CONTENTS

INTRODUCTION	8
SECTION A CLASSIFICATION AND NOMENCLATURE	
CHAPTER A-1, CALSSIFICATION OF FLUID METERS	11
Division 1, Quantity Meters	11
Division 2, Rate Meters	12
CHAPTER A-2, UNITS, REFERENCE CONDITIONS AND LETTER	
SYMBOLS USED IN FLUID METERING	14
CHAPTER A-3, SPECIAL TERMS	18
SECTION B THE THEORY AND FUNDAMENTALS OF FLUID METERS	
CHAPTER B-1, QUANTITY METERS	34
Division 1, Weighing Meters	34
Division 2, Positive Displacement Meters (Volumeters)	36
CHAPTER B-2, RATE METERS, HEAD CLASS	43
Division 1, Description of Primary Devices	43
Division 2, Theory of Flow of a Fluid in Terms of Head	58
Division 3, Theoretical Equations for Head Meters	61
Division 4, Discharge Coefficients and Working Equations	
for Computing the Actual Rate of Flow	64
Division 5, Analytical Concepts, Physical Characteristics of	
Fluid the Value of, and Should Be Considered in	
Correlating Discharge Coefficients	66
Division 6, Correlation of Discharge Coefficients	69
Division 7, Critical Flow Nozzles and Orifices	81
Division 8, Theoretical Equation for the Pitot Tube	83
Division 9, Equations for Centrifugal Meters	84
Division 10, Equations for Linear Resistance Flow Meters	85
CHAPTER B-3, AREA METERS	86
Division 1, General Principles	86
Division 2, Description of Types	87
CHAPTER B-4, HEAD-AREA METERS	88
Division 1, Weirs	88
Division 2, Flumes	93
CHAPTER B-5, FORCE AND VELOCITY METERS	97
Division 1, Force Meters	97
Division 2, Velocity Meters	98
CHAPTER B-6, THERMAL METERS	103
CHAPTER B-7, SPECIAL METHODS	105
SECTION C CONSTANTS AND FACTORS USEFUL IN FLUID METERING	
CHAPTER C-1, CONVERSION FACTORS, NUMERICAL TERMS, AND	
ON FLUIDS	110
CHAPTER C-2, DISCHARGE COEFFICIENTS AND EXPANSION FACT	
FOR VENTURI TUBES	125
CHAPTER C-3, DISCHARGE COEFFICIENTS AND EXPANSION FACT FOR FLOW NOZZLES	ORS 133

CHAPTER C-4, COEFFICIENTS AND EXPANSION FACTORS FOR
SQUAREEDGED ORIFICES138CHAPTER C-5, ECCENTRIC AND SEGMENTAL ORIFICES178CHAPTER C-6, METHOD OF USING A PITOT TUBE182

CHAPTER C-7, INSTALLATION OF METERS	186
CHAPTER C-8, TOLERANCES	187

INDEX