The International Ergonomics Association (IEA) has developed standards for Ergonomic Quality in Design (EQUID), which primarily intend to promote ergonomics principles and the adaptation of a process approach for the development of products, work systems and services. After implementation of ergonomic principles in design it is, however, important to assess the ergonomic quality of products, hand-held tools and computer input devices through working processes that represent reality. Well-designed working tools can be expected to reduce or eliminate fatigue, discomfort, accidents and health problems and they can lead to improvements in productivity and quality. Furthermore, absenteeism, job turnover and training costs can positively be influenced by the working tools and the environment. Not all these short-term and long-term issues of working tools can be quantified in pragmatically oriented ergonomic research approaches. Performance measurements combined with multi-channel electromyography, which enable the measurement of the physiological costs of the muscles involved in handling tools during standardized working tests, and subjective assessments of experienced subjects provide a reliable insight in the essential ergonomic criteria of working tools and products. In this respect it is advantageous to apply a test procedure, in which working tests can be carried out alternatingly both with test objects and reference models.
Contents:


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