14,976 | 16,629 | 19,943 | 23,226 | 23,638 | 24,876 | 26,526 | 29,801 | 33,098 |
| 6.5  | 10,967 | 14,472 | 16,267 | 18,063 | 21,663 | 25,232 | 25,680 | 27,024 | 28,817 | 32,376 | 35,959 |
| 7.0  | 11,831 | 15,610 | 17,558 | 19,496 | 23,367 | 27,217 | 27,701 | 29,151 | 31,085 | 34,926 | 38,791 |
| 7.5  | 12,694 | 16,769 | 18,849 | 20,930 | 25,088 | 29,223 | 29,742 | 31,299 | 33,375 | 37,502 | 41,652 |
| 8.0  | 13,515 | 17,860 | 20,076 | 22,292 | 26,739 | 31,148 | 31.702 | 33,361 | 35,574 | 39,975 | 44,398 |
| 8.5  | 14,378 | 19,009 | 21,367 | 23.725 | 28,460 | 33,154 | 33,743 | 35,510 | 37.865 | 42,550 | 47,259 |
| 9.0  | 15,242 | 20,157 | 22,658 | 25,159 | 30,164 | 35,140 | 35,764 | 37,636 | 40,133 | 45,100 | 50,091 |
| 9.5  | 16,105 | 21,306 | 23,949 | 26,592 | 31,884 | 37,145 | 37,805 | 39,784 | 42,424 | 47,676 | 52,951 |
| 10,0 | 16,926 | 22,397 | 25,175 | 27,954 | 33,553 | 39,111 | 39,806 | 41,890 | 44,668 | 50,226 | 55,783 |
| 10,5 | 17,789 | 23.545 | 26,467 | 29,388 | 35,274 | 41,117 | 41.847 | 44,038 | 46,959 | 52,802 | 58,644 |

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|      | 1      |        |        |        |        |        |        |        |        |        |        |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      |        |        |        |        |        |        |        |        |        |        |        |
|      | 600    | 800    | 900    | 1000   | 1200   | 1400   | 1425   | 1500   | 1600   | 1800   | 2000   |
| 0,3  | 0,482  | 0,619  | 0,696  | 0,758  | —      | —      | —      | —      | —      | —      | —      |
| 0,4  | 0,654  | 0,848  | 0,953  | 1,030  | 1,202  | —      | —      | —      | —      | —      | —      |
| 0,5  | 0,826  | 1,077  | 1,211  | 1,316  | 1,545  | 1,802  | 1,834  | 1,930  | 2,058  | —      | —      |
| 0,6  | 0,990  | 1,283  | 1,433  | 1,574  | 1,889  | 2,182  | 2,221  | 2,338  | 2,493  | —      | —      |
| 0,7  | 1,162  | 1,512  | 1,700  | 1,860  | 2,232  | 2,583  | 2,629  | 2,767  | 2,950  | —      | —      |
| 0,8  | 1,325  | 1,719  | 1,932  | 2,146  | 2,541  | 2,963  | 3,016  | 3,174  | 3,385  | 3,755  | 4,171  |
| 0,9  | 1,498  | 1,948  | 2,190  | 2,432  | 2,885  | 3,364  | 3,423  | 3,603  | 3,842  | 4,270  | 4,743  |
| 1,0  | 1,653  | 2,154  | 2,422  | 2,690  | 3,194  | 3,704  | 3,770  | 3,968  | 4,231  | 4,733  | 5,257  |
| 1,2  | 1,997  | 2,612  | 2,937  | 3,262  | 3,881  | 4,505  | 4,585  | 4,825  | 5,146  | 5,710  | 6,343  |
| 1,5  | 2,496  | 3,277  | 3,684  | 4,092  | 4,842  | 5,606  | 5,706  | 6,005  | 6,404  | 7,099  | 7,886  |
| 1,6  | 2,668  | 3,506  | 3,942  | 4,378  | 5,186  | 5,966  | 6,072  | 6,391  | 6,816  | 7,613  | 8,457  |
| 1,8  | 3,012  | 3,941  | 4,431  | 4,922  | 5,838  | 6,767  | 6,888  | 7,249  | 7,730  | 8,642  | 9,600  |
