DRAFT
RECOMMENDATION

TC 16/SC 1
(NL+RU)

INFORMATION

Instruments for continuous measuring SO_2 in stationary source emissions

Draft submitted for
direct CIML online approval *on 2009.02.18.*
Voting closes on 2009.05.15.

New OIML Draft Recommendation

ORGANISATION INTERNATIONALE
DE MÉTROLOGIE LÉGALE

INTERNATIONAL ORGANIZATION
OF LEGAL METROLOGY

DRAFT INTERNATIONAL RECOMMENDATION

Instruments for continuous measuring SO_2 in stationary source emissions

The Draft Recommendation *Instruments for continuous measuring SO_2 in stationary source emissions* was developed by OIML TC 16/SC 1 ***Air pollution*** and in particular under the responsibility of a Project Leader within the Subcommittee.

The Draft was previously submitted to CIML preliminary online ballot in 2008 with a deadline of 28 October 2008. The results of this preliminary online ballot are summarized in Annex 1 and the comments received are attached in Annex 2, together with the replies of the Project Leader.

Consequently, due to the fact that the time schedule was too tight, it was not possible to submit an amended Draft Recommendation (on the basis of the results of the preliminary online ballot) to the CIML for approval at its 43rd Meeting.

Therefore, the CIML decided to submit the Draft to **direct CIML online approval** (43rd CIML Meeting Resolution No. 26).

A revised Draft Recommendation has been drawn up by the Project Leader based on the comments received from CIML Members and on the replies indicated in Annex 2.

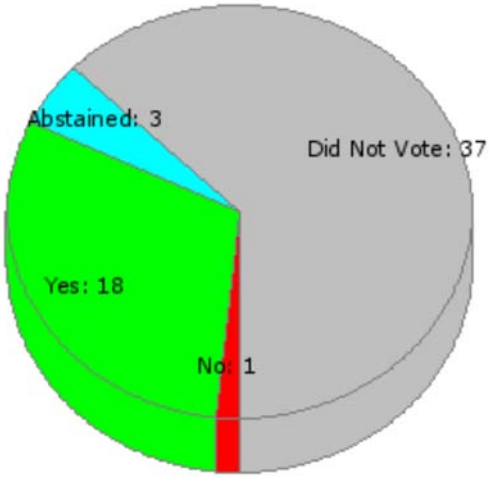
Project Number 50 (Instruments for continuous measuring SO2 in stationary source emissions)

Deadline: 2008-10-28

JAPAN voted No (Comments)

AUSTRIA voted Yes
BELARUS voted Yes
CANADA voted Yes
CYPRUS voted Yes
CZECH REPUBLIC voted Yes
FINLAND voted Yes
FRANCE voted Yes
NETHERLANDS voted Yes
P.R. CHINA voted Yes
POLAND voted Yes
ROMANIA voted Yes
SERBIA voted Yes
SLOVAKIA voted Yes
SOUTH AFRICA voted Yes
SWITZERLAND voted Yes
UNITED KINGDOM voted Yes
UNITED STATES voted Yes
VIET NAM voted Yes

BRAZIL Abstained
DENMARK Abstained (Comments)
GERMANY Abstained



Countries who did not vote (37)

ALBANIA, ALGERIA, AUSTRALIA, BELGIUM, BULGARIA, CAMEROON, CROATIA, CUBA, EGYPT, ETHIOPIA, GREECE, HUNGARY, INDIA, INDONESIA, IRAN, IRELAND, ISRAEL, ITALY, KAZAKHSTAN, KENYA, KOREA (R.), MACEDONIA (F.Y.R.), MONACO, MOROCCO, NEW ZEALAND, NORWAY, PAKISTAN, PORTUGAL, RUSSIAN FEDERATION, SAUDI ARABIA, SLOVENIA, SPAIN, SRI LANKA, SWEDEN, TANZANIA, TUNISIA, TURKEY.

ANNEX 2

Summary of comments on the Draft Recommendation
received further to the preliminary online ballot

Instruments for continuous measuring SO_2 in stationary source emissions

No	Country	Section, paragraph	Comments	Conclusion of the project leader for project p2 of OIML TC 16/SC 1
1	Denmark	Chapter 3.3	There seems to be a tube-connection between 1. Pipe and 7. Electro pneumatic valve? – there is no description/explanation (p.8)	Accepted The text and figure are corrected
		Chapter 4.3.1	The maximum permissible intrinsic error shall be no more than 0,5 ppm or 5 % of measuring range. There is no explanation on when to use 0,5 ppm or 5 % - it seems, that some ranges could be helpful	Accepted The text is corrected
		Chapter 4.3.2	Analogue remarks as under chapter 4.3.1	Accepted Similarly to the example given in 4.3.1
		Chapter 5.1.5	It should be sufficient to mention a gas flow-meter. It should not be necessary to specify it as a rotameter	This is not of fundamental importance
2	Japan	4.5.3 Vibration	gas analytical system →<u>gas analyzer</u> (Reason) The requirements to the vibration parameter are not the requirements that include the gas analytical system, but they are limited to the gas analyzer. It is not necessary to vibrate the gas analytical system as a whole. We must use the same expression as that in other items in Section 4.	Accepted

