

Fairleads

1. Scope

This Japanese Industrial Standard specifies fairleads for mooring use.

2. Classification

The fairleads shall be classified by type, material for roller and number of rollers into eight types as given in Table.

Table

Type	Form	Roller	
		Material	Number
AF	Open type	Cast iron	2
AS	Open type	Steel plate	2
BF	Closed type	Cast iron	2
BS	Closed type	Steel plate	2
CF	Open type	Cast iron	3
CS	Open type	Steel plate	3
DF	Closed type	Cast iron	3
DS	Closed type	Steel plate	3

3. Construction, Shape and Dimensions

The construction, shape and dimensions shall be as given in Figs. 1 to 4 and in Attached Tables 1, 3, 5, 7 and 9.

4. Quality

The quality of fairleads shall conform to the following requirements.

- (1) **Appearance** All surfaces shall be free from any defect such as crack, detrimental flaw or rusting, and of good finish.
- (2) **Operation** The roller of fairleads shall rotate freely.

Reference Standards:

- JIS B 0202 – Parallel Pipe Threads
 JIS B 0203 – Taper Pipe Threads
 JIS B 1180 – Hexagon Head Bolts and Hexagon Head Screws
 JIS B 1181 – Hexagon Nuts
 JIS G 3101 – Rolled Steel for General Structure
 JIS G 4051 – Carbon Steel for Machine Structural Use
 JIS G 4303 – Stainless Steel Bars
 JIS G 5501 – Grey Iron Castings
 JIS H 3250 – Copper and Copper Alloy Rods and Bars
 JIS H 5111 – Bronze Castings

5. Materials

The materials shall be as given in Attached Tables 2, 4, 6 and 8.

6. Inspection

The fairleads shall be subjected to the following items of inspection.

- (1) **Appearance Inspection** The fairlead shall be subjected to visual inspection, and shall satisfy the requirements of 4.(1).
- (2) **Operational Inspection** Rotating parts shall be subjected to operational inspection, and shall satisfy the requirements of 4.(2).

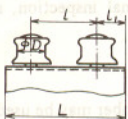
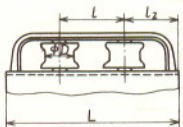
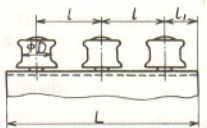
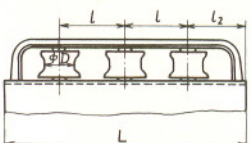
7. Designation

The fairlead shall be designated by the title, type and nominal diameter. JIS number may be used in place of the title.

