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I-4065

USSR STATE STANDARD

GAS-SHIELDED ARC WELDING

WELDED JOINTS

MAJOR TYPES, STRUCTURAL ELEMENTS AND DIMENSIONS.

GOST 14771-76

Official Edition.

60x3
63

State Committee on Standards of the Council
of Ministers of the USSR

Moscow

U S S R S T A T E S T A N D A R D

GAS-SHIELDED ARC WELDING.

WELDED JOINTS.
MAJOR TYPES, STRUCTURAL ELEMENTS
AND DIMENSIONS.

G O S T
14771-76

Supersedes
GOST
14771-69

By Decree No. 1826, dated July 28, 1976, of the State Committee on Standards of the Council of Ministers of the USSR, the term of introduction of the present Standard is set to be

from July 01, 1977

till July 01, 1982.

Non-Observance Prosecuted.

1. The present Standard sets forth the major types, structural elements and dimensions of welded joints of steels, as well as of iron-nickel and nickel-base alloys, made by gas-shielded arc welding.

The Standard does not apply to major types, structural elements and dimensions of welded joints of steel pipelines and tubes, as set forth in GOST 16037-70.

2. The Standard employs the following symbols to define the welding methods:

MH - inert-gas shielded welding with non-consumable electrode, without filler;

MHn - inert-gas shielded with non-consumable electrode, with filler;

Mn - welding with consumable electrode, shielded with inert (noble) gases and their mixtures with carbon dioxide and oxygen;

9П - welding with consumable electrode, shielded with carbon dioxide and its mixture with oxygen.

3. The major types of welded joints shall conform with those set forth in Table 1 below.











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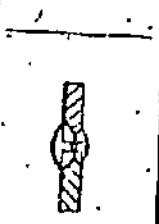


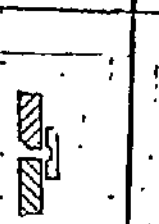

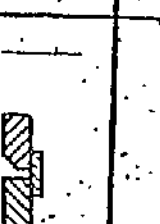

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Table 1

| Joint type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol |
|-----------------------|-------------------------------|---|--|--|---|---------|----------|----------|---------------------|
| | | | of prepared edges | of final weld | ИН | ИИп | Ип | Уп | |
| | | | | | | | | | |
| Butt | With two edges flanged | Single |  |  | 0.5-2.0 | - | 0.5-4.0 | 0.5-4.0 | C1 |
| | | |  |  | - | 0.8-4.0 | 1.0-12.0 | 1.0-12.0 | C2B |
| | Single-flanged | |  |  | 0.5-2.0 | - | 0.5-4.0 | 0.5-4.0 | C3 |
| | | |  |  | 0.5-4.0 | 0.8-6.0 | 0.8-6.0 | 0.8-6.0 | C2 |
| Without flanged edges | Single with removable backing |  |  | | | | 0.8-8.0 | C4 | |
| | | | | | | | | | |

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Table 1 - continued

| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol |
|------------|-------------------------|-------------------------------|---|---|---|---------|----------|----------|---------------------|
| | | | of prepared edges | of final weld | ИН | ИМН | ИП | УП | |
| Butt | Without flanged edges | Single with permanent backing |  |  | | | | | C5 |
| | | Single-lock |  |  | 0.5-4.0 | 0.8-6.0 | 0.8-6.0 | 0.8-8.0 | |
| | | Double |  |  | 3.0-6.0 | 3.0-6.0 | 3.0-6.0 | 3.0-12.0 | C7 |
| | Single bevel | Single |  |  | | | | | C8 |
| | | Single with removable backing |  |  | | | | | |
| | | Single with permanent backing |  |  | | | 3.0-10.0 | 3.0-10.0 | 3.0-60.0 |

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Table 1 - continued















| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol | | |
|------------|-------------------------|---------------------|---|---|---|------|------|--------|---------------------|-----|-----|
| | | | of prepared edges | of final weld | ИН | ИИП | ИП | УП | | | |
| Butt | Single-bevel | Single-lock |  |  | - | | | | 3-40 | C11 | |
| | | |  |  | - | 3-10 | | | 3-60 | C12 | |
| | Single-J | |  |  | - | | | | | C13 | |
| | Single-broken-bevel | |  |  | - | | | 18-100 | 18-100 | | C14 |
| | Double-bevel | | |  |  | - | | | | | |
| | Double-J | Double |  |  | - | | 6-20 | 8-100 | 8-100 | C15 | |
| | | |  |  | - | | | 30-120 | 30-120 | C16 | |

Table 1 - continued

| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | Welded Joint Symbol | | | |
|------------|-------------------------|-------------------------------|-----------------------|---------------|---|---------------------|------|-----|-----|
| | | | of prepared edges | of final weld | | | | | |
| Butt | Single | Single | | | ИН | С17 | | | |
| | | Single with removable backing | | | | | ИНП | С18 | |
| | Single-V | Single with permanent backing | | | 3-10 | ИП | | | С19 |
| | | Single-lock | | | | | 3-60 | С20 | |
| | | Double | | | | | | | |
| | Single flat-base U | Single | | | 4-20 | С22 | | | |
| | | | | | | | | | |

Table 1 - continued




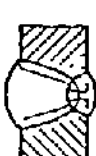

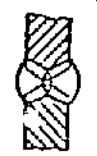






| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol |
|------------|-------------------------|---------------------|---|---|---|---------|------------|------------|---------------------|
| | | | of prepared edges | of final weld | ИН | ИИИ | ИП | УП | |
| Butt | Single-U | Double |  |  | - | | 24-100 | 24-100 | C23 |
| | Broken single-V | Double |  |  | - | | 24-100 | 24-100 | C24 |
| | Double-V | |  |  | - | 6-20 | 6-120 | 6-120 | C25 |
| | Double-U | Double |  |  | - | | 26.0-120.0 | 26.0-120.0 | C26 |
| | Broken double-V | |  |  | - | | | 26.0-120.0 | C27 |
| | Corner | Corner-flange | Single |  |  | 0.5-3.0 | 0.5-3.0 | 0.5-4.0 | 0.5-4.0 |

Table 1-continued

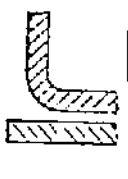
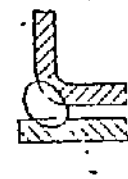
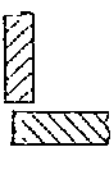
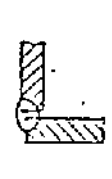


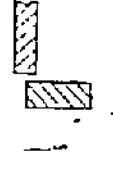



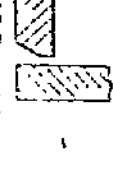

| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol | |
|------------|-------------------------|---------------------|---|---|---|----------|----------|----------|---------------------|----|
| | | | of prepared edges | of final weld | ИИ | ИИи | ИП | УП | | |
| Corner | Corner-flange | Single |  |  | - | 0.8-4.0 | 1.0-12.0 | 1.0-12.0 | У2 | |
| | | |  |  | - | 0.8-4.0 | 0.8-8.0 | 0.8-8.0 | | У4 |
| | Straight-edge | Single |  |  | - | 0.8-10.0 | 0.8-30.0 | 0.8-30.0 | У5 | |
| | | |  |  | - | 0.8-4.0 | 0.8-12.0 | 0.8-12.0 | | У6 |
| | Single-bevel | Single | Double |  |  | - | 0.8-10.0 | 0.8-30.0 | 0.8-30.0 | |
| | | | |  |  | - | 3.0-10.0 | 3.0-10.0 | 3.0-60.0 | |

Table 1 - continued








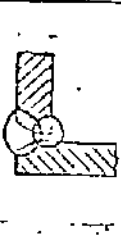

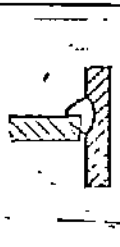
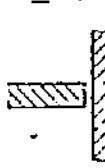
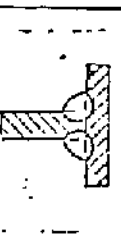
| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol |
|------------|-------------------------|---------------------|---|---|---|----------|----------|----------|---------------------|
| | | | of prepared edges | of final weld | ИИ | ИИп | ИП | УП | |
| Corner | Single-bevel | Double |  |  | - | 3-10 | 3-10 | 6-60 | У7 |
| | Double-bevel | |  |  | - | 6-20 | 6-20 | 6-100 | У8 |
| | Single-V | Single |  |  | - | 3-20 | 3-20 | 3-60 | У9 |
| | | | Double |  |  | - | 0.8-40.0 | 0.8-40.0 | 0.8-40.0 |
| Tee | Straight-edge | Single-fillet |  |  | - | 0.8-40.0 | 0.8-40.0 | 0.8-40.0 | Т1 |
| | Straight-edge | Double-fillet |  |  | - | 0.8-40.0 | 0.8-40.0 | 0.8-40.0 | Т3 |

Table 1, continued

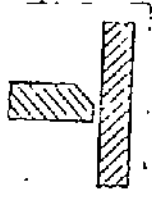
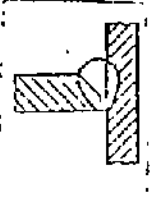
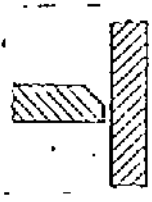
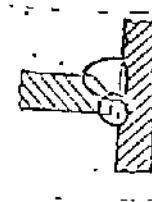
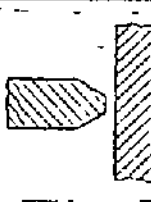
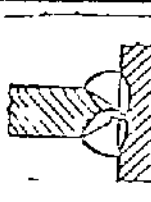
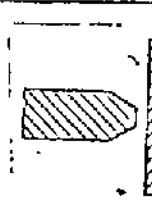
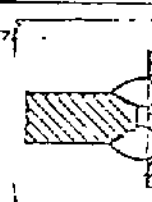




| Joint type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol |
|------------|-------------------------|---------------------|---|---|---|----------|----------|----------|---------------------|
| | | | of prepared edges | of final weld | ИН | ИИИ | ИП | УП | |
| T00 | Single-bevel | Single-fillet |  |  | - | - | - | УП | T6 T7 |
| | | Double-fillet |  |  | 3-10 | 3-60 | 3-60 | | |
| T01 | Double-fillet | Double |  |  | - | 6-20 | 6-80 | 6-80 | T8 T9 |
| | | Double |  |  | - | - | 12-100 | 12-100 | |
| T02 | Straight-edges | Single-fillet |  |  | 0.8-4.0 | 0.8-10.0 | 0.8-60.0 | 0.8-60.0 | H1 |