| 1,9  | 3,185  | 4,170  | 4,689  | 5,208  | 6,182  | 7,168  | 7,295  | 7,678  | 8,188  | 9,157  | 10,171 |
| 2,0  | 3,357  | 4,399  | 4,947  | 5,494  | 6,525  | 7,528  | 7,662  | 8,064  | 8,600  | 9,645  | 10,714 |
| 2,5  | 4,200  | 5,522  | 6,209  | 6,896  | 8,208  | 9,490  | 9,659  | 10,166 | 10,841 | 12,140 | 13,486 |
| 3,0  | 5,044  | 6,645  | 7,472  | 8,298  | 9,856  | 11,452 | 11,656 | 12,267 | 13,082 | 14,584 | 16,200 |
| 3,5  | 5,887  | 7,768  | 8,734  | 9,700  | 11,539 | 13,414 | 13,653 | 14,369 | 15,324 | 17,130 | 19,028 |
| 4,0  | 6,731  | 8,891  | 9,996  | 11,102 | 13,188 | 15,336 | 15,609 | 16,428 | 17,519 | 19,677 | 21,857 |
| 4,5  | 7,574  | 10,013 | 11,259 | 12,504 | 14,870 | 17,338 | 17,647 | 18,572 | 19,807 | 22,249 | 24,714 |
| 5,0  | 8,400  | 11,113 | 12,496 | 13,878 | 16,587 | 19,321 | 19,664 | 20,696 | 22,071 | 24,795 | 27,543 |
| 5,5  | 9,292  | 12,289 | 13,814 | 15,310 | 18,343 | 21,361 | 21,740 | 22,878 | 24,396 | 27,405 | 30,438 |
| 6,0  | 10,121 | 13,381 | 15,041 | 16,658 | 19,994 | 23,266 | 23,679 | 24,919 | 26,572 | 29,852 | 33,155 |
| 6,5  | 10,984 | 14,529 | 16,332 | 18,091 | 21,715 | 25,272 | 25,721 | 27,067 | 28,863 | 32,428 | 36,016 |
| 7,0  | 11,848 | 15,678 | 17,623 | 19,525 | 23,401 | 27,257 | 27,741 | 29,194 | 31,130 | 34,978 | 38,848 |
| 7,5  | 12,711 | 16,826 | 18,914 | 20,959 | 25,122 | 29,263 | 29,783 | 31,342 | 33,421 | 37,554 | 41,709 |
| 8,0  | 13,532 | 17,917 | 20,140 | 22,335 | 26,744 | 31,188 | 31,742 | 33,404 | 35,620 | 40,026 | 44,455 |
| 8,5  | 14,395 | 19,066 | 21,431 | 23,768 | 28,495 | 33,194 | 33,784 | 35,553 | 37,911 | 42,602 | 47,316 |
| 9,0  | 15,259 | 20,214 | 22,722 | 25,202 | 30,198 | 35,180 | 35,805 | 37,679 | 40,179 | 45,152 | 50,148 |
| 9,5  | 16,122 | 21,363 | 24,014 | 26,635 | 31,919 | 37,185 | 37,846 | 39,827 | 42,469 | 47,727 | 53,009 |
| 10,0 | 16,943 | 22,454 | 25,240 | 27,983 | 33,588 | 39,151 | 39,846 | 41,933 | 44,714 | 50,277 | 55,841 |
| 10,5 | 17,806 | 23,603 | 26,531 | 29,416 | 35,309 | 41,157 | 41,888 | 44,081 | 47,005 | 52,853 | 58,701 |

|      | 1      |        |        |        |        |        |        |        |        |        |        |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      | 600    | 800    | 900    | 1000   | 1200   | 1400   | 1425   | 1500   | 1600   | 1800   | 2000   |
| 0.3  | 0.481  | 0,618  | 0,695  | 0.758  | —      | —      | —      | —      | —      | —      | —      |
| 0.4  | 0.653  | 0.847  | 9,952  | 1.029  | 1,200  | —      | —      | —      | —      | —      | —      |
| 0.5  | 0.825  | 1,076  | 1,210  | 1,315  | 1,543  | 1,799  | 1,831  | 1,928  | 2,056  | —      | —      |
| 0.6  | 0.988  | 1,282  | 1,441  | 1,572  | 1,886  | 2,179  | 2,218  | 2,335  | 2,490  | —      | —      |
| 0.7  | 1,160  | 1,510  | 1,699  | 1,858  | 2,229  | 2,579  | 2,625  | 2,763  | 2,947  | —      | —      |
