Table 1. Standard Wrought Pipe

Table of Standard Dimensions

Size Inches	Diameters		Nominal Thickness Inches	Circumference		Transverse Areas			Length of Pipe per Square Foot of		Nominal Weight per Foot	
	External Inches	Approximate Internal Inches		External Inches	Internal Inches	External Sq. In.	Internal Sq. In.	Metal Sq. In.	External Surface	Internal Surface	Plain Ends	Threaded and Coupled
⅛	0.405	0.269	0.068	1.272	0.845	0.129	0.057	0.072	9.431	14.199	0.244	0.245
¼	0.540	0.364	0.088	1.696	1.144	0.229	0.104	0.125	7.073	10.493	0.424	0.425
⅜	0.675	0.493	0.091	2.121	1.549	0.358	0.191	0.167	5.658	7.747	0.567	0.568
½	0.840	0.622	0.109	2.639	1.954	0.554	0.304	0.250	4.547	6.141	0.850	0.852
¾	1.050	0.824	0.113	3.299	2.589	0.866	0.533	0.333	3.637	4.635	1.130	1.134
1	1.315	1.049	0.133	4.131	3.296	1.358	0.864	0.494	2.904	3.641	1.678	1.684
1¼	1.660	1.380	0.140	5.215	4.335	2.164	1.495	0.669	2.301	2.767	2.272	2.281
1½	1.900	1.610	0.145	5.969	5.058	2.835	2.036	0.799	2.010	2.372	2.717	2.731
2	2.375	2.067	0.154	7.461	6.494	4.430	3.355	1.075	1.608	1.847	3.652	3.678
2½	2.875	2.469	0.203	9.032	7.757	6.492	4.788	1.704	1.328	1.547	5.793	5.819
3	3.500	3.068	0.216	10.996	9.638	9.621	7.393	2.228	1.091	1.245	7.575	7.616
3½	4.000	3.548	0.226	12.566	11.146	12.566	9.886	2.680	0.954	1.076	9.109	9.202
4	4.500	4.026	0.237	14.137	12.648	15.904	12.730	3.174	0.848	0.948	10.790	10.889
4½	5.000	4.506	0.247	15.708	14.156	19.635	15.947	3.688	0.763	0.847	12.538	12.642
5	5.563	5.047	0.258	17.477	15.856	24.306	20.006	4.300	0.686	0.756	14.617	14.810
6	6.625	6.065	0.280	20.813	19.054	34.472	28.891	5.581	0.576	0.629	18.974	19.185
7	7.625	7.023	0.301	23.955	22.063	45.664	38.738	6.926	0.500	0.543	23.544	23.769
8	8.625	8.071	0.277	27.096	25.356	58.426	51.161	7.265	0.442	0.473	24.696	25.000
8	8.625	7.981	0.322	27.096	25.073	58.426	50.027	8.399	0.442	0.478	28.554	28.809
9	9.625	8.941	0.342	30.238	28.089	72.760	62.786	9.974	0.396	0.427	33.907	34.188
10	10.750	10.192	0.279	33.772	32.019	90.763	81.585	9.178	0.355	0.374	31.201	32.000
10	10.750	10.136	0.307	33.772	31.843	90.763	80.691	10.072	0.355	0.376	34.240	35.000
10	10.750	10.020	0.365	33.772	31.479	90.763	78.855	11.908	0.355	0.381	40.483	41.132
11	11.750	11.000	0.375	36.914	34.558	108.434	95.033	13.401	0.325	0.347	45.557	46.247
12	12.750	12.090	0.330	40.055	37.982	127.676	114.800	12.876	0.299	0.315	43.773	45.000
12	12.750	12.000	0.375	40.055	37.699	127.676	113.097	14.579	0.299	0.318	49.562	50.706

or uniform the pipe may be, its life, particularly under severe corrosion conditions; such as, hot-water supply lines, boiler feed and return lines, is limited, and some protective measures are necessary to secure a longer life.

The electrolytic theory of corrosion, as formulated in 1903 by Dr. Whitney, led to the development of certain protective methods for closed

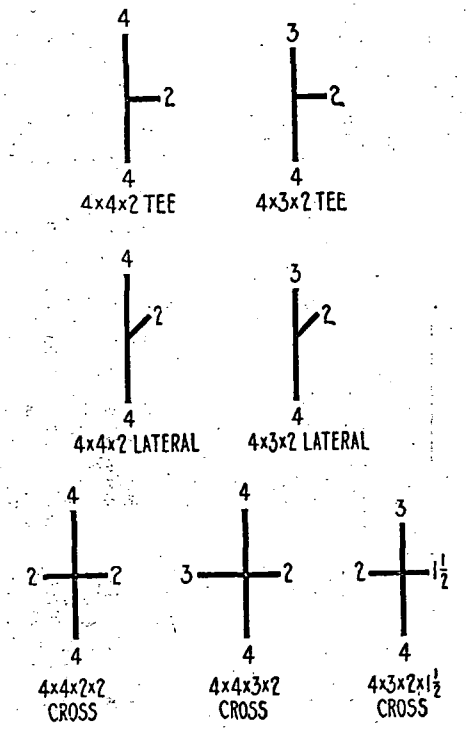

Fig. 1. Usual Method of Designating Fittings

water systems, which are based on the removal of dissolved oxygen from the water. Careful experiments in various research laboratories have demonstrated that the amount of corrosion found in such systems is almost directly proportional to the amount of oxygen in solution, and varies with the temperature.

All reliable data on this subject indicate that the composition of the iron—*i.e.*, the varying amount of carbon, phosphorous, manganese, sulphur, silicon, oxides, slag and copper usually found in wrought iron and soft steel—makes very little difference in the amount or character of