STANDARD **10155**

First edition
1995-04-01

Stationary source emissions — Automated monitoring of mass concentrations of particles — Performance characteristics, test methods and specifications

Émissions de sources fixes — Contrôle automatique des concentrations en masse de particules — Caractéritisques de fonctionnement, modes opératoires d'essai et spécifications

Reference number
ISO 10155:1995(E)

Contents

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10155 was prepared by Technical Committee ISO/TC 146, *Air quality*, Subcommittee SC 1, *Stationary source emissions*.

Annex A forms an integral part of this International Standard. Annexes B, C and D are for information only.

Stationary source emissions — Automated monitoring of mass concentrations of particles — Performance characteristics, test methods and specifications

1 Scope

This International Standard specifies conditions and criteria for the automated monitoring of the mass concentration of particulate matter in stationary source gas streams. This includes performance characteristics and test procedures.

This International Standard provides the field evaluation test program and its application to automated monitoring systems. Its approach is general and not limited to a specific measurement principle or instrument system. The scope includes system operation characteristics, calibration, test procedures and data treatment.

This International Standard is applicable only on a site-specific basis by direct correlation with the manual testing method in ISO 9096. If site conditions change (i.e. change in emission controls, change in fuel type), the calibration needs to be repeated. The mass concentration range of application is only confined to those automated methods that can meet the calibration specifications. Consequently, the actual range will vary according to the measurement technique of the automated method.

Changes in the physical properties (i.e. size, shape, colour, etc.) and chemical composition of the particulate matter may exist, to the extent that the integrity of the calibration cannot be maintained for the measurement system used. In such instances this technique ceases to be applicable. Reported and suspected limitations of various measurement methods need to be evaluated on a site-by-site basis.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4225:1994, *Air quality — General aspects — Vocabulary.*

ISO 6879:1983, *Air quality — Performance characteristics and related concepts for air quality measuring methods.*

ISO 7504:1984, *Gas analysis — Vocabulary.*

ISO 9096:1992, *Stationary source emissions — Determination of concentration and mass flow rate of particulate material in gas-carrying ducts — Manual gravimetric method.*

ISO 9169:1994, *Air quality — Determination of performance characteristics of measurement methods.*