Table 1 - continued

| Joint Type | Shape of Prepared Edges | Weld Characteristic | Cross-Sectional Shape | | Thickness Range of Joined Articles by Welding Methods, mm | | | | Welded Joint Symbol |
|------------|-------------------------|---------------------|---|---|---|----------|----------|----------|---------------------|
| | | | of prepared edges | of final weld | ИИ | ИИП | ИП | УП | |
| Lap | Straight-edge | Double-fillet |  |  | 0.8-4.0 | 0.8-10.0 | 0.8-60.0 | 0.8-60.0 | H2 |

9-12

Table 2

Dimensions, mm

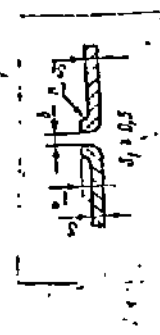
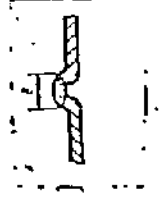
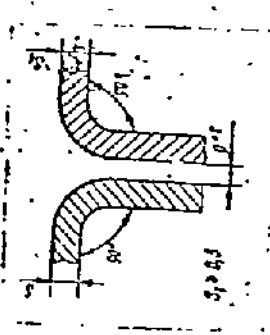
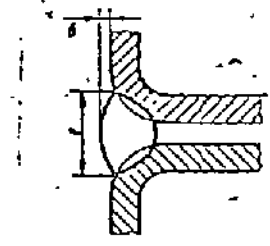
| Welded Joint Symbol | Structural Elements | | Welding Method | S | b | | r | l | e, within | |
|---------------------|---|---|------------------|---------|---------|-------------|---|---|-----------|--------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | | | | |
| C1 |  |  | MH МП, УП | 0.5-0.9 | +0.2 | | | | 3B+1.5 | |
| | | | | 1.0-1.4 | +0.3 | | | | | 2B+2.0 |
| | | | | 1.5-2.0 | +0.5 | 0 | | | | 3S+2.5 |
| | | | | 0.5-1.4 | +1.0 | | | | | 2B+3.0 |
| | * for reference | | | 1.5-4.0 | | | | | | |

Table 3

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | B | e, within | Nominal | Max. Toler. |
|---------------------|---|---|----------------|---------|-----------|---------|-------------|
| | of prepared edges of welded articles | of final weld | | | | | |
| C2B |  |  | ИИП | 0.8-1.9 | 3s+2.0 | 0 | +1.0 |
| | | | | 2.0-4.0 | 2s+2.0 | | +1.5 |
| | | | ИП, УП | 1.0-1.9 | 3s+2.0 | 0 | +1.0 |
| | | | | 2.0-6.0 | 2s+3.0 | | +2.0 |
| | | | | 7.0-9.0 | 2s+4.0 | | +3.0 |
| 10.0-12.0 | | | | | | | |

Dimensions, mm

Table 4

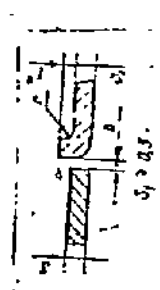
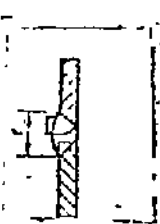
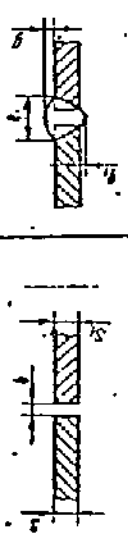
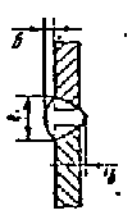
| Welded Joint Symbol | Structural Elements | | Welding method | B | b | | r | i | C, within |
|---------------------|--|---|----------------|--------------------|----------|-------------|------|------|--------------------------------------|
| | of prepared edges of welded articles | of final weld | | | Nomi-nal | Max. Toler. | | | |
| 03 |  <p>* for reference</p> |  | ИИ | 0.5-0.9 | 0 | +0.2 | 6-2B | B-3B | 3B+1.5 2B+2.0 3B+2.5 2B+3.0 |
| | | | | 1.0-1.4 | | +0.3 | | | |
| | | | ИП, УП | 1.5-2.0 | +0.5 | | | | |
| | | | | 0.5-1.4 1.5-4.0 | +1.0 | | | | |

Table 5

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | S=S ₁ | b | | e, within | g | | g ₁ | | | | |
|---------------------|---|---|----------------|------------------|---------|-------------|-----------|---------|-------------|----------------|-------------|--|--|--|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | | Nominal | Max. Toler. | Nominal | Max. Toler. | | | |
| C2 |  |  | MH | 0.5-0.9 | | +0.1 | 6.0 | | +0.1 | | +0.1 | | | |
| | | | | 1.0-1.4 | | +0.2 | 7.0 | | +0.3 | 0 | +0.5 | | | |
| | | | | 1.5-1.9 | 0 | +0.3 | 8.0 | | ±1.0 | | | | | |
| | | | | 2.0-2.8 | | +1.0 | 9.0 | | | | | | | |
| | | | | 3.0-4.0 | | | 7.0 | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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ГОСТ 14171-16

14-17-16

Table 6

Dimensions, mm

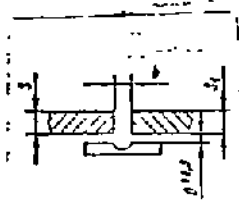
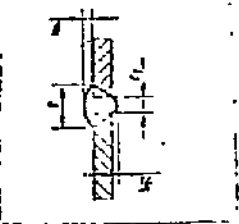
| Welded Joint Symbol | Structural Elements | | Welding Method | S=S ₁ | b | | e, within | e ₁ | | S | | S ₁ | | |
|---------------------|--|--|----------------|------------------|-------------|-------------|-----------|----------------|-------------|---------|-------------|----------------|-------------|------|
| | of prepared edges of welded articles | of final weld | | | No. nominal | Max. Toler. | | Nominal | Max. Toler. | Nominal | Max. Toler. | | No. nominal | |
| CA |  |  | ИИ | 0.5-0.9 | +0.1 | 6.0 | 2.0 | +1.0 | 0 | +0.1 | 0 | +0.2 | | |
| | | | | 1.0-1.5 | +0.2 | 7.0 | | | | | +0.2 | | +0.5 | |
| | | | | 1.6-2.2 | +0.3 | 8.0 | | | | | +0.2 | | +1.0 | |
| | | | | 2.5-4.0 | +0.5 | 9.0 | | | | | +0.3 | | +0.5 | |
| | | | | 0.8-1.4 | +1.0 | 7.0 | 4.0 | | | | +0.5 | | +0.5 | |
| | | | | 1.5-2.2 | +2.0 | 8.0 | | | | | +0.5 | | +0.5 | |
| | | | 2.5-6.0 | +1.5 | 12.0 | | | | | +2.0 | 0.5 | +0.5 | 0.5 | +0.5 |
| | | | 0.8-1.4 | +2.0 | 7.0 | | | | | | 1.0 | +0.5 | 0 | +0.5 |
| | | | 1.5-2.8 | +1.5 | 8.0 | | | | | | 1.0 | +0.5 | 0.5 | +0.5 |
| | | | 3.0-6.0 | +2.0 | 12.0 | | | | | | 1.5 | +1.0 | 1.0 | +1.0 |
| | | | 0.8-1.4 | +1.5 | 6.0 | | | | | | 1.0 | +0.5 | 1.0 | +0.5 |
| | | | 1.5-2.8 | +2.0 | 7.0 | | | | | | 1.5 | +1.0 | 1.5 | +1.0 |
| 3.0-4.0 | +1.5 | 8.0 | | | | | | 1.0 | +0.5 | 1.0 | +0.5 | | | |
| 4.5-6.0 | +2.0 | 9.0 | | | | | | 1.5 | +1.0 | 1.5 | +1.0 | | | |
| 7.0-8.0 | +2.0 | 12.0 | | | | | | 2.0 | +1.0 | 2.0 | +1.0 | | | |

Table 7

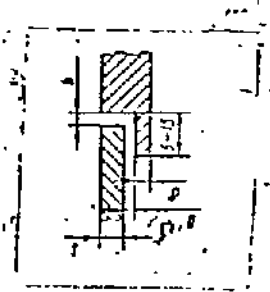
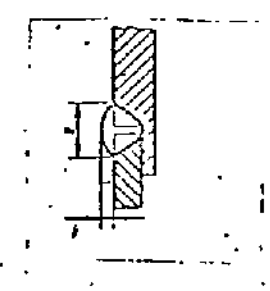
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | a, mm | b | | e, within | E | | not below | |
|---------------------|--------------------------------------|---------------|----------------|---------|---------|-------------|-----------|---------|-------------|-----------|--|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | | Nominal | Max. Toler. | | |
| | ИИ | | | 0.5-0.9 | +1.0 | 6.0 | +0.1 | | | | |
| | | | | 1.0-1.5 | +0.2 | 7.0 | | | | | |
| | | | | 1.6-2.2 | +0.3 | 8.0 | | | | | |
| | | | | 2.5-4.0 | | 10.0 | | | | | |
| | | | | 0.8-1.5 | +0.5 | 7.0 | | | | | |
| | | | | 1.6-2.2 | | 8.0 | | | | | |
| | ИП | | | | 0.8-1.4 | +1.0 | 7.0 | +0.5 | | | |
| | | | | | 1.5-2.8 | +1.5 | 8.0 | +0.5 | | | |
| | | | | | 3.0-6.0 | +2.0 | 12.0 | -0.2 | | | |
| | УП | | | | 0.8-1.4 | +1.5 | 6.0 | +1.0 | | | |
| | | | | | 1.5-2.8 | | 7.0 | -0.5 | | | |
| | | | | | 3.0-4.0 | +2.0 | 8.0 | | | | |
| | | | | 4.5-6.0 | | 9.0 | | | | | |
| | | | | 7.0-8.0 | | 12.0 | +1.0 | | | | |

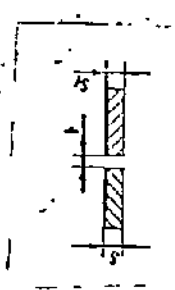
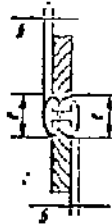
Р17 Гос14771

