

JIS

JAPANESE INDUSTRIAL STANDARD

Clay pipes

Ⓔ JIS R 1201—1991

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.



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J I S

Clay pipes

R 1201-1991

1. Scope

This Japanese Industrial Standard specifies the clay round pipes (hereafter referred to as the "pipe").

Remarks 1. The applicable standards to this Standard are as given in the following:

JIS K 6301 Physical Testing Methods for Vulcanized Rubber

JIS K 7114 Testing Method for Evaluation of the Resistance of Plastics to Chemical Substances

JIS R 2203 Method of Measuring Warpage of Refractory Bricks

2. The units and numerical values given in { } in this Standard are in accordance with the traditional units, and are informative reference values.

2. Types

The types of pipes shall be classified into class I and class II, and further divided into as given in Table 1 according to the shapes.

Table 1

Type	Shapes			Nominal diameters															
Class I	Straight pipe			100	125	150	200	250	300	350	400	450	500	600					
	Bends			30°	100	125	150	200											
				45°	100	125	150	200											
				60°	100	125	150	200											
				90°	100	125	150	200											
	Branches			60°				200-150	250-150	300-150	350-150	400-150	450-150	500-150	600-150				
									250-200	300-200	350-200	400-200	450-200	500-200	600-200				
				90°			150-100	200-100	250-100										
							150-125	200-125	250-125										
								200-150	250-150	300-150	350-150	400-150	450-150	500-150	600-150				
									250-200	300-200	350-200	400-200	450-200	500-200	600-200				
	Sockets			60°	A *			150	200										
					B *			150	200										
				90°	A *	100	125	150	200										
					B *			150	200										
Class II	Straight pipe			50		60	75		100		125		150		180		230		300
	Deformed pipes	90° bend		50		60	75		100		125		150		180		230		300
		90° branch		50-50		60-60		75-75		100-100		125-125		150-150		180-180		230-230	

Class II	Straight pipe		50	60	75	100	125	150	180	230	300
	Deformed pipes	90° bend	50	60	75	100	125	150	180	230	300
		90° branch	50-50	60-60	75-75	100-100	125-125	150-150	180-180	230-230	300-300

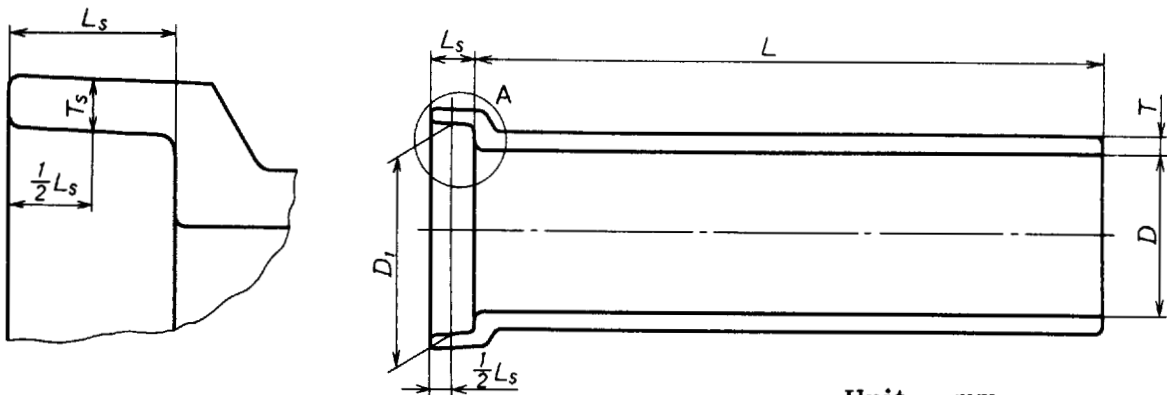
Note * Divisions of A and B shall be as given in Figs. 10 and 11.

Remarks: The numerical values on the leftside of branches indicate those for main pipes, and the numerical values on the rightside for branched pipes.

3. Shapes, dimensions, warpages and angles

The shapes, dimensions, warpages and angles shall conform to Figs. 1 to 11.

