

Inspecting Pipeline Installation

ASCE Manuals and Reports
on Engineering Practice
No. 117

ASCE

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Inspecting Pipeline Installation

Prepared by
the Pipeline Division of
the American Society of Civil Engineers

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ASCE American Society of Civil Engineers

Library of Congress Cataloging-in-Publication Data

Inspecting pipeline installation / prepared by the Pipeline Division of the American Society of Civil Engineers; edited by T.J. Hovland and Mohammad Najafi.
p. cm.—(ASCE manuals and reports on engineering practice; no. 117)
Includes bibliographical references and index.
ISBN 978-0-7844-1054-7 (alk. paper)
1. Pipelines—Design and construction. 2. Underground construction. I. Hovland, T. J. II. Najafi, Mohammad. III. American Society of Civil Engineers. Pipeline Division.
TA660.P55I544 2009
621.8'672—dc22

2009024838

Published by American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, Virginia 20191

www.pubs.asce.org

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ISBN 13: 978-0-7844-1054-7
Manufactured in the United States of America.

16 15 14 13 12 11 10 09 1 2 3 4 5

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116	Navigation Engineering Practice and Ethical Standards
117	Inspecting Pipeline Installation

PREFACE

This manual describes successful construction methods and procedures for installing the common types of pipes used to transport water-like fluids. Because this manual focuses on the needs of field personnel, constructors, and inspectors, it assumes the pipeline design is complete, decisions on alternatives are resolved, and the designer's concepts are now ready for conversion into a real project.

This manual has two main purposes: first, it provides an educational tool for readers with limited field experience, and second, it consolidates practical pipeline installation information into one volume.

Many recommendations are made about pipeline earthwork, and descriptions of the proper installation practices for ten different types of common pipes are provided, including steel, corrugated steel, ductile iron, prestressed concrete, reinforced concrete, bar-wrapped concrete, vitrified clay, polyvinyl chloride, high-density polyethylene, and fiberglass-reinforced pipes.

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CHAPTER 1
INTRODUCTION

Pipeline construction is complex and demanding, and requires the services of skilled contractors and craftsmen. Construction quality control and assurance are strict job requirements. The design engineer's drawings and specifications usually describe the quality and final results the owner expects. The constructor must then select the construction procedures to complete the work as envisioned by the project designer. The best results are obtained when good interpersonal relationships exist between all parties.

This manual provides help for those readers with limited technical backgrounds or those without specific working knowledge of a variety of pipe materials, although the level of detail should satisfy those who have wider work experiences. Nontechnical personnel needing basic information regarding the pipeline installation process will also find this manual useful.

Technical literature on fluid transportation often focuses on the design phase of project development. In contrast, journal articles or conference papers contain better references to field work. Brochures from pipe manufacturers are a significant source of basic facts about this work. However, distribution is limited for all these, which can be frustrating for less experienced technical personnel or the casual reader. Combining pipeline data from multiple sources of information into one book should be one of the main benefits to readers of this manual.

Discussion of oil and gas pipelines is not included here because federal mandates and regulations standardize such work. This manual does not discuss no-dig or underwater construction because of site complexities and still-evolving technology in those fields.