Dimensions, mm

P-18

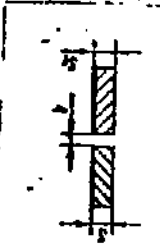
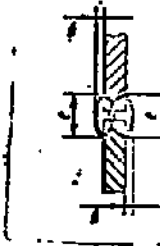
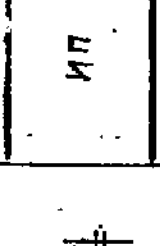
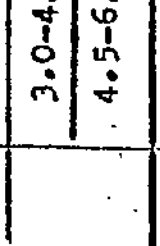
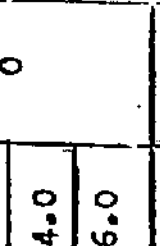
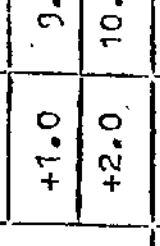
| Welded Joint Symbol | Structural Elements | | Welding Method | S | b | | O, width | R | | n | | |
|---------------------|--|--|----------------|---------|---------|------------|----------|---------|------------|---|---|---|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler | | Nominal | Max. Toler | | | |
| CG |  |  | MH | 0.5-0.9 | 0 | +0.1 | 6.0 | 0 | +0.1 | n | | |
| | | | | 1.0-1.5 | | +0.2 | 7.0 | | +0.2 | | | |
| | | | | 1.6-2.2 | | +0.3 | 8.0 | | +0.2 | | | |
| | | | | 2.5-4.0 | | +0.5 | 7.0 | 0.5 | +0.5 | | | |
| | | | MHn | 0.8-1.5 | 0 | +1.0 | 12.0 | 1.0 | +0.5 | | | 3 |
| | | | | 1.6-2.2 | | | 7.0 | 0.5 | +0.5 | | 7 | |
| | | | Mn | 0.8-1.4 | | | 8.0 | 1.0 | | | | |
| | | | | 1.5-2.8 | | | 12.0 | 1.5 | | | | |
| | | | Mn | 3.0-6.0 | | | 6.0 | 1.0 | +1.0 | | | |
| | | | | 0.8-1.4 | | | 7.0 | 1.0 | +1.0 | | | |
| | | | | 1.5-2.8 | | | 8.0 | 1.5 | +1.0 | | | |
| | | | | 3.0-4.0 | | | 9.0 | 1.5 | +1.0 | | | |
| 4.5-6.0 | 12.0 | 2.0 | | +1.0 | | | | | | | | |
| | 7.0-8.0 | | +2.0 | 12.0 | 2.0 | +1.0 | | | 3 | | | |

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | BMB1 | b | | Width | S | | |
|--|--------------------------------------|---------------|----------------|------|---------|------------|-------|------|---------|----------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler | | | | |
|   | ИН | 3.0-4.0 | ±0.5 | 9.0 | 0 | ±0.2 | 0 | ±1.0 | | |
| | | | | | | | | | 4.5-6.0 | ±1.0 |
| | | ИНП | 3.0-4.0 | 0 | ±2.0 | 9.0 | 0 | ±1.0 | 1.0 | ±1.0 |
| | | | 4.5-6.0 | | | | | | | |
| | | ИП | 3.0-4.0 | 0 | ±1.0 | 9.0 | 0 | ±1.0 | 1.0 | ±1.0 |
| | | | 4.5-6.0 | | | | | | | |
| | УП | 3.0-4.0 | ±0.5 | 8.0 | 1.5 | 0 | ±1.5 | 2.0 | ±1.5 | |
| | | | | | | | | | | 4.5-6.0 |
| | | 7.0-8.0 | ±1.0 | 9.0 | 1.5 | 0 | ±1.5 | 2.0 | ±1.5 | |
| | | | | | | | | | | 9.0-10.0 |
| | | 11.0-12.0 | ±1.0 | 14.0 | 2.0 | 0 | ±1.5 | 2.0 | ±1.5 | |

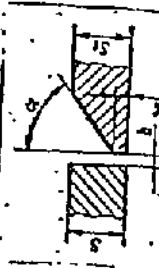
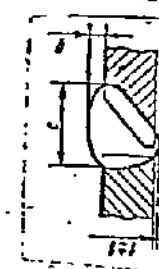
P. 19 (03) 1.7 1-1

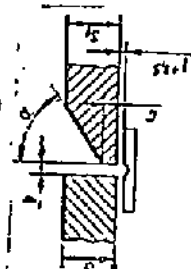
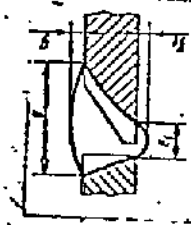
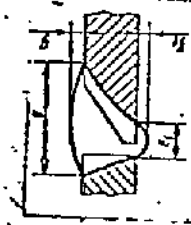
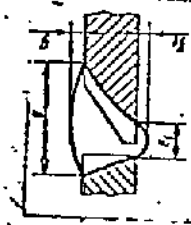
Dimensions, mm

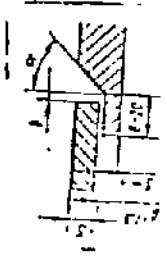
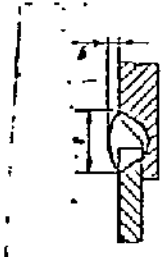
| Welded Joint Symbol | Structural Elements | | Welding Method | S-B1 | b | | D, width | E | | | |
|---|---|---|---|---------|-----------|------------|----------|----------|--------------|------|--|
| | of prepared edges of welded articles | of final weld | | | Nomi-nal | Max. Toler | | Nomi-nal | Max. Toler | | |
|  |  |  | ИВ | 3.0-4.0 | 0 | +0.5 | 9.0 | 0 | +0.2 | | |
| | | | | 4.5-6.0 | | 10.0 | | | | | |
| | | | | 3.0-4.0 | 0 | +1.0 | 9.0 | 1.0 | +0.5 -1.0 | | |
| | | | | 4.5-6.0 | | 10.0 | | | | | |
| | | | | 3.0-4.0 | 0 | +1.0 | 9.0 | 1.5 | ±1.0 | | |
| | | | | 4.5-6.0 | | 10.0 | | | | | |
| |  |  |  | УП | 3.0-4.0 | 1.5 | ±0.5 | 8.0 | 2.0 | ±1.5 | |
| | | | | | 4.5-6.0 | | 9.0 | | | | |
| | | | | | 7.0-8.0 | 1.5 | ±1.0 | 10.0 | 2.0 | ±1.5 | |
| | | | | | 9.0-10.0 | | 12.0 | | | | |
| | | | | | 11.0-12.0 | 2.0 | | | 14.0 | | |
| | | | | | | | | | | | |

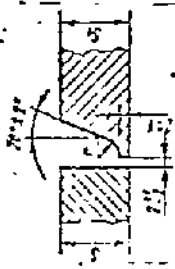
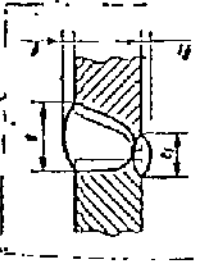
P.19 GOST 147 1-77

Dimensions, mm

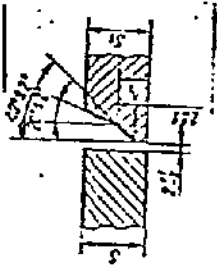
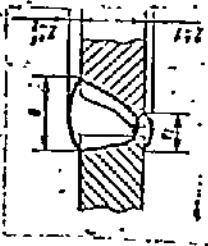
| Welded Joint Symbol | Structural Elements of prepared edges of welded articles | Welding Method | Sizes | b | | c | | d | | E | | ang. max. toler. +2 | |
|---|---|----------------|---------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|---------------------|------|
| | | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | | |
|  |  | УНП, УП | 3.0-3.5 | | | | | 6 | | | | 50 | |
| | | | 3.8-4.5 | | | | | 7 | | | | | +0.5 |
| | | | 5.0-5.5 | | | | | 8 | | | | | -1.0 |
| | | | 6.0 | | | | | 10 | | | | | |
| | | | 7.0 | | | | | 14 | | | | | |
| | | | 8.0 | ±1 | | | | 16 | ±1 | | | | |
| | | | 9.0 | | | | | 18 | | | | | |
| | | 10.0 | | | | | 20 | | | | | | |
| | | 3-4.0 | | | | | 6 | | | | | | |
| | | 4.5-7.0 | | | | | 8 | | | | | | |
| | | 8-11.0 | | | | | 14 | | | | | | |
| | | 12-14 | | | | | 18 | | | | | | |
| | | 16-18 | | | | | 22 | | | | | | |
| | | 20-22 | | | | | 26 | | | | | | |
| 24-26 | | | | | 30 | | | | | | | | |
| 28-30 | | | | | 34 | | | | | | | | |
| 32-34 | | | 2.0 | | 38 | +1.0 | | | | | | | |
| 36-40 | | | | | 42 | -2.0 | | | | | | | |
| 42-45 | | | | | 46 | | | | | | | | |
| 48-53 | | | | | 50 | | | | | | | | |
| 56-60 | | | | | 54 | | | | | | | | |

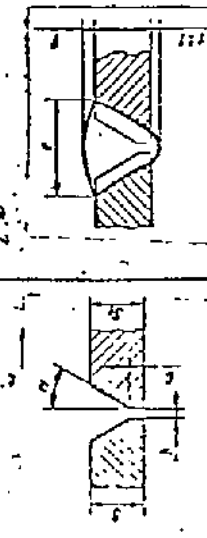
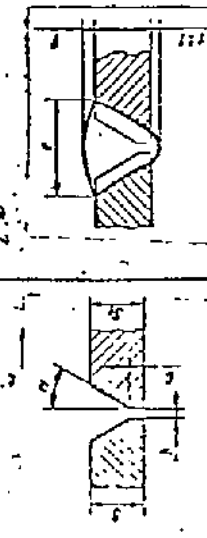
| Welded Joint Symbol | Structural Elements | | Welding Method | S=81 | b | | c | | o | | o ₁ (max. toler. ±2) | R No. mi- nol Max. To- ler. | C ₁ (max. toler. ±1) | C ₂ (max. toler. ±2) | | | | | | | | | | |
|--|--------------------------------------|---|----------------|------|----------------|--|----------------|------------------|----------------|------------------|------------------------------------|---|------------------------------------|------------------------------------|---|-----------|--|----|---|----|---|---|----|-----|
| | of prepared edges of welded articles | of final weld | | | No. mi- nol | Max. To- ler. | No. mi- nol | Max. To- ler. | No. mi- nol | Max. To- ler. | | | | | | | | | | | | | | |
|   09 | MHn, MП |  | 3.0-3.5 | 1 ±1 | 1 ±1 | 6 7 8 10 14 16 18 20 6 10 16 | ±1 | ±2 | 4 | 1 | ±1 | 1.0 | 50 | | | | | | | | | | | |
| | | | 3.8-4.5 | | | | | | | | | | | | | | | | | | | | | |
| | | | 5.0-5.5 | | | | | | | | | | | | | | | | | | | | | |
| | | | 6.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 7.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 8.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 9.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 10.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 3.0-4.5 | | | | | | | | | | | 9П |  | 12.0-14.0 | 20 24 28 32 36 40 44 48 52 56 | ±3 | 6 | ±1 | 8 | 2 | ±2 | 2.0 |
| | | | 16.0-18.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 20.0-22.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 24.0-26.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 28.0-30.0 | | | | | | | | | | | | | | | | | | | | | |
| | | | 32.0-34.0 | | | | | | | | | | | | | | | | | | | | | |
| 36.0-40.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 42.0-45.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 48.0-53.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | | | | | | | | | | | | | |

