**INSTITUTE FOR ACCREDITATION OF THE REPUBLIC OF MACEDONIA**

# Procedure for applying MKTC CEN/TS 15675: 2009 in accreditation procedure of laboratories for testing emissions from stationary sources

PR 05-13

**Contents**

## 1. INTRODUCTION

The standard MKC EN ISO/IEC 17025: 2006 contains general requirements for the competence of testing laboratories wishing to demonstrate that they have implemented management system, to be technically competent and able to issue technically good/accurate results. The standard MKC EN ISO/IEC 17025: 2006 in section 1.6, Note 1, states that it may be necessary to explain or interpret certain requirements of this international standard to ensure that they are consistently applied. Technical Specification MKTC CEN/TS 15675: 2009 provides guidance on the application of MKC EN ISO/IEC 17025: 2006 in the specific area periodically measuring the emissions from stationary sources. Instructions for application in special/specific areas are given in Annex B of the standard MKC EN ISO/IEC 17025: 2006.

## 2. PURPOSE

The purpose of this procedure, issued by the Director of the Institute for Accreditation of the Republic of Macedonia (hereinafter: IARM) is to describe the policy of IARM in the application of the MKTC CEN/TS 15675: 2009 in accreditation of the testing laboratories performing periodic measurements of emissions from stationary sources. The laboratories that are already accredited and those in the process of accreditation according to MKC EN ISO/IEC 17025: 2006 will be further evaluated in accordance with the requirements of MKTC CEN/TS 15675: 2009. The procedure is designed for the IARM's assessors and testing laboratories in preparing documentation for submission of an application for accreditation/extension of the accreditation range and it is publicly available on the website of IARM: http://www.iarm.gov.mk/.

## 3. REFERENCE DOCUMENTS, TERMS AND DEFINITIONS

MKC EN ISO/IEC 17025: 2006, General requirements for the competence of testing and calibration laboratories
MKTC CEN/TS 15675: 2009, Air quality - Measurement of stationary source emissions - Application of EN ISO/IEC 17025: 2005 for periodic measurements.
**Stationary source** is an installation, technological process, technological industrial plant unit, a device, specified activity, which in a certain unchangeable position, through certain outlets or holes emit air pollutants.
**Emission** is the discharge of pollutants into the air from outlets or holes of a stationary source and is expressed in emission sizes: mass concentration, mass flow, emission factor and the level of emissions.
**Device for heating** is a technical device in which combustion of fuels produce energy and it is the furnace along with the device for purifying exhaust gases. Depending on the heating power of the combustion sources, they are divided into:
1) combustion sources with thermal power lower than 1MW,
2) combustion sources with thermal power of 1 to 50, and MW
3) combustion sources with thermal power greater than 50 MW.

These definitions are in accordance with the Regulation on limit values for permissible emission levels and types of pollutant substances in waste gases and vapors emitted from stationary sources into the air (Official Gazette of RM, no.141/2010).

## 4. IARM POLICY REGARDING THE IMPLEMENTATION OF THE MKTC CEN/TS 15675: 2009

### 4.1 General background of MKTC CEN/TS 15675: 2009

The IARM conducts assessments of competence of testing laboratories that measure emissions from stationary sources according to the standard MKC EN ISO/IEC 17025: 2006 and the technical specification MKTC CEN/TS 15675: 2009.
On the 21st General Assembly of EA held on 28 and 29 May 2008 in Estonia, it was decided that from 31 October 2009, the accreditation body that accredits testing laboratories for emissions of air pollutants from stationary sources, besides using the standard MKC EN ISO/IEC 17025: 2006 must also use the technical specification MKTC CEN/TS 15675: 2009.
Technical Specification MKTC CEN/TS 15675: 2009 complements the requirements of MKC EN ISO/IEC 17025: 2006 and is suitable for proving the competence of laboratories carrying out periodic measurements of emissions from stationary sources, including sampling and subsequent analysis of gases and particles, and determining the reference magnitudes such as temperature, pressure, amount of steam and oxygen in the test area.
The technical specification can't be applied independently and it will be shown only in the scope of accreditation. Documents used for applying of MKTC CEN/TS 15675: 2009 are:
MKC EN 15259:2009: Air quality - Measurement of stationary source emissions, Requirements for measurement sections and sites and for the purposes, the plan and the report from the measurement, and
MKTC CEN/TS 14793: 2007: Stationary source emissions - interlaboratory validation procedure for an alternative method compared to the reference method. All contributions to the MKTC CEN/TS 15675 and MKC EN 15259 are mandatory, not informative.

### 4.2 Instructions for measuring the emission of pollutants into the air from combustion sources with thermal power lower than 1MW

This section defines the guidelines of IARM for accreditation of testing laboratories that perform measuring of emissions from combustion sources with thermal power lower than 1MW according to the standard MKC EN ISO/IEC 17025: 2006 and the technical specification MKTC CEN/TS 15675: 2009.
1. Site review before the measurement as stated in section 5.1 in the MKC EN 15259: 2009, that is to say section 5.7.2.1 in the MKTC CEN/TS 15675: 2009 is not necessary.
2. Developing a measurement plan in accordance with section 7.2 of the MKC EN 15259: 2009, or 5.4.1 b) of the MKTC CEN/TS 15675: 2009 is not necessary.
3. Minimum number of employees to perform measurements (three employees as outlined in Appendix B of the MKTC CEN/TS 15675: 2009) is not necessary.
4. Testing the homogeneity of the waste gases in the outlet or the opening as specified in section 8.3 of the MKC EN 15259: 2009 is not necessary.

