

TORONTO WATER WORKS.

SPECIFICATION FOR CAST IRON WATER PIPES.

1. Quantity.

The maximum quantity of Pipes required will be about 7,500 tons, and the minimum about 3,600 tons.

In the following Schedule is given the maximum and minimum number of Pipes, the class to which they belong, their diameter, thickness, standard weight, permitted deviation, greatest proposed head, the pressure to which they are to be proved, and the approximate weight of the maximum and minimum quantity that the Commissioners may accept:

Maximum number of Pipes	Minimum number of Pipes	Class	Nominal diameter in inches	Length in feet	Thickness in inches	Standard weight in pounds	Permitted deviation	Greatest proposed head, in feet	Pressure to which the Pipes are to be proved	Weight of maximum order in tons	Weight of minimum order in tons
102	192	A	30"	12'	1 1/8"	4,075	100 lbs.	150'	300 lbs.	338	338
360	360	B	30"	12'	1 1/4"	4,309	108 lbs.	180'	300 lbs.	693	693
100	100	C	30"	12'	1 1/2"	4,544	112 lbs.	215'	300 lbs.	203	203
225	225	B	24"	12'	1"	3,174	80 lbs.	180'	300 lbs.	319	319
5,005	2,280		12"	12'	3/4"	1,012	30 lbs.	180'	300 lbs.	2,261	1,030
29,888	8,175		6"	9'	3/4"	274	8 lbs.	180'	300 lbs.	3,656	1,000

2. Shape

The pipes are to be made to conform accurately to the drawings to be furnished by the Engineer, the thickness of the body of the pipe being such as to give the proper weights. All pipes above six inches in diameter to be twelve feet long, exclusive of flange. The specified diameters are nominal, but no casting of any class, shall have less interior diameter than the specified nominal diameter, and the interior diameter shall approximate as closely to the nominal diameter as is consistent with other requirements herein specified.

The exterior diameters of all classes or thicknesses of pipes shall be the same for each specified nominal diameter, the variation in thickness of metal being made by changes in the interior diameter.

3. Deviation in Weights.

No greater deviation in weights than that in the table will be admitted; any excess above this in any pipe will not be paid for, and any pipe falling short will be rejected. The gross weight of pipes of each size is not to exceed that due to the specified mean weight by over two per cent.

4. Metal.

The metal is to be remelted grey pig iron, of the best quality, of approved mixture, and of such a character as to make strong, tough castings, not too soft nor so hard but that it will satisfactorily bear drilling and cutting or chipping, and at each casting a specimen bar is to be cast, three and a half feet long, two inches deep, and one inch thick, which is to be placed on supports three feet apart, and bear a weight of three thousand two hundred pounds in the centre, without breaking. This test is to be made by the Contractor in presence of the Commissioners' Engineer or any one appointed by him for this purpose.

The thickness of the metal of the castings will be tested by calipers after they have been freed from sand, and thoroughly cleaned, and no pipe will under any circumstances be received when the thickness of metal is in any part less by more than one-sixteenth of an inch, than the thickness required by the Plans and Specifications.