
A Brief Description of the Development and Usage of Wooden Stave Pipe

Although the first use of wooden pipe of the present day type is of comparatively recent date, bored logs were extensively used by our forefathers for carrying water under pressure. These log pipes, however, were made in small sizes, not exceeding four and five inches in diameter.

Soon the increased demands of civilization called for larger conduits, and longer pipe lines to reach up into the mountains to the source of greater, purer supply.

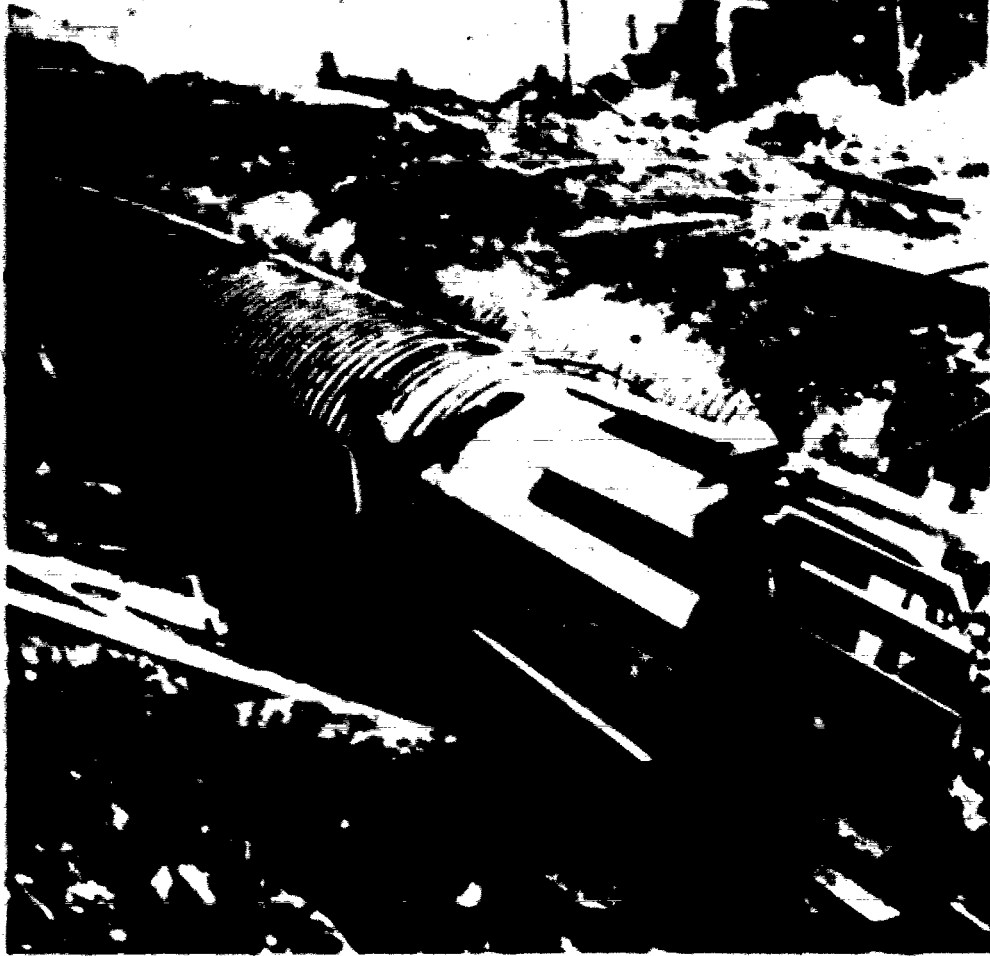
Necessity, therefore, developed the type of wooden pipe now being built, known as "continuous stave pipe," which is widely used in irrigation, penstocks for hydro-electric developments and municipal water supply, and is built in sizes from ten inches to ten feet, and more, in diameter.

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This pipe is made up of a sufficient number of staves to complete the circle of desired diameter, each stave being "saw-kerfed" at the ends. In these saw-kerfs, or slots, are seated metallic tongues, which, when the staves are "driven back," form a tight butt joint. The seam joints between staves are made tight by banding the pipe with round steel rods, varying in size from three-eighths to one inch in diameter, depending on the size of the pipe. Each rod is made a complete band by means of a malleable iron shoe, or lug, engaging the headed and threaded ends, nut and washer of the rod.

So the present type of wooden pipe differs materially from its bored log ancestor by being banded by these steel rods.

When asked as to the life of a "continuous stave pipe," some wooden pipe manufacturers cite the finding of the old bored logs in London, New York, and many other places, where they have been "dug up," after perhaps a century in the ground, and the wood found to be in an almost perfect state of preservation. This, of course, is not a fair comparison, as the bored log presented no steel to corrode or rust away.



WOODEN STAVE PIPE LINE IN PROCESS OF CONSTRUCTION

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In considering the life of continuous stave pipe, let us first discuss the stave or wooden portion:

So many structures have existed for years, depending for their stability on wooden piles or grillage placed below "low water mark" that it is accepted as a truth, "wood kept saturated with water will not rot." Therefore, under ordinary conditions, the life of continuous stave pipe, when kept constantly full, its staves saturated, becomes the life of the steel bands encircling it. The life of the steel bands can be greatly prolonged if the metal is covered with some protective coating. It is, therefore, of the utmost importance that this coating, to prevent corrosion, should be selected and applied in as careful a manner as economically possible.

The writer's experience in wooden pipe construction covers a period of some eight years, and during this time effort has continually been made to find the most effective protective coating for the metal portions of wooden pipe, such coating to be tough, durable, to resist chipping or scaling off, and at the same time to be economical.

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During the last six years, on the construction of a number of wooden pipe lines under the supervision of the undersigned, "*PIONEER*" Mineral Rubber Pipe Coating has been very successfully used as a hot dip for coating the bands, and "*PIONEER*" Field Paint as a cold application for retouching spots that become abraded during construction; both these materials being manufactured by *The American Asphaltum & Rubber Co.*, of Chicago.

Based on experience and use, the writer is unhesitating in his praise of "*PIONEER*" Mineral Rubber Pipe Coating and "*PIONEER*" Field Paint, as fulfilling effectively the rigid requirements of a protective coating on the metal portion of wooden pipe.

(Signed) SHIRLEY BAKER, Am. So. C. E.

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*"Pioneer" Mineral Rubber Pipe Coating Manufactured Exclusively by
The American Asphaltum & Rubber Co., 600-614 Harvester Building, Chicago*

Canadian Offices: The Canadian Mineral Rubber Co., Ltd., 1 Toronto St., Toronto, Ont.