

1. Record Nr.	UNISA996216945603316
Titolo	Metrology in industry [[electronic resource]] : the key for quality // [edited by] French College of Metrology
Pubbl/distr/stampa	London ; ; Newport Beach, CA, : ISTE, 2006
ISBN	1-280-51063-3 9786610510634 1-84704-501-4 0-470-61212-6 0-470-39478-1 1-84704-601-0
Descrizione fisica	1 online resource (272 p.)
Collana	ISTE ; ; v.113
Disciplina	620 620.0045 620/.0045
Soggetti	Quality control Metrology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Metrology in Industry; Table of Contents; Preface; Foreword; Chapter 1. Analysis of the Metrological Requirements Needed to Ensure Quality; 1.1. Introduction; 1.2. Definition of the objectives; 1.3. Choice of the method of measurement; 1.3.1. Accounting for the selection of the method; 1.3.2. Defining the method and the principle to implement; 1.4. Choice of the means of measurement; 1.4.1. Introduction; 1.4.2. Analysis of what is already available; 1.4.3. Assessment and acquisition of material; 1.4.4. Technical criteria; 1.4.4.1. Basic characteristics 1.4.4.2. Compartment towards influence quantities 1.4.4.3. Durability of the instruments used; 1.4.4.4. Homogeneity of the supply of instruments; 1.4.4.5. Quality of the supplier's service; 1.4.4.6. Adaptation of the instrument; 1.4.4.7. Possibility of traceability; 1.4.4.8. Computerization and the speed of taking measurements; 1.4.4.9. Ergonomics; 1.4.4.10. Capability of measuring instruments; 1.4.5. Economic criteria; 1.4.6. Grid of the analysis of the choice;

1.4.6.1. Stage 1: primary technical requirements (unavoidably necessary)

1.4.6.2. Stage 2: secondary technical requirements (desirable)

1.4.7. Technical assistance for users of measuring instruments; 1.4.7.1. The EXERA (France); 1.4.7.2. VDI/VDE-GMA (Germany); 1.5. The traceability of the measurements; 1.5.1. The necessity of traceability of the measurements; 1.5.2. Calibration requirements; 1.5.3. The selection of standards; 1.6. Conclusion; Chapter 2. Organization of Metrology: Industrial, Scientific, Legal; 2.1. A metrological organization: why?; 2.2. Metrology: how?; 2.3. Scientific and technical metrology; 2.3.1. The BIPM

2.3.2. Results of the international activities
2.3.3. Regional organizations; 2.3.3.1. EUROMET; 2.3.3.2. European Cooperation for Accreditation (EA); 2.3.3.3. Accreditation procedure; 2.3.4. Organization at the national level; 2.3.4.1. The Laboratoire National de Metrologie et d'Essais (LNE); 2.3.4.2. The Italian national calibration system (SNT); 2.3.4.3. The Swiss national calibration system; 2.4. Legal metrology; 2.4.1. Scope of legal metrology; 2.4.2. The International Organization of Legal Metrology (OIML); 2.4.3. The European level; 2.4.3.1. European Union harmonization; 2.4.3.2. WELMEC

2.4.3.3. Other regional bodies
2.4.4. At national level; 2.4.4.1. Legal metrology in Italy; 2.4.4.2. Legal metrology in Switzerland; 2.4.4.3. Legal metrology in France;

Chapter 3. Mastering Measurement Processes Approach to the Setting up of a Metrology Function; 3.1. What to do at the beginning?; 3.2. Goals and role of the measurement management system-metrological function; 3.3. The measurement processes; 3.3.1. Conception and development of a new measurement process; 3.3.1.1. Analysis of the requirements

3.3.1.2. Transcription of the characteristics of the product in "measurand" form or "characteristics to be measured" form

Sommario/riassunto

Metrology is an integral part of the structure of today's world: navigation and telecommunications require highly accurate time and frequency standards; human health and safety relies on authoritative measurements in diagnosis and treatment, as does food production and trade; global climate studies also depend on reliable and consistent data. Moreover, international trade practices increasingly require institutions to display demonstrated conformity to written standards and specifications. As such, having relevant and reliable results of measurements and tests in compliance with mutually rec