| Welded Joint Symbol | Structural Elements | | Welding Method | a | b | | o | | c | | No. of samples (max. per lot) |
|---------------------|---|---|----------------|-----------|---------|-------------|--------------|-------------|---------|-------------|-------------------------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | |
| C11 |  |  | ИИП, ИП | 3.0-3.5 | 0 | +3 | 7 | ±2 | 1.0 | ±1.0 | 50 |
| | | | | 3.8-4.5 | | | 8 | | | | |
| | | | | 5.0-5.5 | | | 9 | | | | |
| | | | | 6.0 | | | 12 | | | | |
| | | | | 7.0 | | | 14 | | | | |
| | | | | 8.0 | | | 16 | | | | |
| | | | | 9.0 | | | 18 | | | | |
| | | | | 10.0 | | | 20 | | | | |
| | | | | 3.0-4.0 | | | 6 | | | | |
| | | | | 4.5-7.0 | | | 10 | | | | |
| | | | | 8.0-11.0 | | | 16 | | | | |
| | | | | 12.0-14.0 | | | 20 | | | | |
| | | | | 16.0-18.0 | | | 24 | | | | |
| | | | | 20.0-22.0 | | | 30 | | | | |
| | | | | 24.0-26.0 | | | 34 | | | | |
| 28.0-30.0 | 38 | | | | | | | | | | |
| 32.0-34.0 | 42 | | | | | | | | | | |
| 36.0-40.0 | 46 | | | | | | | | | | |
| | 2 | ±2 | | ±3 | | 2.0 | +1.0 -2.0 | 40 | | | |

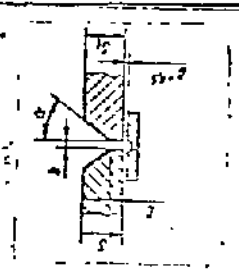
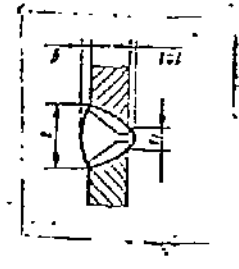
| Welded Joint Symbol | Structural Elements | | Welding Method | S=H1 | I (max. toler. +1) | e | | O1 (max. toler. +2) | Nominal | Max. Toler. | E1 (max. toler. +1) |
|---------------------|---|---|----------------|-------|--------------------|---------|-------------|---------------------|---------|-------------|---------------------|
| | of prepared edges of welded articles | of final weld | | | | Nominal | Max. Toler. | | | | |
| C13 |  |  | ИП, УП | 18-20 | 8 | 17 | ±2 | 10 | 2 | +1 -2 | 2 |
| | | | | 22-24 | | 18 | | | | | |
| | | | | 26-28 | | 20 | | | | | |
| | | | | 30-34 | | 22 | ±3 | | | | |
| | | | | 36-40 | | 24 | | | | | |
| | | | | 42-45 | | 26 | | | | | |
| | | | | 48-53 | | 28 | ±4 | | | | |
| | | | | 56-60 | | 30 | | | | | |
| | | | | 63-65 | | 34 | | | | | |
| | | | | 70-75 | | 38 | ±5 | | | | |
| | | | | 80-85 | | 42 | | | | | |
| | | | | 90-95 | | 44 | ±6 | | | | |
| | 100 | 46 | | | | | | | | | |

Dimensions, mm

| Welded Joint Symbol | Structural Elements of prepared edges of welded articles | Structural Elements of final weld | Welding Method | S=S ₁ | h (max. toler. +1) | e | | e ₁ (max. toler. +2) |
|---------------------|---|---|----------------|------------------|--------------------|---------|-------------|---------------------------------|
| | | | | | | Nominal | Max. Toler. | |
| C14 |  |  | MP, UP | 18-20 | 10 | ±3 | 10 | 12 |
| | | | | 22-24 | | | | |
| | | | | 26-30 | | | | |
| | | | | 32-36 | 12 | ±4 | 21 | |
| | | | | 38-42 | | | | |
| | | | | 45-48 | | | | |
| | | | | 50-53 | 12 | ±5 | 23 | |
| | | | | 56-60 | | | | |
| | | | | 63-70 | | | | |
| | | | | 75-80 | 12 | ±5 | 25 | |
| | | | | 85-90 | | | | |
| | | | | 95-100 | | | | |

| Welded Joint Symbol | Structural Elements | | Welding Method | S=91 | b | | c | | e | | g | | α, ang.° (max. toler. ±2°) |
|---------------------|---|---|----------------|-----------|---------|--------------|-------------|--------------|--|----------------------|---------|-------------|----------------------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | No. minimal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | |
| G17 |  |  | ИИП, ИП | 3.0-4.0 | 1.0 | ±1.0 | 1.0 | ±1.0 | 6 | ±2 | 1 | ±1 | 30 |
| | | | | 4.5-5.5 | | | | | | | | | |
| | | | | 6.0 | | | | | | | | | |
| | | | | 7.0 | | | | | | | | | |
| | | | | 8.0 | | | | | | | | | |
| | | | | 9.0-10.0 | | | | | | | | | |
| | | | | 3.0-4.5 | | | | | | | | | |
| | | | | 5.0-7.0 | | | | | | | | | |
| | | | | 8.0-10.0 | | | | | | | | | |
| | | | | 11.0-14.0 | | | | | | | | | |
| | | | | 16.0-18.0 | | | | | | | | | |
| | | | | 20.0-22.0 | | | | | | | | | |
| | | | | 24.0-26.0 | | | | | | | | | |
| | | | | 28.0-30.0 | | | | | | | | | |
| | | | | 32.0-34.0 | | | | | | | | | |
| 36.0-40.0 | | | | | | | | | | | | | |
| 42.0-45.0 | | | | | | | | | | | | | |
| 48.0-53.0 | | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | | |
| | | | | | 2.0 | +1.0 -2.0 | 2.0 | +1.0 -2.0 | 24 28 32 36 40 44 50 | +4 +4 +4 +5 | 2 | +1 -2 | 20 |

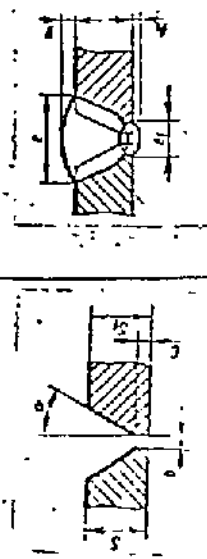
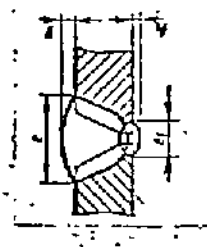
Dimensions, mm

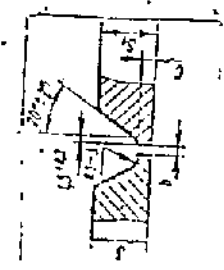
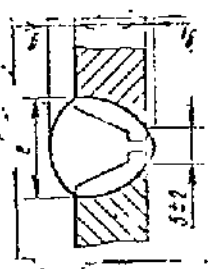
| Welded Joint Symbol | Structural Elements | | Welding Method | SWS 1 | b | | c | | e | | f (max toler. ± 2) | g | h | i (max toler. ± 2) | j | k | | | |
|---------------------|---|---|----------------|-----------|---------------|---------------|---------------|---------------|---------------|---------------|-------------------------|-----------|-----------|-------------------------|-----------|----|-------------|-------------|--|
| | of prepared edges of welded articles | of final weld | | | No. minimal | Max. toler. | No. minimal | Max. toler. | No. minimal | Max. toler. | | | | | | | No. minimal | Max. toler. | |
| G10 |  |  | ИЭП, ИП | 3.0-3.5 | 1.0 ± 1.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 5 | ± 2.0 | 4.0 | 1.0 | ± 1.0 | 20 | | | | | |
| | | | | 3.8-4.5 | | | | | 7 | | | | | | | | | | |
| | | | | 5.0-5.5 | | | | | 8 | | | | | | | | | | |
| | | | | 6.0 | | | | | 10 | | | | | | | | | | |
| | | | | 7.0-8.0 | | | | | 12 | | | | | | | | | | |
| | | | УП | 9.0-10.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 1.0 ± 1.0 | 14 | ± 3.0 | 6.0 | 2.0 | ± 1.0 | 20 | | | |
| | | | | 3.0-4.0 | | | | | | | 16 | | | | | | | | |
| | | | | 4.5-7.0 | | | | | | | 10 | | | | | | | | |
| | | | | 8.0-11.0 | | | | | | | 12 | | | | | | | | |
| | | | | 12.0-14.0 | | | | | | | 15 | | | | | | | | |
| | | | | 16.0-18.0 | | | | | | | 18 | | | | | | | | |
| | | | | 20.0-22.0 | | | | | | | 22 | | | | | | | | |
| | | | | 24.0-26.0 | | | | | | | 26 | | | | | | | | |
| | | | | 28.0-30.0 | | | | | | | 30 | | | | | | | | |
| | | | | 32.0-36.0 | | | | | | | 34 | | | | | | | | |
| 38.0-42.0 | 38 | | | | | | | | | | | | | | | | | | |
| 45.0-48.0 | 42 | | | | | | | | | | | | | | | | | | |
| 50.0-53.0 | 46 | | | | | | | | | | | | | | | | | | |
| 56.0-60.0 | 52 | | | | | | | | | | | | | | | | | | |

ГОСТ 14171-75

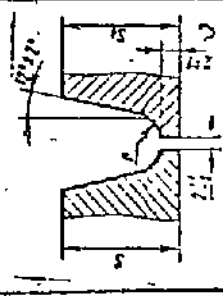
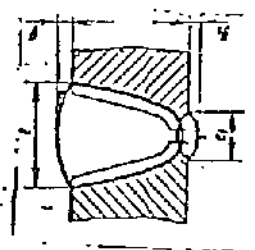
Table 23