| 0.8  | 1,323  | 1,716  | 1,930  | 2,144  | 2,537  | 2,959  | 3,012  | 3,170  | 3,381  | 3,751  | 4,167  |
| 0.9  | 1,495  | 1,945  | 2,188  | 2,430  | 2,880  | 3,359  | 3,419  | 3,598  | 3,838  | 4,265  | 4,738  |
| 1.0  | 1.650  | 2,151  | 2,419  | 2.687  | 3,189  | 3,699  | 3,765  | 3,962  | 4,226  | 4.727  | 5,252  |
| 1.2  | 1.994  | 2,609  | 2,934  | 3,259  | 3,874  | 4.498  | 4.579  | 4,819  | 5,140  | 5,704  | 6,336  |
| 1.5  | 2,492  | 3.273  | 3,680  | 4,088  | 4,834  | 5,598  | 5,698  | 5.997  | 6,396  | 7,091  | 7.878  |
| 1.6  | 2,664  | 3,501  | 3,938  | 4,374  | 5.177  | 5,958  | 6,064  | 6,382  | 6,807  | 7,605  | 8,449  |
| 1.8  | 3,007  | 3,936  | 4,427  | 4,917  | 5,829  | 6,758  | 6,878  | 7.239  | 7,721  | 8,633  | 9,590  |
| 1.9  | 3,179  | 4.165  | 4,684  | 5,203  | 6,171  | 7,157  | 7,285  | 7,668  | 8,178  | 9,147  | 10,161 |
| 2.0  | 3,351  | 4,394  | 4,941  | 5,488  | 6,514  | 7,517  | 7,651  | 8,053  | 8,589  | 9,635  | 10,704 |
| 2.5  | 4,193  | 5,515  | 6,202  | 6,889  | 8,194  | 9,477  | 9,645  | 10,152 | 10,827 | 12,127 | 13,472 |
| 3.0  | 5,035  | 6,637  | 7,463  | 8,290  | 9,840  | 11,436 | 11.640 | 12,251 | 13,066 | 14,568 | 16,184 |
| 3.5  | 5.877  | 7.758  | 8,724  | 9,690  | 11.520 | 13,395 | 13,634 | 14,350 | 15,305 | 17,111 | 19,009 |
| 4.0  | 6,720  | 8,880  | 9,985  | 11,091 | 13,166 | 15,314 | 15,587 | 16,406 | 17,498 | 19,655 | 21,835 |
| 4.5  | 7,562  | 10,001 | 11,246 | 12.492 | 14.846 | 17,314 | 17.622 | 18,548 | 19,782 | 22,224 | 24,689 |
| 5.0  | 8,387  | 11,099 | 12,482 | 13,864 | 16,560 | 19,293 | 19,637 | 20,668 | 22,043 | 24.768 | 27,515 |
| 5.5  | 9,276  | 12,274 | 13,799 | 15,295 | —      | —      | —      | —      | —      | —      | —      |
| 6.0  | 10,104 | 13,364 | 15,024 | 16,641 | —      | —      | —      | —      | —      | —      | —      |
| 6.5  | 10,966 | 14,511 | 16,314 | 18,073 | —      | —      | —      | —      | —      | —      | —      |
| 7.0  | 11,828 | 15,658 | 17,603 | 19,506 | —      | —      | —      | —      | —      | —      | —      |
| 7.5  | 12,690 | 16,805 | 18.893 | 20,938 | —      | —      | —      | —      | —      | —      | —      |
| 8.0  | 13,509 | 17,895 | 20,118 | 22,313 | —      | —      | —      | —      | —      | —      | —      |
| 8.5  | 14,372 | 19,042 | 21.408 | 23.745 | —      | —      | —      | —      | —      | —      | —      |
| 9.0  | 15.234 | 20,189 | 22,697 | 25,177 | —      | —      | —      | —      | —      | —      | —      |
| 9.5  | 16,096 | 21,337 | 23,987 | 26,609 | —      | —      | —      | —      | —      | —      | —      |
| 10,0 | 16,915 | 22,426 | 25,212 | 27,955 | —      | —      | —      | —      | —      | —      | —      |
| 10,5 | 17,777 | 23,573 | 26,502 | 29,387 | —      | —      | —      | —      | —      | —      | —      |