No	Country	Section, paragraph	Comments	Conclusion of the project leader for project p2 of OIML TC 16/SC 1
		5.4 Computing device	which calculate emissions (e.g. the average emission during the specified time, etc.) … →The gas analytical system may be equipped with a computing device (or a personal computer). The computing device calculates emissions (e.g. the average emission during the specified time, etc.) … (Reason) It is not necessary that the gas analytical system is always equipped with a computing device. This should be stated clearly.	Not accepted Since the measurements are performed in a continuous mode, their results have to be processed and stored in a computing device memory
		6.1 (Operating manual)	The manufacturer shall provide operating manual for each gas analytical system in the Language (s) of the country in which it will be used. →Operating manual for each gas analytical system shall be provided either in the language(s) of the country in which it will be used, or in one of the international languages such as English. (Reason In the export of gas analytical system, if manufacturers must provide operating manual in the language(s) of the country in which it will be used, it corresponds to "the nontariff technical barrier".	Accepted
		8.3 Repeatability	…shall not exceed 1/3 modulus of the maximum permissible error of the initial verification according to 4.4, →shall not exceed 1/3 modulus of the maximum permissible error according to 4.4, (Reason) In the initial verification, there is no item of repeatability.	Accepted
		A.3 Stability with time or drift	a CGM with the smallest SO2 volume fraction according to A.2. →a CGM with the largest and the smallest SO2 volume fraction according to A.2. (Reason) The largest sensitivity change occurs near the area of a span, while the smallest sensitivity change occurs near the area of zero. If we test only the largest change, then the change near the area of a span cancels the change near the area of zero. As a result, we cannot confirm the influence. Therefore we must confirm both the largest change and the smallest change.	Accepted

No	Country	Section, paragraph	Comments	Conclusion of the project leader for project p2 of OIML TC 16/SC 1
		A.5.2 (Dry heat)	the CGM recommended in A.3. →a CGM with the largest and the smallest SO2 volume fraction according to A.2. (Reason) The largest sensitivity change occurs near the area of a span, while the smallest sensitivity change occurs near the area of zero. If we test only the largest change, then the change near the area of a span cancels the change near the area of zero. As a result, we cannot confirm the influence. Therefore we must confirm both the largest change and the smallest change.	Accepted See A.3 (corrected, but reference to A3 is retained in the text of the Recommendation))
		A.6.2 (Cold)	the CGM recommended in A.3. →a CGM with the largest and the smallest SO2 volume fraction according to A.2. (Reason) The largest sensitivity change occurs near the area of a span, while the smallest sensitivity change occurs near the area of zero. If we test only the largest change, then the change near the area of a span cancels the change near the area of zero. As a result, we cannot confirm the influence. Therefore we must confirm both the largest change and the smallest change.	Accepted See A.3 (corrected, but reference to A3 is retained in the text of the Recommendation))
		A.8.2 (Ambient pressure)	the CGM recommended in A.3. →a CGM with the largest and the smallest SO2 volume fraction according to A.2. (Reason) The largest sensitivity change occurs near the area of a span, while the smallest sensitivity change occurs near the area of zero. If we test only the largest change, then the change near the area of a span cancels the change near the area of zero. As a result, we cannot confirm the influence. Therefore we must confirm both the largest change and the smallest change.	Accepted See A.3 (corrected, but reference to A3 is retained in the text of the Recommendation))

No	Country	Section, paragraph	Comments	Conclusion of the project leader for project p2 of OIML TC 16/SC 1
		A.9.2 (Power supply variation)	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted
		A.11.1 (Mechanical vibration and shock)	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted
		A.11.2.1 (Mechanical vibration and shock)	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted
		A.12.2 (Short-time power reduction)	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted
		A.13.2 Voltage pulses from the mains	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted

No	Country	Section, paragraph	Comments	Conclusion of the project leader for project p2 of OIML TC 16/SC 1
		A.14.3 Electrostatic discharges	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted
		A.15.3 Radiated, radiofrequency, electromagnetic fields	the CGM recommended in A.3. →a CGM with the largest SO2 volume fraction according to A.2. (Reason) The mechanical and electrical influences are equal near the area of largest span and near the smallest zero area. Alternatively, the influences are greater near the area of largest span. So, it is appropriate to confirm near the area of largest span.	Accepted
		A.16.1 d)	the same CGM →a CGM with the largest and the smallest SO2 volume fraction according to A.2. (Reason) The largest sensitivity change occurs near the area of a span, while the smallest sensitivity change occurs near the area of zero. If we test only the largest change, then the change near the area of a span cancels the change near the area of zero. As a result, we cannot confirm the influence. Therefore we must confirm both the largest change and the smallest change.	Accepted See A.3 (corrected, but reference to A3 is retained in the text of the Recommendation))