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | s = s ₁ | b | | o | | o | | e ₁ (max. toler. ±2) | g | | g ₁ | | α, mmg. (max. toler. ±2) |
|---------------------|---|---|----------------|--------------------|-----------------|-----------|-----------------|-----------|-----------------|-----------|---------------------------------|-----------------|-----------|-----------------|-----------|--------------------------|
| | of prepared articles | of final weld | | | No. of articles | Max. Tol. | No. of articles | Max. Tol. | No. of articles | Max. Tol. | | No. of articles | Max. Tol. | No. of articles | Max. Tol. | |
| C21 |  |  | ИП, ИП | 3.0-3.5 | 1.0 ±1 | 1.0 ±1 | 6 | +1 | 6 | +1 | 6 | ±0.5 | ±0.5 | ±0.5 | 30 | |
| | | | | 3.8-4.5 | | | 7 | | 7 | | | | | | | |
| | | | | 5.0-5.5 | | | 8 | | 8 | | | | | | | |
| | | | | 6.0 | | | 10 | | 10 | | | | | | | |
| | | | | 7.0-8.0 | | | 12 | | 12 | | | | | | | |
| | | | | 9.0-10.0 | | | 14 | | 14 | | | | | | | |
| | | | | 3.0-4.0 | | | 6 | | 6 | | | | | | | |
| | | | | 4.5-7.0 | | | 8 | | 8 | | | | | | | |
| | | | | 8-11 | | | 10 | | 10 | | | | | | | |
| | | | | 12-14 | | | 13 | | 13 | | | | | | | |
| | | | | 16-18 | | | 2 | +1 | 2 | +1 | -2 | | | | | |
| | | | | 20-22 | | | 2 | +1 | 2 | +1 | -2 | | | | | |
| | | | | 24-26 | | | 20 | | 20 | | | | | | | |
| | | | | 28-30 | | | 24 | | 24 | | | | | | | |
| | | | | 32-36 | | | 28 | | 28 | | | | | | | |
| 38-42 | | | 32 | | 32 | | | | | | | | | | | |
| 44-48 | | | 36 | | 36 | | | | | | | | | | | |
| 50-54 | | | 40 | | 40 | | | | | | | | | | | |
| 56-60 | | | 44 | | 44 | | | | | | | | | | | |
| | | | 48 | | 48 | | | | | | | | | | | |

| Welded Joint Symbol | Structural Elements | | Welding Method | Subj | b | | e (max. toler. ±0.5) | e (max. toler. ±2) | B | | S1 | | | | |
|---------------------|---|---|----------------|-------|----------|--------------|----------------------|--------------------|-----------|--------------|-----------|--------------|--------------|----|--|
| | of prepared edges of welded articles | of final weld | | | Nomi-nal | Max. Tol-er. | | | No-mi-nal | Max. Tol-er. | No-mi-nal | Max. Tol-er. | | | |
| C22 |  |  | ИП, МП | 4-5.5 | | +0.2 | 2.0 | 7 | | +0.5 -1.0 | | +1 | | | |
| | | | | 6-7 | | +0.5 | 3.0 | 8 | | ±1.0 | | | | | |
| | | | | 8-9 | 0 | | | 10 | | | | 0 | | +2 | |
| | | | | 10-12 | | +1.0 | 3.5 | 12 | | | | | | | |
| | | | | 14-16 | | | | 16 | | | | 2.0 | +1.0 -2.0 | | |
| | | | | 18-20 | | | | 18 | | | | | | | |

ДИМОНЦИОНН • МУН

| Welded joint symbol | Structural Elements | | Welding Method | B=8 B | r (max. toler. ±1) | e | | e ₁ (max. toler. ±2) | E | | E ₁ (max. toler. ±1) | |
|---------------------|---|---|----------------|-------|--------------------|-------------|-------------|---------------------------------|-------------|-------------|---------------------------------|----|
| | of prepared edges of welded articles | of final weld | | | | No. minimal | Max. toler. | | No. minimal | Max. toler. | | |
| 023 |  |  | ИП, УП | 24-28 | 8 | 28 | ±4 | 10 | | | | |
| | | | | 30-34 | | 30 | | | | | | |
| | | | | 36-40 | | 32 | | | | | | |
| | | | | 42-45 | | 34 | | | | | | |
| | | | | 48-50 | | 36 | | | | | | |
| | | | | 53-56 | | 38 | | | | | | |
| | | | | 60-63 | | 40 | | | | | | 12 |
| | | | | 65-70 | | 43 | | | | | | |
| | | | | 75-80 | | 48 | | | | | | |
| | | | | 85-90 | | 52 | | | | | | |
| 95-100 | 58 | ±8 | | | | | | | | | | |

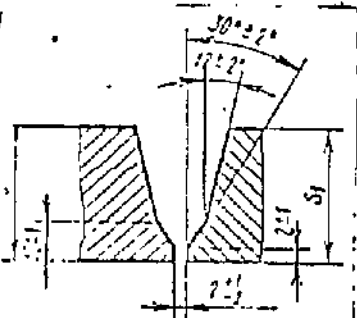
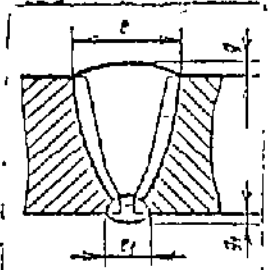
3
+1
-3

3

023

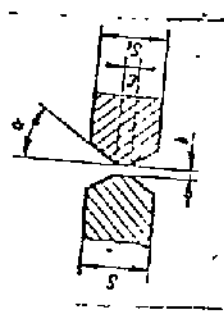
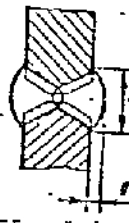
Dimensions, mm

Table 26

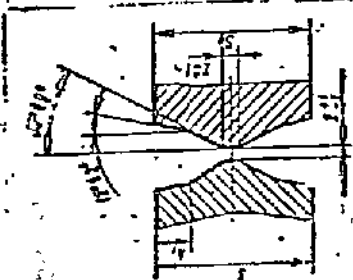
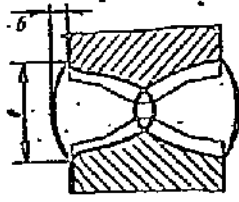
| Welded Joint Symbol | Structural Elements | | Welding Method | S=S ₁ | e | | e ₁ (max. toler. ±2) | E | | E ₁ (max. toler. ±1) |
|---------------------|---|---|----------------|------------------|---------|-------------|------------------------------------|----------|-------------|------------------------------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | | Nominal | Max. Toler. | |
| C24 |  |  | ИП, УП | 24-28 | 22 | ±5 | 10 | 2 | +1 -2 | 2 |
| | | | | 30-34 | 25 | | | | | |
| | | | | 36-40 | 28 | | | | | |
| | | | | 42-45 | 30 | | | | | |
| | | | | 48-50 | 33 | ±6 | | | | |
| | | | | 53-56 | 35 | | | | | |
| | | | | 60-63 | 38 | | | | | |
| | | | | 65-70 | 40 | ±7 | 12 | | | |
| | | | | 75-80 | 43 | | | | | |
| | | | | 85-90 | 48 | ±8 | 3 | +1 -3 | 3 | |
| | | | | 95-100 | 53 | | | | | |

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Dimensions, mm

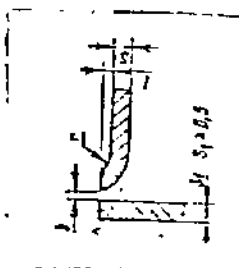
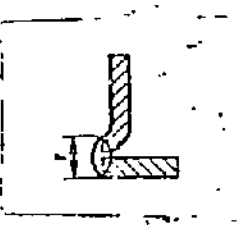
| Welded Joint Symbol | Structural Elements | | Welding Method | SBS ¹ | b | | c | | e | | f | | d _{min} and d _{max} (max. toler. +2) | | | |
|---------------------|---|---|----------------|------------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|--|---------|-------------|----|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | | Nominal | Max. Toler. | |
| 025 |  |  | ИПн, | 6-9 | 1 | ±1 | 1 | ±1 | ±2 | 1 | ±1 | 30 | | | | |
| | | | | 10-12 | | | | | | | | | | | | |
| | | | | 14-16 | | | | | | | | | | | | |
| | | | | 18-20 | | | | | | | | | | | | |
| | | | ИП, УП | 6-9 | 2.0 | ±1 | 2.0 | +1 | -2 | 2.0 | +1 | -2 | 2 | +1 | -2 | 20 |
| | | | | 10-12 | | | | | | | | | | | | |
| | | | | 14-16 | | | | | | | | | | | | |
| | | | | 18-20 | | | | | | | | | | | | |
| | | | | 22-28 | | | | | | | | | | | | |
| | | | | 30-36 | | | | | | | | | | | | |
| | | | | 38-45 | | | | | | | | | | | | |
| | | | | 48-53 | | | | | | | | | | | | |
| | | | | 56-60 | | | | | | | | | | | | |
| | | | | 63-70 | | | | | | | | | | | | |
| | | | | 75-80 | | | | | | | | | | | | |
| 85-90 | | | | | | | | | | | | | | | | |
| 95-100 | | | | | | | | | | | | | | | | |
| 105-110 | | | | | | | | | | | | | | | | |
| 120 | | | | | | | | | | | | | | | | |

Dimensions, mm

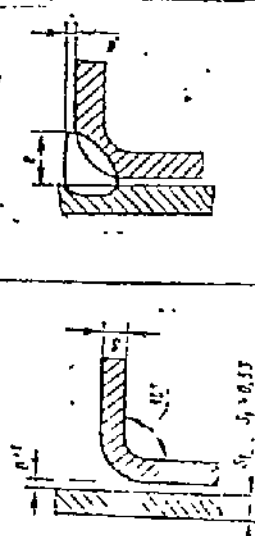
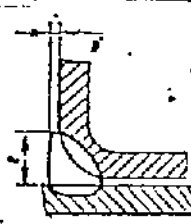
| Welded Joint Symbol | Structural Elements | | Welding Method | S ₀₃ 1 | h (max. toler. +1) | e | | B | | |
|---|---|---------------|----------------|-------------------|--------------------|---------|-------------|---------|-------------|----------|
| | of prepared edges of welded articles | of final weld | | | | Nominal | Max. Toler. | Nominal | Max. Toler. | |
|  |  | 5M | 26-30 | 17 | | | | | | |
| | | | 32-36 | 19 | | | | | | |
| | | | 38-42 | 20 | | ±4 | | | 2 | +1 -2 |
| | | | 45-48 | 21 | | | | | | |
| | | | 50-53 | 22 | 10 | ±5 | | | | |
| | | | 56-60 | 24 | | | | | | |
| | | | 63-70 | 26 | | | | | | |
| | | | 75-80 | 28 | | ±6 | | | | |
| | | | 85-90 | 30 | | | | | 3 | +1 -3 |
| | | | 95-100 | 34 | | | | | | |
| | | | 105-110 | 37 | 12 | ±7 | | | | |
| | | | 120 | 40 | | | | | | |

