giving a perfect swing joint when connected to the vertical riser or radiator connection, whereas the preferred connection does not give this swing without distorting the angle of the pipe. Runouts are usually made about 5 ft long to provide flexibility for movement in the main.

Offsets in steam and return piping should preferably be made with 90-deg ells, but occasionally fittings of other angles are used, and in such cases the length of the diagonal offset will be found as shown in Fig. 38.

Dirt pockets, desirable on all systems employing thermostatic traps, should be so located as to protect the traps from scale and sludge which

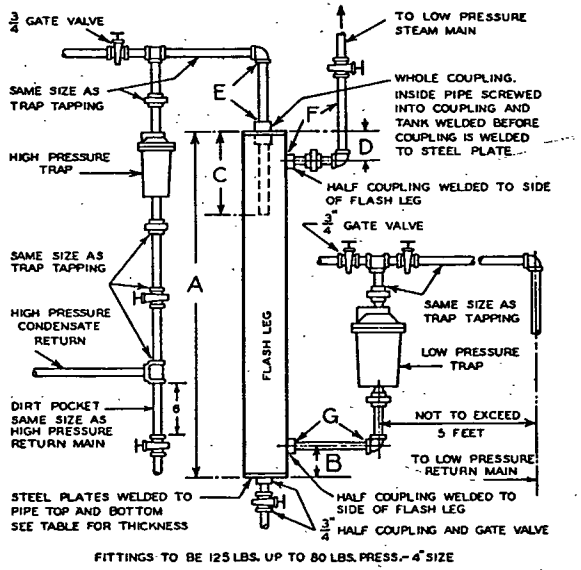


FIG. 43. FLASH LEG INSTALLATION FOR 80 PSI MAXIMUM STEAM WORKING PRESSURE

TABLE 13. DIMENSIONS APPLYING TO FIG. 43

CONDENSATE PER HR., LB AT 70 PSI	TRAPS						FLASH LEG, IPS	A FT.	B IN.	C IN.	D IN.	E IN.	F IN.	G IN.	PLATE THICKNESS, IN.
	HP SIDE			LP SIDE											
	Pipe Size	Orifice	Pres. Range; PSI	Pipe Size	Orifice	Pres. Range, PSI									
200	¾	1/8	21–80	¾	3/16	0–20	4	3	6	8	3	¾	1¼	¾	
300	¾	5/32	31–70	¾	5/16	0–15	4	3	6	8	3	¾	1¼	¾	
700	¾	7/16	31–70	¾		0–15	4	3	6	8	3	¾	1¼	¾	
1500	¾	5/32	61–80	1		0–15	5	4	6	10	4	¾	1½	1	
2500	1	5/32	61–80	1¼		0–15	8	5	6	10	4	1	2	1¼	
4000	1¼	1/2	61–80	2	1 1/16	0–15	10	6	6	12	5	1¼	2½	1½	
8000	2	9/16	61–80	2½	1 1/16	0–15	12	6	6	12	5	2	3	2	
15000	2½	9/16	61–80	2½	1 1/16	0–15	16	6	8	14	6	3	3	3	

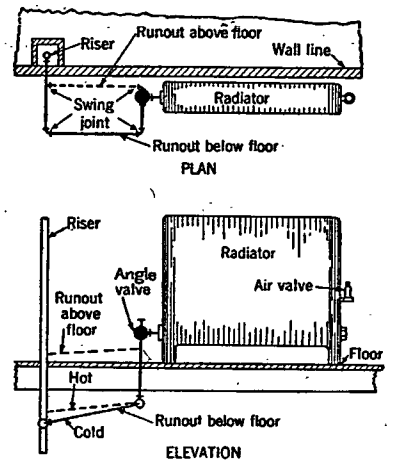


FIG. 44. ONE-PIPE RADIATOR CONNECTIONS

will interfere with their operation. Dirt pockets are usually made 8 in. to 12 in. deep, and serve as receivers for foreign matter which otherwise would be carried into the trap. They are constructed as shown in Fig. 39.

On vapor systems where the end of the steam main is dripped down into the wet-return, the air venting at the end of the main is accomplished by an air vent passing through a thermostatic trap into the dry-return line as shown in Fig. 40. On low pressure or vacuum systems, the ends of the steam mains are dripped and vented into the return through drip traps opening into the return line. A float and thermostatic type trap is recommended for dripping steam mains and risers as indicated in Figs. 41 and 42.

The dripping of high pressure mains, or of equipment using high pressure steam into low pressure or vacuum returns, is generally accomplished by the use of a flash tank or flash leg into which the high pressure trap is arranged to discharge. This tank provides the required space for the flashing from high temperature condensate to low pressure steam to take place. The low pressure steam therein generated is passed directly to the low pressure steam mains, and the condensate is discharged through a second trap to the

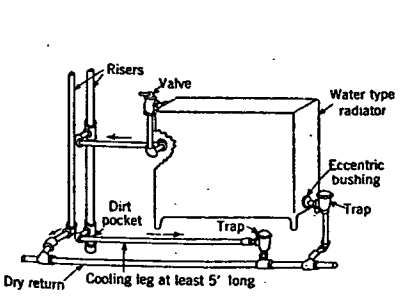


FIG. 45. TWO-PIPE TOP AND BOTTOM OPPOSITE END RADIATOR CONNECTIONS

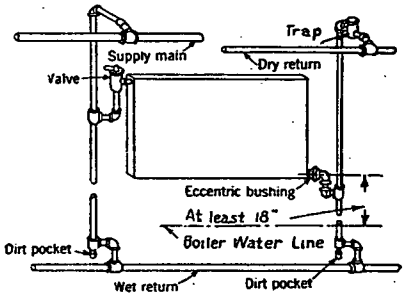


FIG. 46. TWO-PIPE CONNECTIONS TO RADIATOR HUNG ON WALL