

<<油气管道设计与建设>>

图书基本信息

书名：<<油气管道设计与建设>>

13位ISBN编号：9787563629503

10位ISBN编号：7563629505

出版时间：2010-8

出版时间：康勇 中国石油大学出版社 (2010-08出版)

作者：康勇

页数：321

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<油气管道设计与建设>>

内容概要

《石油高等教育“十一五”规划教材：油气管道设计与建设》主要介绍石油天然气管道的国内外发展概况、管道的土工施工技术、管道的主要工艺设计、管道的机械设计、海洋油气管道设计与施工、管道在各种环境中的施工方法、管道的穿跨越工程、管道的运行管理等内容。

书中融入了目前国内外油气管道工程的新技术与新方法，可为油气储运、过程装备、地面工程建设及海洋工程等相关专业的管道设计、施工和运行管理提供理论知识及实用技术。

书后附有中英文词汇对照表，便于读者查阅。

《石油高等教育“十一五”规划教材：油气管道设计与建设》可作为高等学校研究生及本科生的双语专业课教材，也可作为相关专业技术人员或出国人员的专业英语培训资料，特别适用于既需提高专业英语水平又需掌握专业技术的管道工程技术人员学习参考。

书籍目录

Chapter 1 PIPELINE INTRODUCTION 1.1 PIPELINE DEVELOPMENT 1.1.1 International Pipeline Development 1.1.2 Development of China pipeline Industry 1.1.3 Considerations of Pipeline Transportation 1.2 PIPELINE SYSTEM 1.2.1 Types of Pipelines 1.2.2 Pipeline Network 1.2.3 Gas Pipeline Network in the City

Chapter 2 PIPELINE GEOTECHNICS DESIGN 2.1 ELEMENTS INFLUENCING PIPELINE DESIGN 2.1.1 Codes and Standards 2.1.2 The General Procedures of Pipeline Design 2.1.3 Supply, Demand and Route Selection 2.1.4 Environmental Considerations 2.1.5 Effect of Hydraulic Fluid's 2.1.6 Economics 2.1.7 Material and Construction 2.1.8 Pipeline Protection 2.2 ROUTE SDRVERY AND GEOTECHNICAL DESIGN 2.2.1 Preliminary Route Selection 2.2.2 Engineering Survey 2.2.3 Legal Survey 2.2.4 Construction/As Built Survey 2.3 GEOTECHNOLOGY OF PIPELINE CONSTRUCTION 2.3.1 Guidelines of Pipeline Route Selection 2.3.2 Slope Stability Control 2.3.3 Drainage and Erosion Control 2.4 ANCHORING AND SUPPORT 2.4.1 No Anchor Supporting 2.4.2 Anchor Supporting 2.5 PIPELINE ENGINEERING SURVEY 2.5.1 Surveying Equipment 2.5.2 Pipeline Layout Survey 2.6 PIPELINE CONSTRUCTION IN FROZEN AREAS 2.6.1 The Pipeline Design Issues 2.6.2 Pipeline Construction Technology

Chapter 3 PIPELINE MECHANICAL DESIGN 3.1 THEORIES OF STRENGTH 3.1.1 Normal Stress 3.1.2 Component of Shear Stress 3.1.3 Principal Stresses 3.1.4 Allowable Stress 3.1.5 Theories of Failure 3.2 MEMBRANE STRESSES IN VESSELS UNDER INTERNAL PRESSURE 3.2.1 Analysis of Membrane Stresses 3.2.2 Cylindrical Vessel under Internal Pressure 3.3 PROCEDURES OF PIPELINE DESIGN 3.3.1 Considerations of Pipeline Design 3.3.2 Method of Calculation 3.4 VALVE ASSEMBLIES 3.4.1 Block Valves 3.4.2 Compressor Station Tie-ins 3.4.3 Valve Operators 3.4.4 Blowdowns 3.4.5 Vent Operators 3.5 MATERIALS SELECTION 3.5.1 Material and Specification Requirements 3.5.2 Fracture Control Design 3.5.3 Strength Requirements 3.5.4 Chemical Composition 3.5.5 Dimensional Tolerances 3.6 QUALITY MANAGEMENT 3.6.1 Quality and Requirement 3.6.2 A Quality Project

Chapter 4 TRANSMISSION PROCESSES DESIGN 4.1 GENERAL DESIGN PARAMETERS 4.1.1 Forecasting Throughput 4.1.2 Basic Parameters 4.1.3 Physical Characteristics of Mediums 4.1.4 Developing Design Alternatives 4.1.5 Natural Gas Hydraulics 4.2 PRINCIPLES OF FLOW 4.2.1 Ideal Gas Law 4.2.2 Real Gas Law 4.2.3 The Law of Conservation , 4.2.4 Heat Transmission 4.2.5 Friction Factor and Flow Regimes 4.3 GENERAL FLOW EQUATIONS 4.3.1 Darcy's Formula 4.3.2 Flow of Gas in Pipe Lines 4.3.3 Othe'r Flow Equations 4.3.4 Compressor Calculations 4.4 ECONOMIC CONSIDERATIONS 4.4.1 The Optimization Process 4.4.2 Detailed Cost of Service Analysis 4.4.3 J-curve Example