027

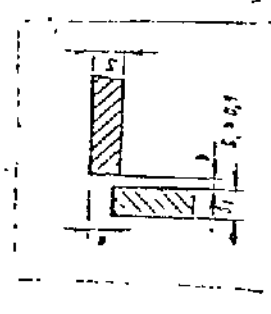
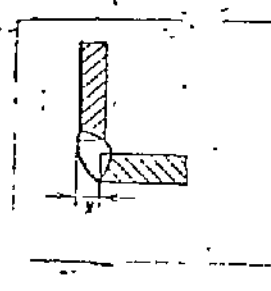
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | S | b | | F | L | 0 | |
|---------------------|---|---|----------------|---------|---------|-------------|------|------|---------|-------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | | | Nominal | Max. Toler. |
| У1 |  |  | MH, MHn | 0.5-0.9 | 0 | +0.2 | B=2B | B=3B | B+B1 | +1.0 |
| | | | | 1.0-1.4 | | +0.3 | | | | +1.5 |
| | | | | 1.5-3.0 | | +0.5 | | | | +2.0 |
| | | | Mn, Yn | 0.5-1.4 | +1.0 | | | | | |
| | | | | 1.5-4.0 | | | | | | |

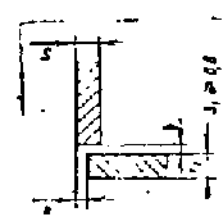
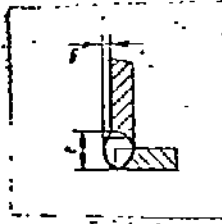
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | S | e | | B | |
|---------------------|---|---|----------------|-----------|---------|-------------|---------|-------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | Nominal | Max. Toler. |
| У2. |  |  | ИП | 0.8-1.5 | 2 | ±3 | 0 | +1 |
| | | | | 1.6-4.0 | 4 | | | |
| | | | | 1.0-1.5 | 2 | | | |
| | | | ИП, УП | 1.6-4.5 | 4 | ±5 | +2 | |
| | | | | 5.0-9.0 | 8 | | | |
| | | | | 10.0-12.0 | 12 | | | |

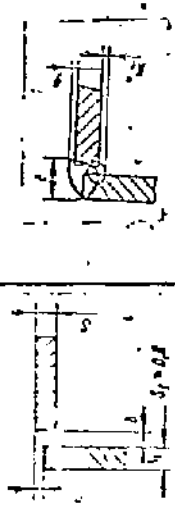
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | B | b | | n |
|---------------------|---|---|----------------|-----------|---------|-------------|---------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | |
| 94 |  |  | ИПН | 0.8-5.5 | 0 | +0.5 | 0.5 B-B |
| | | | | 6-10 | | +1.0 | |
| | | | ИП, УП | 0.8-6.0 | 0 | +1.5 | |
| | | | | 7.0-11.0 | | +2.0 | |
| | | | | 12.0-30.0 | | | |

Dimensions, mm

| Welded Joint Symbol | Structural Elements of prepared edges of welded articles | Structural Elements of final weld | Welding Method | g | b | | n | e | | | | | |
|---------------------|---|---|----------------|---------|---------|-------------|--------|---------|-------------|-------------|------|------|------|
| | | | | | Nominal | Max. Toler. | | Nominal | Max. Toler. | Max. Toler. | | | |
| Y4 |  |  | ИП | 0.8-1.4 | | | | 3 | ±1 | | +1.0 | | |
| | | | | 1.5-2.0 | | | | 5 | | | | | |
| | | | | 2.2-3.2 | | +0.5 | | 7 | ±2 | | | | |
| | | | | 3.5-4.0 | | | | 8 | | | | | +1.5 |
| | | | | 0.8-1.4 | | 0 | 0-0.5B | 4 | ±1 | | | | +1.0 |
| | | | | 1.5-2.8 | | | | 6 | | | | 1.0 | +1.5 |
| | | | 3.0-5.0 | | | | 8 | | | | | +2.0 | |
| | | | 5.5-8.0 | | | | | | | 12 | ±2 | | |

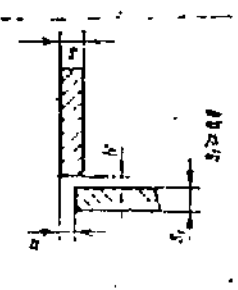
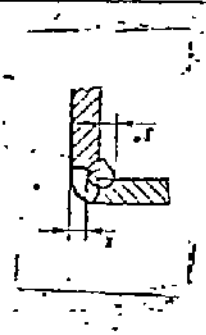
Dimensions, mm

| Welded Joint Symbol | Structural Elements of prepared edges of welded articles | Welding Method | a | b | | n | e | | 8 | | K ₁ | |
|---------------------|---|----------------|---------|---------|-------------|----|---------|-------------|---------|-------------|----------------|---|
| | | | | Nominal | Max. Toler. | | Nominal | Max. Toler. | Nominal | Max. Toler. | | |
| 95 |  | ИП | 0.8-1.4 | | | | 3 | ±1 | | +1.0 | 2 | |
| | | | 1.5-2.0 | | +0.5 | | 5 | | | | | |
| | | | 2.2-3.2 | | | | 7 | ±2 | | +1.5 | | |
| | | | 3.5-4.0 | | | | 8 | | | | | |
| | | 0.8-1.4 | 0 | | | 4 | ±1 | | +1.0 | 3 | | |
| | | 1.5-2.8 | | | | 6 | | | | | | |
| | | 3-5 | | +1.0 | 0-0.5B | 8 | | | +1.5 | | | |
| | | 5.5-8.0 | | | | 12 | ±2 | | | | | |
| | | 9.0-12.0 | | | | 15 | ±3 | | +2.0 | | | |
| | | | | | | | | | | | | 4 |

* for reference

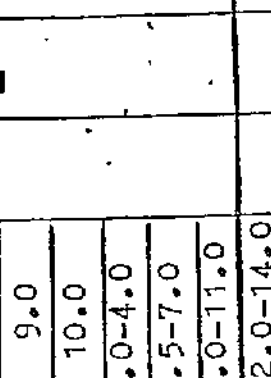
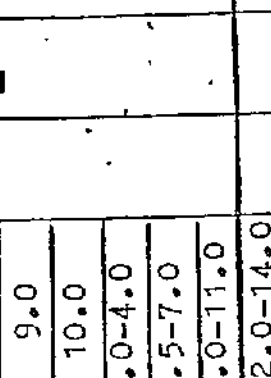
Table 35

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | S | Nominal | b | Max. Toler. | n |
|---------------------|---|---|----------------|-----------|---------|------|-------------|---------------------|
| | of prepared edges of welded articles | of final weld | | | | | | |
| Y5 |  |  | ИВП | 0.8-5.5 | 0 | +0.5 | +1.0 | Above 0.5s to 1.0 B |
| | | | | 6.0-10.0 | | | | |
| | | | ИП, УП | 5.8-6.0 | 0 | +1.5 | +2.0 | |
| | | | | 7.0-11.0 | | | | |
| | | | | 12.0-30.0 | | | | |

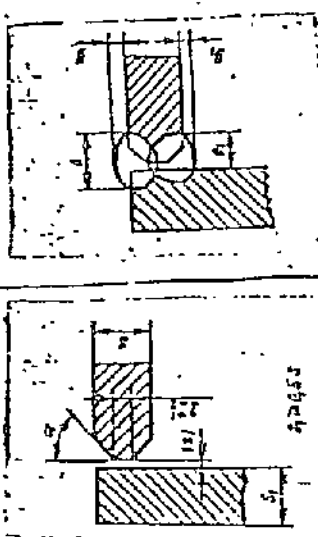
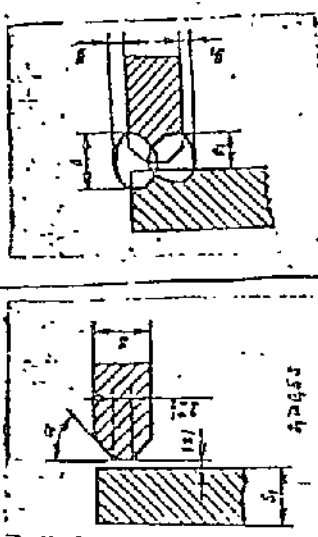
*for reference

| Welded Joint Symbol | Structural Elements | | Welding Method | S | b | | c | | e | | g | | d, ° (max. toler. (+2)) |
|---------------------|--------------------------------------|---------------|----------------|-----------|-------------|-------------|-------------|---|--------------|-------------|-------------|-------------|----------------------------|
| | of prepared edges of welded articles | of final weld | | | No. minimal | Max. Toler. | No. minimal | Max. Toler. | No. minimal | Max. Toler. | No. minimal | Max. Toler. | |
| y6 | | | УНП, УП | 3.0-3.5 | 1 ±1 | 1 ±1 | 1 ±1 | 6 7 8 10 14 16 18 20 6 8 14 | +0.5 -1.0 | 1.0 ±1.0 | 50 | 40 | |
| | | | | 3.8-4.5 | | | | | | | | | |
| | | | | 5.0-5.5 | | | | | | | | | |
| | | | | 6.0 | | | | | | | | | |
| | | | | 7.0 | | | | | | | | | |
| | | | | 8.0 | | | | | | | | | |
| | | | | 9.0 | | | | | | | | | |
| | | | | 10.0 | | | | | | | | | |
| | | | | 3.0-4.0 | | | | | | | | | |
| | | | | 4.5-7.0 | | | | | | | | | |
| | | | | 8.0-11.0 | | | | | | | | | |
| | | | | 12.0-14.0 | | | | | | | | | |
| | | | | 16.0-18.0 | | | | | | | | | |
| | | | | 20.0-22.0 | | | | | | | | | |
| 24.0-26.0 | | | | | | | | | | | | | |
| 28.0-30.0 | | | | | | | | | | | | | |
| 32.0-36.0 | | | | | | | | | | | | | |
| 38.0-42.0 | | | | | | | | | | | | | |
| 45.0-48.0 | | | | | | | | | | | | | |
| 50.0-53.0 | | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | | |

