ISO IEC

GUIDE 51

Guidelines for the inclusion of safety aspects in standards

First edition 1990

Contents

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) together form a system for worldwide standardization as a whole. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

This Guide was developed jointly by the Technical Advisory Group ISO/TAG 11, *Safety*, and the IEC Advisory Committee on Safety, IEC/ACOS. It is the first of a series intended to provide a harmonized approach to the concept of safety when preparing International Standards.

In view of the diversity of safety aspects in standardization, this Guide may need to be supplemented by sectoral guides, for example, as regards

— personal protection;

— fire prevention;

— health care and medicine;

— consumer products;

— packaging and transport of goods;

— machinery and equipment;

— chemicals;

— building and civil engineering;

— transport.

This Guide may be revised in due course on the basis of practical experience. Committees writing standards are invited to inform ISO/TAG 11, or IEC/ACOS respectively, of any difficulties encountered with the implementation of its provisions.

Introduction

The concept of safety is closely related to safeguarding the integrity of people and property. With the increasing complexity of products, processes or services entering the market, it is obvious that safety has gained considerable importance in our contemporary world.

Safety is dealt with in standards work in many different forms, at different levels, in all areas of technology and for most products, processes or services.

Safety is a balance between freedom from risks of harm and other demands to be met by a product, process or service among which such items as utility, suitability for purpose, and the like are included.

There can be no absolute safety. Even at the highest level of safety, a product, process or service can only be relatively safe. The conventions of society, including levels of safety or degrees of risk, are subject to changes. In this respect, decision-making is based on two interrelated considerations: evaluating the risk and judging the safety.

Evaluating risk — assessing the probability of harm, the magnitude of the consequent injury by identifying the characteristics and the likely conditions of use relevant to safety and means of quantifying them — is an empirical scientific activity.

Judging safety — assessing the acceptability of risks — is an activity associated with such factors as the socio-economic and educational background of the society concerned, and whether design, or manufacturing processes, could play a role in increasing safety.

As safety will pose different problems it is impossible to provide a set of precise provisions and recommendations that will apply in every case. However, these guidelines, when followed on a judicious "use when applicable" basis, will help in developing reasonably consistent standards.

Guidelines for the inclusion of safety aspects in standards

1 Scope

This Guide provides standards-writers with a concept of safety with the purpose of promoting safety through standards. It outlines procedures for identifying those characteristics of products that are relevant to safety and for making appropriate provisions for them.

The result may be a standard dealing exclusively with safety aspects or the inclusion of clauses specific to safety in a general standard.

NOTES

1   The term "standard" — used throughout this Guide — includes Technical Report and Guide.

2   Similarly, the term "product" — used throughout this Guide — includes "process", "service", and combinations thereof commonly known as "systems".

2   Normative references

ISO 3864 : 1984, *Safety colours and safety signs.*

IEC/ISO Directives, Part 2: *Methodology for the development of International Standards,* 1989.

IEC/ISO Directives, Part 3: *Drafting and presentation of International Standards,* 1989.

ISO/IEC Guide 2 : 1986, *General terms and their definitions concerning standardization and related activities.*

ISO/IEC Guide 7 : 1982, *Requirements for standards suitable for product certification.*

ISO/IEC Guide 37 : 1983, *Instructions for use of products of consumer interest.*

ISO/IEC Guide 50 : 1987, *Child safety and standards — General guidelines.*