Chapter 5 PIPELINE CONSTRUCTION 5.1 GENERAL CONSTRUCTION PROCESSES 5.1.1 Clearing the Right-of-way 5.1.2 Right-of-way Grading 5.1.3 Ditching and Trenching 5.1.4 Pipe-settled Ditching 5.1.5 Pipe Hauling and Stringing 5.1.6 Pipe Bending 5.1.7 Welding 5.1.8 Pipeline Inspection 5.1.9 Non-destructive Testing 5.1.10 Pipe Painting and Coating 5.1.11 As-built burvey 5.1.12 Lower-in 5.1.13 Backfill 5.1.14 Tie-ins 5.1.15 Ci'osgings 5.1.16 Fabrication 5.1.17 Cathodic Protection 5.1.18 Erosion Control and Revegetation 5.1.19 Cleanup and Restoration 5.2 HYDROSTATIC TESTING 5.2.1 The Considerations of Tested Sections 5.2.2 Internal Cleaning and Ingpection 5.3 COMMISSIONING 5.3.1 Natural Gas Pipelines 5.3.2 Liquid Petroleum Gas Pipelines

Chapter 6 CROSSING AND OFFSHORE PIPELINE CONSTRUCTION 6.1 INTRODUCTION 6.1.1 Buoyant Control of Crossing 6.1.2 Buoyancy Control Systems Design 6.2 OPENING RIVER CROSSING 6.2.1 Construction Plan 6.2.2 Construction Technical Measurements 6.2.3 HSEManagement System 6.2.4 Main Materials and Machines for River Crossing 6.3 CROSSING BY DRILLING 6.3.1 Processes of Drilling 6.3.2 Roads and Railroads Crossing Design 6.4 PIPE DRIVING CROSSING CONSTRUCTION 6.4.1 Shield Construction 6.4.2 Pipe Driving Crossing C6nstrudtion 6.5 OFFSHORE PIPELINE CONSTRUCTION 6.5.1 Introduction to Offshore Pipeline Construction 6.5.2 Reference Documents 6.5.3 Offshore Pipeline Design 6.5.4 Methods of the Pipelay 6.6 PIPELINE OVERHEAD CROSSING 6.6.1 Overhead Crossing Design 6.6.2 Introduction to Overhead Crossing 6.6.3 Future Development of Pipe Overhead Crossing

Chapter 7 PIPELINE ENGINEERING MANAGEMENT 7.1 PIPE MANUFACTURING PROCESS 7.1.1 Types of Pipe Welding 7.1.2 Pipeline Perspectives for the Future 7.1.3 Technological Process of Pipe Manufacturing 7.2 IMPROVED COATINGS 7.2.1

Coating Properties for Operation 7.2.2 Internal and External Pipe Painting System 7.2.3 Coating Materials Choice
7.3 CATHODIC PROTECTION 7.3.1 Methods to Apply Cathodic Protection 7.3.2 Cathodic Protection Design
7.4 PIPELINE PIGGINGS 7.4.1 Explanation of Pigging 7.4.2 Codes and Standards 7.4.3 Major Components of
Pigging Assembly 7.4.4 Pig Barrel and End Closure 7.4.5 Pig Barrel Valves 7.4.6 General Procedures for Pig Launch
and Receive 7.5 PIPELINE LEAKS FINDING AND REPAIRING 7.5.1 Leak Condition and Calculation 7.5.2
Repairing Damaged Pipelines 7.5.3 Non-stop Service Hot-tapping and Plugging on Pipe 7.6 OHSE OPERATION
GUIDE 7.6.1 QHSE Management Functions 7.6.2 Capacity Evaluation 7.6.3 Training 7.6.4 Equipments
Evaluation and Information Exchange 7.6.5 Documents and Controls 7.6.6 QHSE Risks Identification and
Evaluation 7.7 SCADA SYSTEM 7.7.1 A Brief SCADA Review 7.7.2 SCADA Elements 7.7.3 Secured SCADA
System ENGLISH-CHINESE GLOSSARY REFERENCES

<<油气管道设计与建设>>

编辑推荐

康勇编写的《油气管道设计与建设》是“石油高等教育十一五规划教材”之一，可作为高等学校研究生及本科生的双语专业课教材，书中主要介绍石油天然气管道的国内外发展概况、管道的土工施工技术、管道的主要工艺设计、管道的机械设计等内容，可为油气储运、过程装备、地面工程建设及海洋工程等相关专业的管道设计、施工和运行管理提供理论知识及实用技术。

<<油气管道设计与建设>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>