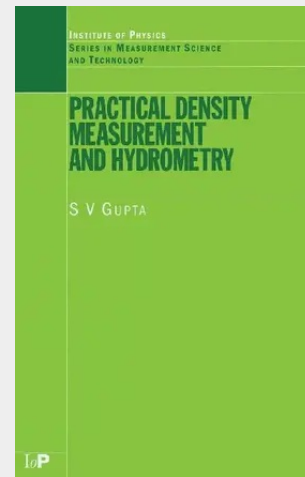


Practical Density Measurement and Hydrometry

The introduction of the ISO 9000 quality standard resulted in renewed interest and pressure on industry to strengthen their quality and metrology standards. To meet this renewed interest Practical Density Measurement and Hydrometry provides invaluable, contemporary information on mass metrology. The book highlights the principles of physics involved and the technology needed to accurately measure the density of solids and liquids to high precision to meet the increasing demands on the metrology industry. Starting with national and international density standards, the book proceeds to discuss the variety of methods used to accurately measure solid and liquid density, to compare and contrast these techniques, and to thoroughly explain the thermal dilation of liquids. It also examines interferometers used in dimensional measurements of solid-based density standards, corrections applicable due to finite aperture, phase change due to reflection and ringing, and special methods for density determination. The final chapters detail specific points of relevance to density measurements and hydrometry for materials commonly used in industry. Complimented with practical guidance on applying these measurement techniques, calibration procedures, and data tables, this book is an essential reference for metrologists and a valuable introduction for graduate students.

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