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|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      |        |        |        |        |        |        |        |        |        |        |        |
|      | 600    | 800    | 900    | 1000   | 1200   | 1400   | 1425   | 1500   | 1600   | 1800   | 2000   |
| 0,3  | 0,473  | 0,595  | 0,669  | 0,715  | —      | —      | —      | —      | —      | —      | —      |
| 0,4  | 0,644  | 0,824  | 0,926  | 1,000  | 1,166  | —      | —      | —      | —      | —      | —      |
| 0,5  | 0,816  | 1,053  | 1,184  | 1,286  | 1,509  | 1,759  | 1,791  | 1,885  | 2,010  | —      | —      |
| 0,6  | 0,980  | 1,259  | 1,415  | 1,544  | 1,851  | 2,139  | 2,177  | 2,292  | 2,444  | —      | —      |
| 0,7  | 1,151  | 1,488  | 1,673  | 1,829  | 2,194  | 2,539  | 2,584  | 2,720  | 2,901  | —      | —      |
| 0,8  | 1,306  | 1,694  | 1,904  | 2,115  | 2,520  | 2,919  | 2,971  | 3,127  | 3,335  | 3,700  | 4,110  |
| 0,9  | 1,478  | 1,922  | 2,162  | 2,401  | 2,863  | 3,319  | 3,378  | 3,555  | 3,792  | 4,214  | 4,681  |
| 1,0  | 1,633  | 2,117  | 2,381  | 2,644  | 3,154  | 3,659  | 3,724  | 3,919  | 4,180  | 4,676  | 5,195  |
| 1,2  | 1,976  | 2,575  | 2,895  | 3,216  | 3,840  | 4,458  | 4,538  | 4,776  | 5,094  | 5,652  | 6,279  |
| 1,5  | 2,449  | 3,204  | 3,603  | 4,002  | 4,766  | 5,498  | 5,596  | 5,890  | 6,282  | 7,040  | 7,821  |
| 1,6  | 2,621  | 3,433  | 3,860  | 4,288  | 5,109  | 5,898  | 6,003  | 6,318  | 6,739  | 7,554  | 8,392  |
| 1,8  | 2,964  | 3,891  | 4,375  | 4,860  | 5,794  | 6,698  | 6,817  | 7,175  | 7,652  | 8,581  | 9,533  |
| 1,9  | 3,136  | 4,119  | 4,632  | 5,145  | 6,137  | 7,097  | 7,224  | 7,603  | 8,109  | 9,095  | 10,104 |
| 2,0  | 3,308  | 4,348  | 4,890  | 5,431  | 6,446  | 7,477  | 7,611  | 8,010  | 8,543  | 9,583  | 10,646 |
| 2,5  | 4,125  | 5,435  | 6,112  | 6,789  | 8,091  | 9,417  | 9,584  | 10,088 | 10,759 | 12,076 | 13,415 |
| 3,0  | 4,941  | 6,522  | 7,335  | 8,147  | 9,771  | 11,316 | 11,518 | 12,122 | 12,929 | 14,516 | 16,127 |
| 3,5  | 5,800  | 7,667  | 8,621  | 9,576  | 11,451 | 13,295 | 13,532 | 14,243 | 15,190 | 17,060 | 18,952 |
| 4,0  | 6,659  | 8,811  | 9,908  | 11,005 | 13,114 | 15,274 | 15,547 | 16,363 | 17,452 | 19,604 | 21,778 |
| 4,5  | 7,919  | 9,955  | 11,195 | 12,435 | 14,828 | 17,274 | 17,582 | 18,505 | 19,736 | 22,173 | 24,632 |
| 5,0  | 8,335  | 11,042 | 12,417 | 13,793 | 16,526 | 19,253 | 19,596 | 20,625 | 21,998 | 24,716 | 27,458 |
| 5,5  | 9,225  | 12,217 | 13,735 | 15,252 | —      | —      | —      | —      | —      | —      | —      |
| 6,0  | 10,087 | 13,307 | 14,960 | 16,613 | —      | —      | —      | —      | —      | —      | —      |
| 6,5  | 10,949 | 14,454 | 16,249 | 18,045 | —      | —      | —      | —      | —      | —      | —      |
