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Nota di contenuto	ENVIRONMENTAL INSTRUMENTATION AND ANALYSIS HANDBOOK; CONTENTS; Preface; PART I INSTRUMENTATION METHODOLOGIES; 1 Influence of Regulatory Requirements on Instrumentation Design; 2 In Situ Versus Extractive Measurement Techniques; 3 Validation of Continuous Emission Monitor (CEM) System Accuracy and Reliability; 4 Integration of CEM into Distributed Control Systems; 5 Infrared Absorption Spectroscopy; 6 Ultraviolet Analyzers; 7 Total Hydrocarbon Analysis Using Flame Ionization Detector; 8 Gas Chromatography in Environmental Analysis 9 Online Analysis of Environmental Samples by Mass Spectrometry 10 Photoionization; 11 Portable Versus Stationary Analytical Instruments; 12 Application of XRF to the Analysis of Environmental Samples; 13 Laboratory Analysis; 14 Solid-Phase Microextraction; 15 Continuous Particulate Monitoring; 16 Gas Survey Instruments; 17 Ion Chromatography for the Analysis of Inorganic Anions in Water; 18 Ultraviolet-Visible Analysis of Water and Wastewater; PART II WATER

QUALITY PARAMETERS; 19 Thermal Conductivity Detectors; 20 Opacity Monitors; 21 Temperature Measurement 22 pH Analyzers and Their Application 23 Conductivity Analyzers and Their Application; 24 Turbidity Monitoring; 25 Watershed Scale, Water Quality Monitoring-Water Sample Collection; PART III GROUND WATER MONITORING; 26 Level Measurements in Groundwater Monitoring Wells; 27 Laboratory Analysis of Wastewater and Groundwater Samples; 28 Techniques for Groundwater Sampling; 29 Soil Permeability and Dispersion Analysis; 30 Passive Sampling; 31 Instrumentation in Groundwater Monitoring; 32 Microbiological Field Sampling and Instrumentation in Assessment of Soil and Groundwater Pollution PART IV WASTEWATER MONITORING 33 Use of Instrumentation for pH Control; 34 Automatic Wastewater Sampling Systems; 35 Optimum Wastewater Sampling Locations; 36 Wastewater Level Measurement Techniques; PART V AIR MONITORING; 37 Data Acquisition Systems for Ambient Air Monitoring; 38 Air Pollution Control Systems; 39 Measurement of Ambient Air Quality; PART VI FLOW MONITORING; 40 Air Flow Measurement; 41 Gas Flow Measurement; 42 Non-Open-Channel Flow Measurement; 43 Open-Channel Wastewater Flow Measurement Techniques; 44 Compliance Flow Monitoring in Large Stacks and Ducts; Index

Sommario/riassunto

A comprehensive resource for information about different technologies and methods to measure and analyze contamination of air, water, and soil.* Serves as a technical reference in the field of environmental science and engineering* Includes information on instrumentation used for measurement and control of effluents and emissions from industrial facilities that can directly influence the environment* Focuses on applications, making it a practical reference tool