| Welded joint symbol | Structural Elements of prepared edges of welded articles | Welding Method | S | b | | c | | d | | e | | Max. Tol. (max. toler. +2) |
|--|--|----------------|-----------|------------|-----------|-------------|-----------|-------------|-----------|-------------|--------------|----------------------------|
| | | | | Nomi. Tol. | Max. Tol. | No. minimal | Max. Tol. | No. minimal | Max. Tol. | No. minimal | | |
|  <p>#for reference</p> |  | МНП, ИП | 3.0-3.5 | 1 | ±1 | 1 | ±1 | 1.0 | ±2 | 1.0 | ±1.0 | 50 |
| | | | 3.8-4.5 | | | | | | | | | |
| | | | 5.0-5.5 | | | | | | | | | |
| | | | 6.0 | | | | | | | | | |
| | | | 7.0 | | | | | | | | | |
| | | | 8.0 | | | | | | | | | |
| | | | 9.0 | | | | | | | | | |
| | | | 10.0 | | | | | | | | | |
| | | | 3.0-4.0 | | | | | | | | | |
| | | | 4.5-7.0 | | | | | | | | | |
| | | | 8.0-11.0 | | | | | | | | | |
| | | | 12.0-14.0 | | | | | | | | | |
| | | | 16.0-18.0 | | | | | | | | | |
| | | | 20.0-22.0 | | | | | | | | | |
| 24.0-26.0 | | | | | | | | | | | | |
| 28.0-30.0 | | | | | | | | | | | | |
| 32.0-34.0 | | | | | | | | | | | | |
| 36.0-40.0 | | | | | | | | | | | | |
| 42.0-45.0 | | | | | | | | | | | | |
| 48.0-53.0 | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | |
| | | ИП | 12.0-14.0 | 2.0 | ±1 | 2.0 | ±2 | 2.0 | ±3 | 2.0 | ±1.0 -2.0 | 40 |
| | | | 16.0-18.0 | | | | | | | | | |
| | | | 20.0-22.0 | | | | | | | | | |
| | | | 24.0-26.0 | | | | | | | | | |
| | | | 28.0-30.0 | | | | | | | | | |
| | | | 32.0-34.0 | | | | | | | | | |
| | | | 36.0-40.0 | | | | | | | | | |
| | | | 42.0-45.0 | | | | | | | | | |
| | | | 48.0-53.0 | | | | | | | | | |
| | | | 56.0-60.0 | | | | | | | | | |
| | | | 18 | | | | | | | | | |
| | | | 22 | | | | | | | | | |
| | | | 26 | | | | | | | | | |
| | | | 30 | | | | | | | | | |
| 34 | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | |
| 42 | | | | | | | | | | | | |
| 46 | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | |

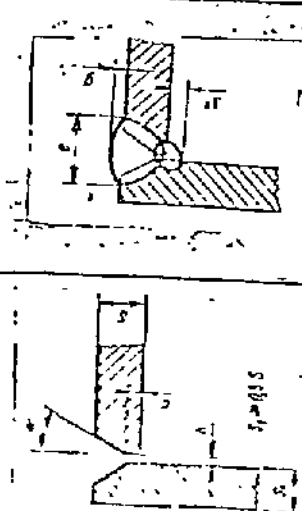
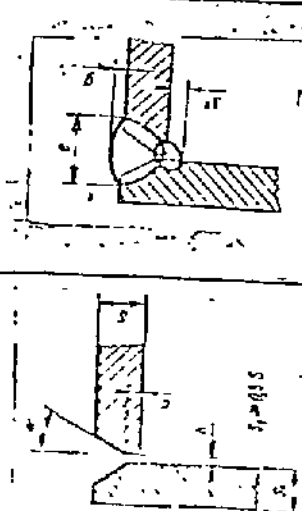
Dimensions, mm

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| Welded Joint Symbol | Structural Elements of prepared edges of welded articles | Welding Method | B | | C | | D | | E | | Max. Toler. | Nominal | Max. Toler. | ang. (max. toler. $\pm 2^\circ$) | | |
|--|--|----------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|-------------|---------|-------------|-----------------------------------|--|--|
| | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | | | | | | |
|  |  | ИИп, ИП | 6-9 | 7 | | | | | | | | | | 50 | | |
| | | | 10-12 | 9 | | | | | | | | | | | | |
| | | | 14-16 | 13 | | | | | | | | | | | | |
| | | | 18-20 | 17 | | | | | | | | | | | | |
| | | | 6-10 | 8 | | | | | | | | | | | | |
| | | | 11-16 | 10 | | | | | | | | | | | | |
| | | | 18-22 | 13 | | | | | | | | | | | | |
| | | | 24-28 | 16 | | | | | | | | | | | | |
| | | | 30-34 | 19 | | | | | | | | | | | | |
| | | | 36-40 | 22 | | | | | | | | | | | | |
| | | | 42-45 | 26 | | | | | | | | | | | | |
| | | | 48-53 | 30 | | | | | | | | | | | | |
| | | | 56-63 | 38 | | | | | | | | | | | | |
| | | | 65-70 | 42 | | | | | | | | | | | | |
| | | | 75-80 | 46 | | | | | | | | | | | | |
| 85-90 | 50 | | | | | | | | | | | | | | | |
| 95-100 | 54 | | | | | | | | | | | | | | | |

| Welded Joint Symbol | Structural Elements of prepared edges of welded articles | Welding Method | S | b | | c | | e | | f | | d ang. (max. toler. ±2°) | |
|---------------------|--|----------------|-----------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|-----------------------------------|----|
| | | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | | |
| 59 | | УНП, УП | 3.0-4.5 | | | | 8 | | | | | 30 | |
| | | | 5.0-8.0 | | | | 12 | | | | | | |
| | | | 9.0-12.0 | | | | 16 | | | | | | |
| | | | 14.0-16.0 | ±1.0 | 1.0 | ±1.0 | 20 | | | | | | |
| | | | 18.0-20.0 | | | | 24 | | | ±2 | | | |
| | | | 3.0-4.5 | | | | 6 | | | | | | ±1 |
| | | 5.0-8.0 | | | | 10 | | | | | | | |
| | | 9.0-12.0 | | | | 13 | | | | | | | |
| | | 14.0-16.0 | | | | 16 | | | | | | | |
| | | 18.0-20.0 | | | | 20 | | | | | | | |
| | | 22.0-24.0 | | УП | | 24 | | | | | | | 20 |
| | | 26.0-30.0 | | | 2.0 | +1.0 | 3.0 | +1.0 | | | | | |
| 32.0-36.0 | | | | | -2.0 | -2.0 | | | | | | | |
| 38.0-42.0 | | | | | | | | | | | | | |
| 44.0-48.0 | | | | | | | | | | | | | |
| 50.0-53.0 | | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | | |

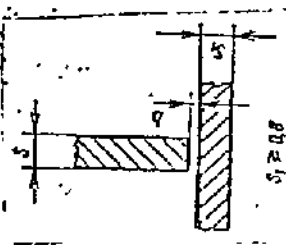
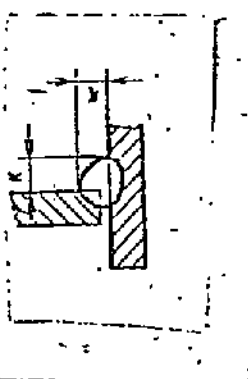
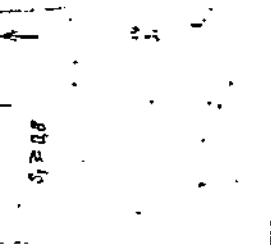
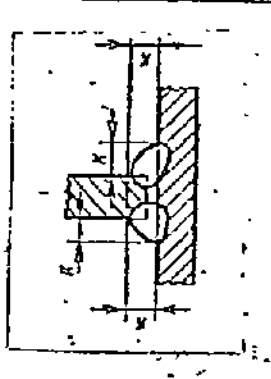
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | a | b | | c | | d | | e | f | g | h | | | | | |
|---------------------|--|--|----------------|-----------|---------|--------------|---------|--------------|---------|-------------|---|---|---|---|---------|-------------|--|--|--|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | | | | | Nominal | Max. Toler. | | | |
| Y10 |  |  | ШНП, ИП | 3.0-4.5 | | | | | | | | | | | | | | | |
| | | | | 5.0-8.0 | | | | | | | | | | | | | | | |
| | | | | 9.0-12.0 | | | | | | | | | | | | | | | |
| | | | | 14.0-16.0 | 1.0 | ±1.0 | 1.0 | ±1.0 | | | | | | | | | | | |
| | | | | 18.0-20.0 | | | | | | | | | | | | | | | |
| | | | | 3.0-4.5 | | | | | | | | | | | | | | | |
| | | | | 5.0-8.0 | | | | | | | | | | | | | | | |
| | | | | 9.0-12.0 | | | | | | | | | | | | | | | |
| | | | | 14.0-16.0 | | | | | | | | | | | | | | | |
| | | | | 18.0-20.0 | | | | | | | | | | | | | | | |
| | | | | 22.0-24.0 | | | | | | | | | | | | | | | |
| | | | | 26.0-30.0 | 2.0 | +1.0 -2.0 | 2.0 | +1.0 -2.0 | | | | | | | | | | | |
| | | | | 32.0-36.0 | | | | | | | | | | | | | | | |
| | | | | 38.0-42.0 | | | | | | | | | | | | | | | |
| 45.0-48.0 | | | | | | | | | | | | | | | | | | | |
| 50.0-53.0 | | | | | | | | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | | | | | | | | |

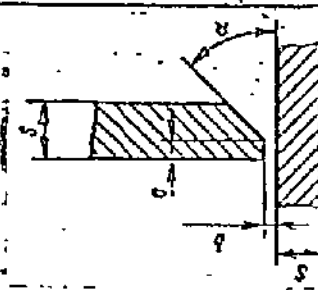
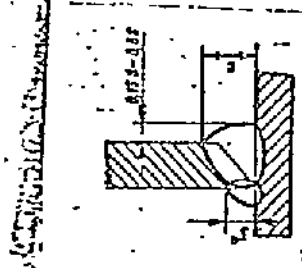
* for reference

2.5. 089 177 17

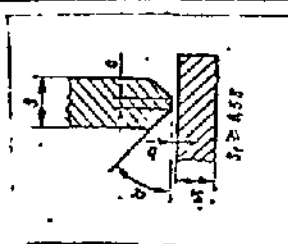
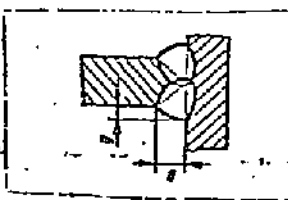
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | s | b | |
|---------------------|--|--|----------------|-----------|---------|-------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. |
| T1; T3 |  |  | ИП, ИП, УП | 0.8-3.0 | 0 | +0.5 |
| | | | | 3.2-5.5 | | +1.0 |
| |  |  | | 6.0-20.0 | +1.5 | |
| | | | | 22.0-40.0 | +2.0 | |