| 7,0  | 11,811 | 15,601 | 17,539 | 19,477 | —      | —      | —      | —      | —      | —      | —      |
| 7,5  | 12,673 | 16,748 | 18,829 | 20,909 | —      | —      | —      | —      | —      | —      | —      |
| 8,0  | 13,492 | 17,838 | 20,054 | 22,270 | —      | —      | —      | —      | —      | —      | —      |
| 8,5  | 14,354 | 18,985 | 21,343 | 23,702 | —      | —      | —      | —      | —      | —      | —      |
| 9,0  | 15,217 | 20,132 | 22,633 | 25,134 | —      | —      | —      | —      | —      | —      | —      |
| 9,5  | 16,079 | 21,279 | 23,923 | 26,566 | —      | —      | —      | —      | —      | —      | —      |
| 10,0 | 16,898 | 22,369 | 25,148 | 27,926 | —      | —      | —      | —      | —      | —      | —      |
| 10,5 | 17,760 | 23,516 | 26,437 | 29,359 | —      | —      | —      | —      | —      | —      | —      |



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|------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|      | 600        | 800    | 900    | 1000   | 1200   | 1400   | 1425   | 1500   | 1600   | 1800   | 2000   |
| 5.0  | 8,605      | 11,457 | 12,882 | 14,307 | 17,171 | 20,021 | 20,378 | 21,446 | 22,871 | 27,721 | 28,571 |
| 5.5  | 9,499      | 12,634 | 14,202 | 15,769 | 18,928 | 22,063 | 22,454 | 23,630 | 25,198 | 28,333 | 31,468 |
| 6.0  | 10,363     | 13,783 | 15,493 | 17,203 | 20,648 | 24,068 | 24,496 | 25,778 | 27,488 | 30,908 | 34,328 |
| 6.5  | 11,226     | 14,931 | 16,784 | 18,636 | 22,369 | 26,074 | 26,537 | 27,926 | 29,779 | 33,484 | 37,189 |
| 7.0  | 12,090     | 16,080 | 18,075 | 20,070 | 24,090 | 28,080 | 28,578 | 30,075 | 32,070 | 36,060 | 40,050 |
| 7.5  | 12,953     | 17,228 | 19,366 | 21,503 | 25,810 | 30,085 | 30,620 | 32,223 | 34,360 | 38,635 | 42,910 |
| 8.0  | 13,817     | 18,377 | 20,657 | 22,937 | 27,531 | 32,091 | 32,661 | 34,371 | 36,651 | 41,211 | 45,771 |
| 8.5  | 14,680     | 19,525 | 21,948 | 24,370 | 29,252 | 34,097 | 34,702 | 36,519 | 38,942 | 43,787 | 48,632 |
| 9.0  | 15,544     | 20,674 | 23,239 | 25,804 | 30,972 | 36,102 | 36,744 | 38,667 | 41,232 | 46,362 | 51,492 |
| 9.5  | 16,407     | 21,822 | 24,530 | 27,237 | 32,693 | 38,108 | 38,785 | 40,816 | 43,523 | 48,938 | 54,353 |
| 10,0 | 17,271     | 22,971 | 25,821 | 28,671 | 34,414 | 40,114 | 40,826 | 42,964 | 45,814 | 51,514 | 57,214 |
| 10,5 | 18,135     | 24,120 | 27,112 | 30,105 | 36,134 | 42,119 | 42,868 | 45,112 | 48,104 | 54,089 | 60,074 |

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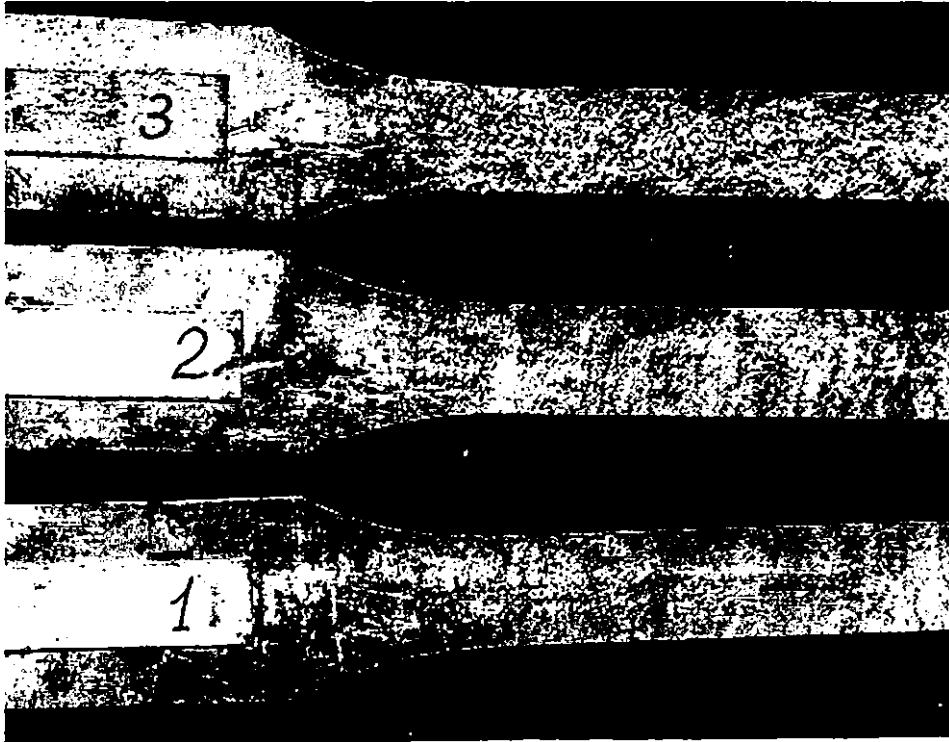
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| 1    | 2,71  |
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| 1    | 2,80  |
| 1565 | 2,65  |
| 1580 | 2,67  |
| 16   | 2,77  |
| 95   | 2,85  |
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