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Asbestos Cement Pressure Pipes and Low Pressure Pipes (1951).

(The whole book (29MB) can be viewed at <http://ibasecretariat.org/italit-asb-cem-pres-pipe-and-low-pres-pipe-1951.pdf>)

TECHNICAL REPORT ON "ITALIT" PIPES

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AS long ago as 1925 a report on "ITALIT" pipes was made by this well known firm of consulting engineers, concluding with the following brief summary :—

1 Our partner, Mr. H. F. J. Gourley, arrived in Italy on 13th December last. The object of his visit was to report impartially on the asbestos-cement pipes as manufactured at Casale Monferrato under the trade name "ETERNIT" for Italian supplies and "ITALIT" for foreign supplies. He saw the process of manufacture, carried out a number of tests and inspections, and discussed the usefulness and application of asbestos-cement pipes with a number of well-known Italian engineers who had had experience in the laying of such pipes.

2 We found that already there was a very considerable and growing demand for Asbestos-Cement Pipes for Water, Gas and Sanitary Engineering, and that considerable savings followed their use, in the place of other materials. We might mention that in 1923 the supply was 35 miles of various sizes; in 1924, 47 miles; and in 1925, 87 miles.

3 We inspected the process of manufacture and the resulting product is a tough straight pipe with a glossy regular and truly circular interior, which permanently retains these characteristics.

4 The pipes are not liable to deterioration, in ground which would cause trouble with metal pipes, nor are they likely to suffer loss of carrying capacity. They are also immune from the effects of stray electric currents.

5 They offer a smaller resistance to the flow of water than new coated cast iron pipes laid under the best conditions.

6 They are easily tapped for small connections, and offer less difficulty than metal for larger connections.

7 They are lighter, more easily laid, and more readily jointed than cast iron.

8 They call for cast iron adaptors at valves and for specially thickened spigots on bends owing to their greater thickness than cast iron, but, owing to the flexible joints which may be used with them and the readiness with which they may be cut, the number of bends is not as large as would be required with a cast iron main.

9 Given good pipe laying, the pipes are amply strong enough for any loading to which they may ordinarily be subjected and are capable of successfully withstanding a considerable amount of rough usage.

10 We consider that for working pressures up to 300 ft. of water and for diameters up to about 15 ins., mains of asbestos-cement are 45 to 25 per cent. less costly, laid completely, than if cast iron were used, provided that the mains compared have the same ultimate carrying capacity.

These savings are exclusive of the cost of trench excavation and refilling, which is common to both. For smaller working pressures, asbestos-cement pipes above 15 ins. in diameter can compete successfully with cast iron pipes.

11 Asbestos-cement pipes are also suitable and economical for use as gas mains, sewers and drains, oil pipe lines and cable ducts.