

CONCRETE PIPE FOR THE NEW MILLENNIUM

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EDITORS

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Concrete Pipe for the New Millennium

Iraj I. Kaspar and Jeffrey I. Enyart, editors

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Foreword

This publication, *Concrete Pipe for the New Millennium*, contains papers presented at the symposium of the same name held in Seattle, Washington, on 19–20 May 1999. The symposium was sponsored by ASTM Committee C13 on Concrete Pipe. The symposium co-chairmen were Iraj I. Kaspar, Consultant, and Jeffrey I. Enyart, ISG Resources, Incorporated.

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Overview

As we reach the end of this century and the start of a new millenium we need to look at where concrete pipe has come, and also where it is going in the new millenium. While concrete pipe was in use prior to the start of the 20th century, the industry has made tremendous advancements in the last hundred years. High speed, efficient, automated plants have been developed revolutionizing manufacturing. First Dr. Anson Marston and Dr. Merlin Spangler at Iowa State University, and then more recently Dr. Frank Heger of Simpson, Gumpertz and Heger, have made tremendous advances in the technical understanding and design procedures for the internal and external performance of concrete pipe. Even with all these advances there are still many opportunities for increased understanding and improved performance for concrete pipe in the new millenium.

This Special Technical Publication has been published as a result of the May, 1999 Symposium on Concrete Pipe for the New Millenium, held in Seattle, Washington and sponsored by ASTM Committee C13 on Concrete Pipe. The objectives of this Symposium were to present historical information on the evolution of specifications and manufacturing technology for concrete pipe; to discuss innovative applications and uses; to introduce new technologies for concrete pipe products; and to both discuss and determine the use of and need for new ASTM standards for these products. This publication presents design application methods using the newly developed Standard Installation Direct Design (SIDD) methods as applied to low-head pressure pipe along with the results of installation testing and performance to verify the SIDD performance assumptions. In addition to a review of the impact of proposed load resistance factor design (LRFD) methods, developments of new technology, particularly in materials performance, is included.

Engineers will find the presentation of new design methods, and the reporting of field performance to verify these design methods, useful in advancing their understanding of current design and performance. While the information and performance opportunities using material advancements will require additional applications and performance studies, they provide an insight into the potential available with new materials. This publication just touches on some of the improved materials available now, the new millenium will bring other new innovations that will further revolutionize concrete pipe.

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