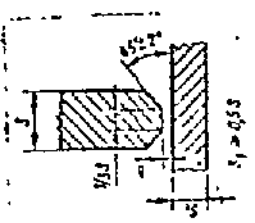
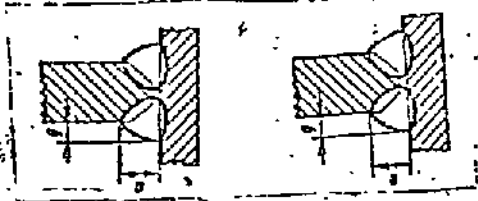
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | S | b | | c | | o | | | α, ang. (max. toler. +2) |
|--|--------------------------------------|---------------|----------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|--------------------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Tol. | Nominal | Max. Tol. | Nominal | Max. Tol. | Nominal | |
|   *for reference | | | MHП УП, УП | 3.0-4.0 | | | | | | | | 55 |
| | | | | 4.5-6.0 | | | | | | | | |
| | | | | 7.0-10.0 | | | | | | | | |
| | | | | 3.0-4.0 | | | | | | | | |
| | | | | 4.5-6.0 | | | | | | | | |
| | | | | 7.0-10.0 | | | | | | | | |
| | | | | 11.0-14.0 | | | | | | | | |
| | | | | 16.0-18.0 | | | | | | | | |
| | | | | 20.0-22.0 | | | | | | | | |
| | | | | 24.0-26.0 | | | | | | | | |
| | | | | 28.0-30.0 | | | | | | | | |
| | | | | 32.0-34.0 | | | | | | | | |
| 36.0-40.0 | | | | | | | | | | | | |
| 42.0-45.0 | | | | | | | | | | | | |
| 48.0-53.0 | | | | | | | | | | | | |
| 56.0-60.0 | | | | | | | | | | | | |

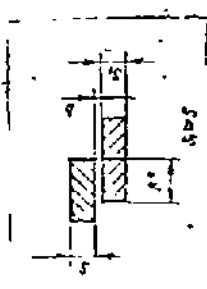
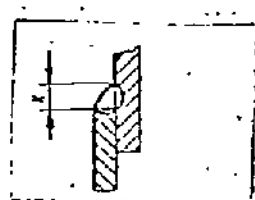
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | s | b | | c | | d | | E (max. toler. ± 2) | d, ang. (max. toler. $\pm 2^\circ$) | | |
|---------------------|--|--|----------------|-------|--------------------|--------------------|---------|--------------------|---------|--------------------|--------------------------|--------------------------------------|---------|----|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | Nominal | Max. Toler. | Nominal | Max. Toler. | | | | |
| |  |  | MHn | 6-9 | 1 | ± 1 | ± 1 | 1 | ± 1 | 7 | ± 2 | 55 | | |
| | | | | 10-12 | | | | | | 9 | | | | |
| | | | | 14-16 | | | | | | 12 | | | | |
| | | | | 18-20 | | | | | | 16 | | | | |
| | | | 6-9 | 2 | ± 1 ± 2 | ± 1 ± 2 | 2 | ± 1 ± 2 | 2 | ± 1 ± 2 | 2 | 8 | ± 3 | 45 |
| | | | 10-12 | | | | | | | | | 10 | | |
| | | | 14-18 | | | | | | | | | 12 | | |
| | | | 20-24 | | | | | | | | | 14 | | |
| | | | 26-30 | 2 | ± 1 ± 2 | ± 1 ± 2 | 2 | ± 1 ± 2 | 2 | ± 1 ± 2 | 2 | 16 | ± 4 | 45 |
| | | | 32-36 | | | | | | | | | 20 | | |
| | | | 38-42 | | | | | | | | | 24 | | |
| | | | 45-48 | | | | | | | | | 28 | | |
| | | | 50-53 | 2 | ± 1 ± 2 | ± 1 ± 2 | 2 | ± 1 ± 2 | 2 | ± 1 ± 2 | 2 | 32 | ± 5 | 45 |
| | | | 56-60 | | | | | | | | | 36 | | |
| 63-65 | 40 | | | | | | | | | | | | | |
| 70-75 | 44 | | | | | | | | | | | | | |
| 80 | | | | | | | | | 48 | | | | | |

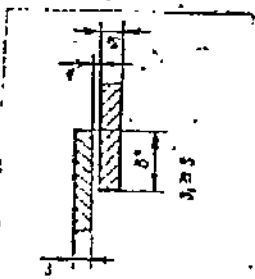
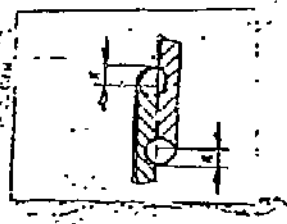
Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | a | b | | e | | c (max. toler. ±2) |
|---------------------|---|--|----------------|-------|---------|-------------|---------|-------------|-----------------------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | Nominal | Max. Toler. | |
| T9 |  |  | ИП, УП | 12-16 | 0 | 10 | ±2 | ±2 | 0.05л-0.15В |
| | | | | 18-22 | | 12 | | | |
| | | | | 24-28 | | 14 | | | |
| | | | | 30-34 | | 16 | | | |
| | | | | 36-40 | | 18 | | | |
| | | | | 42-45 | | 20 | | | |
| | | | | 48-53 | | 22 | | | |
| | | | | 56-60 | | 24 | | | |
| | | | | 63-65 | | 26 | | | |
| | | | | 70-75 | | 30 | | | |
| | | | | 80-85 | | 34 | | | |
| | | | | 90-95 | | 38 | | | |
| | | | | 100 | | 40 | | | |

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | B | b | | B | | | |
|---------------------|---|--|----------------|-----------|---------|-------------|------------|--|--|--|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler. | | | | |
| H1 |  <p>* for reference</p> |  | MH | 0.8-3.0 | | +0.2 | 3.0-12.0 | | | |
| | | | | 3.2-4.0 | | +0.5 | 5.0-16.0 | | | |
| | | | MHP | 0.8-5.0 | | +1.0 | 3.0-20.0 | | | |
| | | | | 5.5-10.0 | | +0.5 | 0.0-40.0 | | | |
| | | | MP, UP | 0.8-2.0 | | +1.0 | 3.0-20.0 | | | |
| | | | | 2.2-5.0 | | +1.5 | 8.0-40.0 | | | |
| | | | | 5.5-10.0 | | +2 | 12.0-100.0 | | | |
| | | | | 11.0-28.0 | | | 30.0-240.0 | | | |
| | | | | | | 30.0-60.0 | | | | |

Dimensions, mm

| Welded Joint Symbol | Structural Elements | | Welding Method | a | b | | | |
|---------------------|--|--|----------------|----------|---------|------------|------|----------|
| | of prepared edges of welded articles | of final weld | | | Nominal | Max. Toler | | |
| H2 |  <p>*for reference</p> |  | ИИ | 0.8-3.0 | +0.2 | 3.0-12.0 | | |
| | | | | 3.2-4.0 | | | | |
| | | | ИИИ | 0.8-5.0 | +0.5 | 3.0-20.0 | | |
| | | | | 5.5-10.0 | | | | |
| | | | ИП, УП | | | 0.8-2.0 | +1.0 | 8.0-40.0 |
| | | | | | | 2.2-5.0 | | |
| | | | | | | 5.5-10.0 | | |
| | | | | | | 11.0-28.0 | | |
| | | | | | | 30.0-60.0 | | |
| | | | | | | | | |

5. When the root of a multilayer weld is made by a method different from the major one employed for filling-up the clearance between the prepared edges, the structural elements of the welded joint shall be determined by the major welding method. In this case the welding method symbol should be expressed as a fraction, with the root welding method given as the numerator, and the main welding method given as the denominator.

6. In case of welded joints, types C12, C21, C23, C24, Y7, Y10, T7 with article thickness $s = 12$ mm, and more, and also in case of welded joints, types C15, C16, C25, C27, Y8, T8 with article thickness $s = 20$ mm, and more, made by the Y7 welding method, blunting $c = 5 \pm 2$ mm is tolerated.

7. Butt-welding of articles of unsimilar thickness, with the thickness difference within the ranges given in Table 48 below, shall be performed like that of articles of the same thickness; the structural elements of the prepared edges and the weld dimension should be determined in such cases by the greater thickness.

To attain smooth transition from one article to the other one, the sloping shape of the weld surface is tolerated (Fig.1).



Fig.1

mm

Table 48

| Thinner Article Thickness | Thickness Differential |
|---------------------------|------------------------|
| 2-3 | 1 |
| 4-30 | 2 |
| 32-40 | 4 |
| above 40 | 6 |

With the thickness differential of the articles to be welded in excess of the ranges given in Table 48 above, the article with the greater thickness (s_1) shall be chamfered at either one or both sides to the thickness (s) of the thinner article, as indicated in Figs. 2 and 3. In this case the structural elements of the prepared edges and the weld dimensions shall be determined by the smaller thickness.

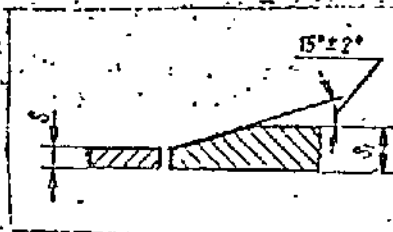


Fig. 2

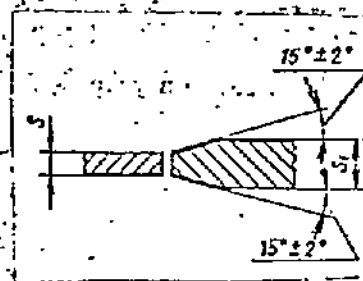


Fig. 3

8. The cathetus K of a corner weld shall not exceed 3 mm when welding articles up to 3 mm thick; it shall not exceed 1.2 of the thickness of the thinner article when articles with thickness above 3 mm are welded.

9. In joints involving rolled stock and shapes with rounded edges (Fig. 4), the cathetus K of a corner weld shall not exceed $0.9 s$.

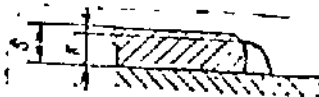


Fig. 4

10. The maximum deviation of the cathetus K of a corner weld from the nominal value shall be within;

from +1.0 mm to - 0.5 mm, with K short of 8 mm ;

from +1.5 mm to - 0.5 mm , with K from 8 to 12 mm ;

from +2.0 mm to - 1,0 mm , with K above 12 mm .

11. The reinforcement or weakening of a corner weld may be up to 30% its cathetus value , but not above 3 mm.

12. Prior to the welding, the relative offsetting of the edges is tolerated within:

0.2 s mm - with articles up to 4 mm thick ;

0.1 s + 0.5 mm - with articles 5 to 25 mm thick;

3 mm - with articles 25 to 50 mm thick;

0.04 s + 1.0 mm - with articles 5 to 100 mm thick;

0.01 s + 4.0 mm , but not above 6 mm with articles more than 100 mm thick.

13. When welding with carbon dioxide shielding , using 0.8 to 1.4 mm thick electrode wire, GOST 5264-69 may be followed for the major welded joint types and their structural elements.