5. The measurement of the speed profile as described in section 6.2.1 c) of the MKC EN 15259:2009 is not required to be included in the selection of the measuring point. Consequently it is not necessary for the laboratory to be accredited for measuring air velocity according to the standard ISO 10780.
6. Determination of the mass concentration of NOx using electro-chemical cell in addition to point 1 of the ISO 10849 standard is an acceptable method.
7. When accrediting test methods for determining the emission of inorganic gaseous pollutants, the measuring distance for sampling must include all the parts specified in the standard ISO 10396.
8. The application of all the other methods not listed as standard methods or standard reference methods, regardless of the scope of accreditation, that is to say, thermal power of the combustion sources, necessarily require proof of the equivalence of the methods according to the standard CEN/TS 14793: 2007 specifications.
In laboratories which are accredited for all parts of the MKTC CEN/TS 15675: 2009, it is allowed application of these instructions in determining emissions from combustion sources with thermal power lower than 1MW.
For laboratories that are not accredited for all the parts of the MKTC CEN/TS 15675: 2009 in the Annex to the accreditation certificate, the thermal power of the combustion source should also be displayed

### 4.3 Instructions for measuring the emission of pollutants into the air from combustion sources with thermal power greater than 1MW

This section defines the instructions of IARM for accreditation of testing laboratories that perform measuring of the emissions from combustion sources with thermal power greater than 1MW according to the standard MKC EN ISO/IEC 17025: 2006 and the technical specification MKTC CEN/TS 15675: 2009, where laboratories must pay attention to the following key questions: § 5.4.1 of the MKTC CEN/TS 15675:2009: Operating procedures and measurement plan must be documented in accordance with the requirements of MKC EN 15259: 2009. § 5.4.2 of the MKTC CEN/TS 15675: 2009: Laboratories must maintain updated knowledge (laboratory must be updated) to existing laws and regulations concerning the protection of the air, especially considering the emission of pollutants air as well as knowledge of the processes that are the source of emission. § 5.4.6 of the MKTC CEN/TS 15675: 2009: The measuring uncertainty must be calculated. The expanded measurement uncertainty must be estimated at the level of limit values of emission (where there are limits). § 5.7.2 of the MKTC CEN/TS 15675: 2009: The requirements of this paragraph are clearly described in Annex F. The laboratory must provide documentary evidence of the application of those requirements. § 5.10.3 of the MKTC CEN/TS 15675: 2009: Elements of the report of the test are clearly described in Annex F of the standard MKC EN 15259: 2009. All the details described in that Annex must be included in the test report. Annex B of the MKTC CEN/TS 15675:2009. All objective evidence to demonstrate the application of these requirements must be kept in the records of the staff. In case when an accredited laboratory is subcontracting the sampling with another accredited laboratory, the testing report must contain a described procedure for calculating the results and data for assessment of the measurement uncertainty. The report of sampling must certainly be attached to the report of the test and the result of testing expressed in units listed in the measuring range.

## 4.4 Time period for the application of MKTC CEN/TS 15675: 2009

The assessment of testing laboratories in accordance with the requirements of MKTC CEN/TS 15675 will be performed as an extension of the accredited scope for all accredited testing laboratories. When submitting an application for accreditation/extension of the scope of accreditation/reaccreditation the laboratory must emphasize that it wants to be assessed in accordance with the requirements of MKTC CEN/TS 15675: 2009. Laboratories must submit all the necessary documentation to the IARM in the period provided in the procedures of the IARM. The withnessing of staff carrying out testing/measuring field will be mandatory in these assessments. Upon completion of the assessment, based on the decision on accreditation a new addition will be issued to the accreditation certificate where clear identification of MKTC CEN/TS 15675: 2009 will stand.

All testing laboratories accredited in accordance with the standard MKC EN ISO/IEC 17025: 2006, having waste gas in the scope of accreditation, or performing periodic measurements of emissions from stationary sources, must be assessed till 31.05.2017, in order to be determined whether they fulfil the requirements of the MKTC CEN/TS 15675. Starting from 01.02.2016, the IARM will realize all the assessments of testing laboratories that perform periodic measurements of emissions from stationary sources by using the MKCEN ISO/IEC 17025: 2006 and MKTC CEN/TS 15675: 2009. On 31.05.2017, for all the testing laboratories that are accredited for periodical measurements of emissions from stationary sources, and are not assessed to determine whether they meet the requirements of the MKTC CEN/TS 15675: 2009, the IARM shall do the following:

- reduction of scope of accreditation; or
- withdrawal of accreditation (when accredited testing laboratory performs only this type of testing/measurement).