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STANDARDISATION MANDATE TO CEN FOR MANUAL REFERENCE METHODS FOR THE CALIBRATION OF AUTOMATED MEASUREMENT SYSTEMS FOR SULPHUR DIOXIDE (SO₂) AND NITROGEN OXIDES (NO_x) EMISSIONS IN STACK.

I. MOTIVATION

Following the environmental protection objectives laid down by Article 130 R of the EC Treaty, the Council has adopted a number of Directives in order to control at Community level air pollution from stationary sources, mainly large combustion plants and waste incineration and co-incineration installations:

- Council Directive 88/609/EEC on the limitation of emissions of certain pollutants into the air from large combustion plants;
- Council Directive 89/369/EEC on the prevention of air pollution from new municipal waste incineration plants;
- Council Directive 89/429/EEC on the reduction of air pollution from existing municipal waste incineration plants;
- Council Directive 94/67/EC on the incineration of hazardous waste.

These Directives lay down emission limit values for different pollutants as minimum requirements to be respected by the operators. Indeed, large combustion and waste incineration and co-incineration installations have an important environmental impact because of their atmospheric emissions, in particular SO₂ and NO_x, which give rise to acidification and photochemical pollution phenomena.

These minimum requirements are explicitly expressed in the text of some of the above mentioned Directives and/or in new related Commission Proposals for Directives:

- Council Directive 88/609/EEC mentions in Article 13(2) that the measuring methods and/or equipment to determine the concentrations of SO₂ and NO_x inter alia shall

provide reproducible and comparable results for the emissions levels; whereas the Commission Proposal COM(98)415 for a Directive amending Council Directive 88/609/EEC on large combustion plants requires that representative measurements as well as reference measurement methods to calibrate automated measurements systems for SO₂ and NO_x emissions inter alia, are to be carried out in accordance with CEN standards;

- Council Directive 94/67/EC on the incineration of hazardous waste and the Commission Proposal COM(98)558 for a Directive on incineration of waste require the availability of standardised analytical measurement methods developed by CEN, for control and compliance purposes related inter alia to the emissions of SO₂ and NO_x from incineration and co-incineration of waste processes.

Therefore, it appears that the availability of a standardised reference method, allowing the calibration of on-site automated measurement systems for SO₂ and NO_x, is a necessary condition for the efficient implementation of these Directives, as far as emissions measurements are concerned.

II. DESCRIPTION OF THE MANDATED WORK

1. The Commission entrusts CEN with the following work:

- Establishment of a standardised manual reference method for SO₂ emissions in stack.
- Establishment of a standardised manual reference method for NO_x emissions in stack.

Each of these standards is to cover:

- scope;
 - principle of the reference method;
 - apparatus for sampling and analysis;
 - sampling and analysis procedure (including technical requirements, calibration,...);
 - calculations and expression of results;
 - evaluation of the performances of the measurement method
 - conducting of tests, including their assessment and validation;
 - interpretation of the tests;
 - summing up of the comparison and variability tests report(s);
 - annex:
 - methodology to show the equivalency of another method, with actual example(s) and sum-up of test report(s);
 - miscellaneous.
2. The following work is to be performed during the standardisation process in order to keep in line with the regulatory framework.

- Standardised reference methods are to be evaluated during field tests on two waste incineration installations, on two specific co-incineration installations (such as cement kilns) and on two large combustion plants.
 - The reference method for SO₂ shall be validated in the range of 0-2000 mg/Nm³ for large combustion plants and 0-200 mg/Nm³ for waste incineration, according to emission limit values laid down in above mentioned Council Directives and Commission Proposals.
 - The reference method for NO_x shall be validated in the range of 0-1300 mg/Nm³ for large combustion plants and 0-400 mg/Nm³ for waste incineration, according to emission limit values laid down in above mentioned Council Directives and Commission Proposals.
 - Standardised reference methods shall allow the calibration of automated measurement systems on the appropriate time basis (half hourly, hourly, daily,...) as laid down in the relevant Council Directives and Commission proposals, already mentioned.
 - Fields tests shall show that 95% confidence interval for standardised reference methods is minimised, and at least smaller than the maximum confidence interval for automated measurement systems, as laid down in relevant Council Directives and Commission Proposals, i.e. 20% for both SO₂ and NO_x.
3. The Commission recommends CEN to take into account, as far as possible, existing standards or rules available in these areas at a national or international level.

III. EXECUTION OF THE MANDATE

1. CEN will present the draft standards for SO₂ and NO_x (prEN) to the Commission before 31 December 2002.
2. The European standards (EN) will be adopted before 30 June 2003.
At this date, the three linguistic versions (French, German, and English) will be available as well as the correct titles in other Community languages.
3. Within six months of their adoption, the European standards (EN) will be transposed into national standards and all the different national standards of the Member States will be withdrawn.
4. The Commission reserves the possibility of specifying more precisely, if necessary, the requirements according to the final version of the draft Directives on large combustion plants and on incineration of waste, once adopted by the Council. The present mandate may be amended by common agreement if that proves to be necessary during the course of the works.
5. CEN will present a report, at least once a year, of the progress of the work carried out according to this mandate.