# SINGAPORE STANDARD

SS 33: 1975

(ICS 23.040.10; 23.120)

## SPECIFICATION FOR

# Cast iron spigot and socket soil, waste and ventilating pipe (Sand cast and spun) and fittings

Published by
SPRING Singapore
1 Fusionopolis Walk
#01-02 South Tower, Solaris
Singapore 138628
SPRING Singapore Website: www.spring.gov.sg
Standards Website: www.standards.org.sg



# SINGAPORE STANDARD

SS 33: 1975

(ICS 23.040.10; 23.120)

## **SPECIFICATION FOR**

# Cast iron spigot and socket soil, waste and ventilating pipe (Sand cast and spun) and fittings

All rights reserved. Unless otherwise specified, no part of this Singapore Standard may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilming, without permission in writing from SPRING Singapore at the address below:

Head Standards SPRING Singapore 1 Fusionopolis Walk #01-02 South Tower, Solaris Singapore 138628 Tel: (65) 6278 6666 Fax: (65) 6278 6667

Email: stn@spring.gov.sg

### **CONTENTS**

									P	age
Forewo	ord	-	<del>.</del>	-	-	-			-	5
			SF	ECIFIC	ATION					
1.	Scope	~• ,	-	M-	_	-	-	-	-	6
2.	Definition	าร	-	-	-	-	-	-	-	6
3.	Quality of	of Mate	rial	-	-	-	-	-	-	6
4.	Freedom	from E	Defects		-	-	~	-	-	7
5.	Dimensio	ns, Ma	sses an	d Tolera	ances	-	-	-		7
6.	Ears	-	-	-	-	-	<b></b>	-	_	7
7.	Hydrosta	tic Test	ing	_	~	-	-	-		7
8.	Finish		-	_	-	-	-	•	-	8
9.	Coating		-	-	-	-	-	•	-	8
10.	Inspectio	n	-	-	-	-	-		-	9
11.	Marking		-	-	-	-	-	-	-	9
				TABL	ES					
1.	Straight	Pipes,	Sockets	(Types	A and	B) and	Spigot	ts -	-	10
2.	Short Ra							-	-	11
3.	Large Ra	adius Be	ends	•	-	-	-	-	-	12
4.	Offsets		-		••	-	•		-	13
5.	Equal Br	anches	with or	without	Elliptic	al Acce	ess Doo	ors	-	14
6.	Unequal	Branch	es with	or with	out Ac	cess Do	oors	-	-	15
7A.	Long Be	nds	-	-	-	-	-	-	-	16
7B.	Long Bra	anches			-	-	-	-	м	16
8.	Double I Access I		ranches -	with or -	withou -	it Ellipti -	cal -	-	-	17
9.	Double !		Branch -	es with	or with	out Ell	iptical -	-		18
10.	Parallel	Branche	s, Singl	e, Equa	l and U	nequal			-	19
11.	Inverted	Branch	es (Soc	ket type	e)	-	-	-	-	20
12.	Inverted	Branch	es (Spi	got type	e)	-	-	-	-	21
13 & 13	3A. Traps		-	-	-	-	-	-	~	22
14.	Elliptical	Access	s Doors		-	-	-	-	7	23
15.	Rectang	ular Ac	cess Do	ors (fo	r Straig	jht Pipe	<del>)</del> )	-	-	24

# S.S. 33 : 1975

						I	⊃age			
16.	Diminishing Pieces -	-	-	-	-		25			
17A.	Roof Outlet (Square Grating)	-	-	-	-		26			
17B.	Roof Outlet (Circular Grating)	-	-	_	<u>.</u>	-	28			
17C.	Roof Outlet ('D' Grating)	-	-	-	-	-	27			
17D.	Bent Roof Outlet -	-	-	-	-	-	27			
18A.	Straight Inspection Pieces with	Elliptica	al Acces	s Door	-		28			
18B.	Straight Inspection Pieces with	Rectan	gular A	ccess [	)oor	-	28			
19.	Union Sockets -	-	-	-	***	~	29			
20.	Shoes	-			-	-	29			
21.	Cast Iron Holderbats -	-	LOSA.	-		-	30			
22.	Wire Balloons, Galvanized Steel or Copper									
23.	Socket to Fit WC Outlet	_	-	_	**	_	32			
24.	Short Connecting Pipe	-	w.	-	wh	-	32			
25.	'P' Branch	-	-	NAM	**	-	33			
26.	'S' Branch	-	•	-	MM .	-	33			
27.	Sanitary Bends -	-		-	-	-	34			
28.	Vent Pipe Roof Connectors	-	-	ш	-	-	34			
29A.	90 mm and 100 mm WC Connectors with Anti-syphon Socket for Caulking (50 mm branch)									
29B.	90 mm and 100 mm WC Connec Threaded (50 mm branch)	ctors wi	th Anti-	syphon -	Socket	-	35			
30.	Bossed Pipes -	**	-	-	-	-	36			
FIGURE										
1.	Right Hand Fittings -	-	-		_		6			

### SINGAPORE STANDARD

# SPECIFICATION FOR CAST IRON SPIGOT AND SOCKET SOIL, WASTE AND VENTILATING PIPES (SAND CAST AND SPUN) AND FITTINGS

### **FOREWORD**

This specification was drawn up by the Technical Committee on cast iron pipes and fittings under the authority of the Building, Construction and Metal Industry Standards Committee.

In preparing the specification, British Standard 416: 1973 'Cast iron spigot and socket soil, waste and ventilating pipes (sand cast and spun) and fittings' was used as the basis and acknowledgement is made for the use of information from the standard.

### 1 SCOPE

This Standard covers cast iron pipes, manufactured by the sand cast or spun process, with either Type 'A' or Type 'B' sockets, together with sand cast fittings. They are designed for use above ground for soil, waste and ventilating purposes in all types of buildings.

The pipes and fittings covered by the Standard are illustrated and dimensioned in Tables 1 to 30. The full range of fittings is available with Type 'A' and Type 'B' sockets.

### 2 DEFINITIONS

For the purposes of this Standard, the following definitions shall apply:

- 2.1 Right Hand Fitting. A bend or branch which is so constructed that, when it is viewed with the spigot downwards and with the access door facing the observer, the socket of the bend or the arm of the branch projects to the right (see Fig. 1).
- 2.2 Left Hand Fitting. A bend or branch which is so constructed that, when it is viewed as described in 2.1, the socket or the arm projects to the left.

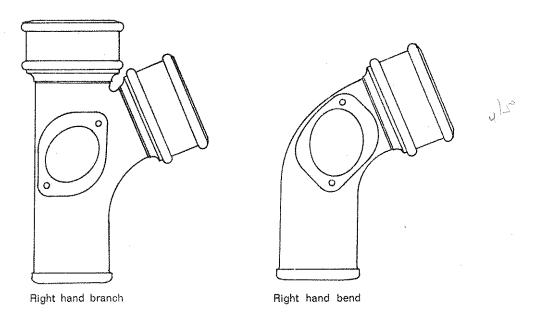


Fig. 1. Right hand fittings

### 3 QUALITY OF MATERIAL

The metal used for the manufacture of cast iron soil, waste and ventilating pipes and fittings, shall be suitable for the method of manufacture, and shall be of a quality not less than that specified in BS 1452 for Grade 10.\*

Screws, bolts and washers for access fittings shall comply with the requirements specified in Tables 14 and 15.

<sup>\*</sup> British Standard 1452 'Grey Iron Castings'.