Fig. 1. Straight pipes

Enlarged diagram
of A

Unit: mm

Type	Nominal diameter	Inside diameter D	Thickness T	Inside diameter of socket D_1	Thickness of socket T_s	Depth of socket L_s	Warpage mm/m
Class I	100	100 ± 3	$16 + \frac{2}{0}$	155 ± 8	15 ± 2	50 ± 5	4 max.
	125	125 ± 4	$18 + \frac{2}{0}$	175 ± 9	17 ± 2	55 ± 5	
	150	150 ± 4	$19 + \frac{2}{0}$	215 ± 10	18 ± 2	60 ± 5	
	200	200 ± 5	$23 + \frac{2}{0}$	280 ± 13	22 ± 3	65 ± 5	
	250	250 ± 6	$26 + \frac{3}{0}$	340 ± 15	25 ± 3	70 ± 5	
	300	300 ± 7	$29 + \frac{3}{0}$	400 ± 18	28 ± 3	75 ± 5	
	350	350 ± 8	$32 + \frac{3}{0}$	460 ± 20	32 ± 4		
	400	400 ± 9	$35 + \frac{4}{0}$	520 ± 25	35 ± 4		
	450	450 ± 10	$38 + \frac{4}{0}$	585 ± 30	38 ± 4		
	500	500 ± 11	$41 + \frac{5}{0}$	650 ± 35	41 ± 5	85 ± 5	
	600	600 ± 12	$44 + \frac{6}{0}$	780 ± 40	44 ± 6		
Class II	50	50 ± 2	$9 + \frac{2}{0}$	80 ± 5	8 ± 2	30 ± 5	
	60	60 ± 3	$10 + \frac{2}{0}$	93 ± 5			
	75	75 ± 3		108 ± 5	9 ± 2		
	100	100 ± 4	$13 + \frac{2}{0}$	143 ± 8	12 ± 3	45 ± 5	
	125	125 ± 5	$14 + \frac{2}{0}$	172 ± 9	13 ± 3	50 ± 5	
	150	150 ± 5	$15 + \frac{2}{0}$	200 ± 10	14 ± 3	55 ± 5	
	180	180 ± 6	$16 + \frac{2}{0}$	236 ± 13	15 ± 3		
	230	230 ± 8	$20 + \frac{2}{0}$	298 ± 15	18 ± 3	65 ± 5	
	300	300 ± 9	$21 + \frac{2}{0}$	374 ± 18	19 ± 3	75 ± 5	

Remarks: The inside diameter of socket (D_i) and thickness of socket (T_s) shall be the dimensions at approximately $\frac{1}{2}$ the depth of socket (L_s).

The warpage shall be a ratio to effective length. The effective lengths shall be as given in Tables 2 and 3.

Table 2

Type	Nominal diameter	Effective lengths L				
		660	750	1000	1500	2000
Class I	100	○	○	-	-	-
	125, 150	○	○	○	-	-
	200	○	○	○	○	-
	250 to 600	-	-	○	○	○

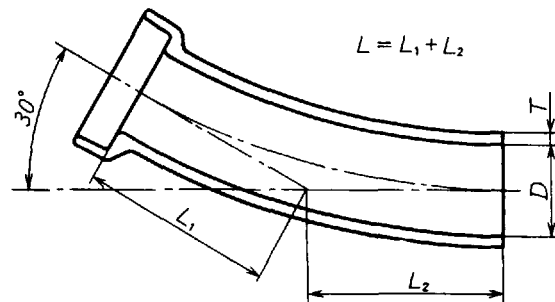
Remarks: The tolerances on the effective lengths L shall be -1 to + 2 %.

Table 3

Type	Nominal diameter	Effective lengths L	
		450	600
Class II	50 to 75	○	-
	100 to 300	-	○

Remarks: The tolerances on the effective lengths L shall be -2 to + 2 %.

Fig. 2. Class I 30° bends

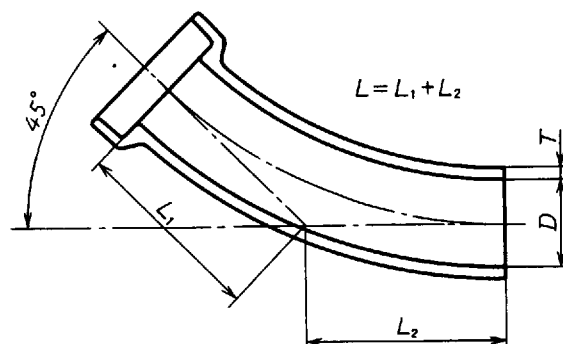


Unit: mm

Type	Nominal diameter	Inside diameter D	Thickness T	Length L	Angle
Class I	100	100 ± 3	$16 + \begin{smallmatrix} 3 \\ 0 \end{smallmatrix}$	500 ± 20	$30 \pm 5^\circ$
	125	125 ± 4	$18 + \begin{smallmatrix} 3 \\ 0 \end{smallmatrix}$		
	150	150 ± 4	$19 + \begin{smallmatrix} 3 \\ 0 \end{smallmatrix}$		
	200	200 ± 5	$23 + \begin{smallmatrix} 3 \\ 0 \end{smallmatrix}$		

Remarks: The inside diameter of socket (D_1), thickness of socket (T_s) and depth of socket (L_s) shall be the dimensions for the same nominal diameter as given in the Class I of Fig. 1 Straight pipes.

Fig. 3. Class I 45° bends



Unit: mm

Type	Nominal diameter	Inside diameter D	Thickness T	Length L	Angle
Class I	100	100 ± 3	$16 \begin{smallmatrix} + 3 \\ 0 \end{smallmatrix}$	500 ± 20	$45 \pm 5^\circ$
	125	125 ± 4	$18 \begin{smallmatrix} + 3 \\ 0 \end{smallmatrix}$		
	150	150 ± 4	$19 \begin{smallmatrix} + 3 \\ 0 \end{smallmatrix}$		
	200	200 ± 5	$23 \begin{smallmatrix} + 3 \\ 0 \end{smallmatrix}$		

Remarks: The inside diameter of socket (D_1), thickness of socket (T_s) and depth of socket (L_s) shall be the dimensions for the same nominal diameter as given in the Class I of Fig. 1 Straight pipes.