Example: Fairlead AF 150 or JIS F 2014 AF 150

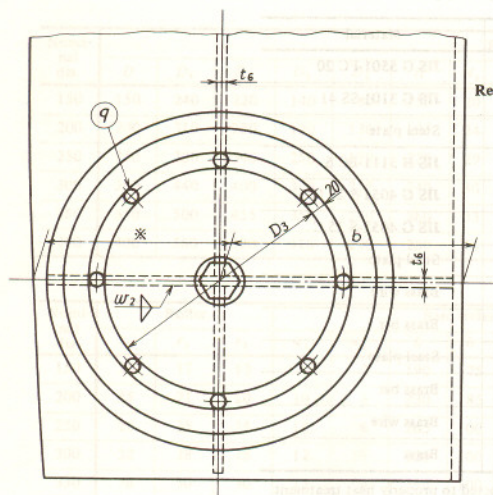
Attached Table 1. Principal Dimensions

Unit: mm

Type	Nominal dia.	D	L	l	l ₁	l ₂	Diameter of mooring line (reference)					
							Wire rope				Hemp rope	Synthetic fibre rope
							No. 2 6×12	No. 4 6×24	No. 5 6×30	No. 6 6×37		
AF and AS 	150	150	740	420	160	—	20	16	18	16	45	32
	200	200	930	530	200	—	25	20	22.4	20	55	39
	250	250	1100	640	230	—	28	24	25	22.4	65	45
	300	300	1270	750	260	—	35.5	30	31.5	28	70	49
	350	350	1440	860	290	—	—	35.5	37.5	33.5	75	53
	400	400	1610	970	320	—	—	37.5	40	37.5	85	60
	AS	450	450	1800	1080	360	—	—	—	42.5	100	70
BF and BS 	150	150	1020	420	—	300	20	16	18	16	45	32
	200	200	1190	530	—	330	25	20	22.4	20	55	39
	250	250	1430	640	—	395	28	24	25	22.4	65	45
	300	300	1610	750	—	430	35.5	30	31.5	28	70	49
	350	350	1890	860	—	515	—	35.5	37.5	33.5	75	53
	400	400	2100	970	—	565	—	37.5	40	37.5	85	60
	BS	450	450	2360	1080	—	640	—	—	42.5	100	70
CF and CS 	150	150	1160	420	160	—	20	16	18	16	45	32
	200	200	1460	530	200	—	25	20	22.4	20	55	39
	250	250	1740	640	230	—	28	24	25	22.4	65	45
	300	300	2020	750	260	—	35.5	30	31.5	28	70	49
	350	350	2300	860	290	—	—	35.5	37.5	33.5	75	53
	400	400	2580	970	320	—	—	37.5	40	37.5	85	60
	CS	450	450	2880	1080	360	—	—	—	42.5	100	70
DF and DS 	150	150	1440	420	—	300	20	16	18	16	45	32
	200	200	1720	530	—	330	25	20	22.4	20	55	39
	250	250	2070	640	—	395	28	24	25	22.4	65	45
	300	300	2360	750	—	430	35.5	30	31.5	28	70	49
	350	350	2750	860	—	515	—	35.5	37.5	33.5	75	53
	400	400	3070	970	—	565	—	37.5	40	37.5	85	60
	DS	450	450	3440	1080	—	640	—	—	42.5	100	70

Remark: Dimensions L, l, l₁ and l₂ may be modified to suit the form of hull part where the fairlead is to be fitted.

Unit: mm



- Remarks:
1. Dimensions marked with * shall be determined according to the hull side line.
The construction, shape and dimensions of the base are shown for reference only.
 2. Hexagon bolts shall conform to JIS B 1180, and hexagon nuts to Appendix of JIS B 1181-Grade 3.
 3. Pipe threads shall conform to JIS B 0202 or JIS B 0203.
 4. The cover shall be galvanized.

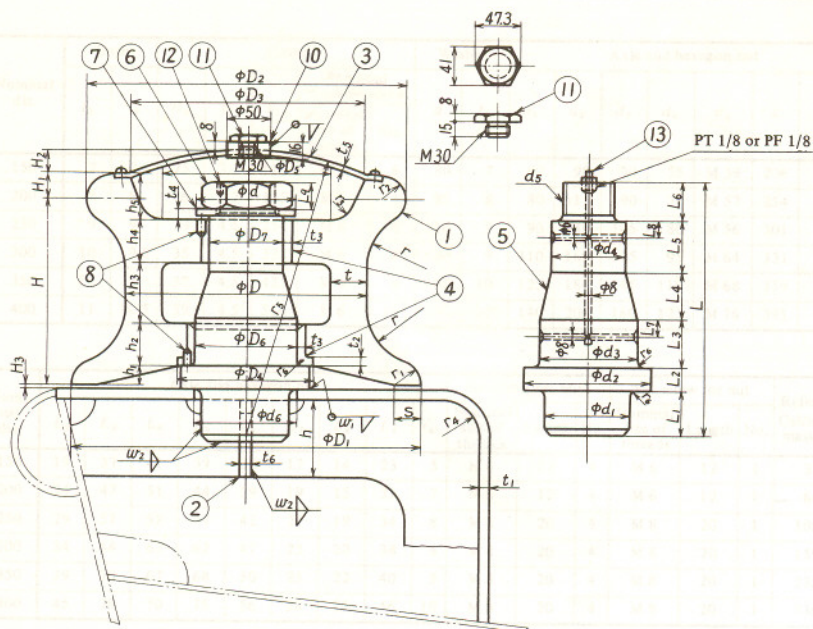


Fig. 1. Open Type, Cast Steel made

Attached Table 2. Materials for Open Type, Cast Iron made

No.	Component	Material
1	Roller	JIS G 5501-FC 20
2	Base	JIS G 3101-SS 41
3	Cover	Steel plate
4	Bush	JIS H 5111-BC 6
5	Axle	JIS G 4051-S 25 C
6	Hexagon nut	JIS G 4051-S 25 C
7	Washer	Steel plate
8	Set screw	Brass wire
9	Pan head machine screw	Brass bar
10	Boss	Steel plate
11	Plug	Brass bar
12	Set screw	Brass wire
13	Grease nipple	Brass

Remark: JIS G 4051-S25C shall be subjected to properly heat treatment.