

# **REPORT**

## **of the chairperson of TC COOMET for subject field «Acoustics. Ultrasound. Vibration» for the CCAUV meeting**

The cooperation between COOMET members for «AUV» began in second half of 2000 after election of the Rapporteur for this subject field. To assure effective work it was important to examine general situation. Results of the study of available information are given below:

Germany, Slovakia, Lithuania and Bulgaria gave declaration to represent CMC data for «AUV» of their NMI through EUROMET.

Two countries (i.e. Russia and Romania) being MRA-signatories were about to represent CMC data through COOMET. The other countries have not signed MRA. Yet, some of these countries, in particular Republic of Belarus, Ukraine and Kazakhstan are under preparation for signing the agreement in 2002 and Moldova and Kirghizia in 2003 respectively.

It was of prime concern to establish the cooperation within the framework of COOMET, liaison with the corresponding members and experts for «AUV», and foster activities associated with CMC data preparation.

In 2001, review of Russian CMC was arranged and carried out. Russian CMC had wide range of calibration and measurement capabilities. They were represented by two NMIs (VNIIFTRI for air acoustics, ultrasound and underwater acoustics, and VNIIM for vibration). The stage of internal review involved experts from Russia, Belarus and Germany. The review of services related to underwater acoustics was conducted by Dr S. Robinson, NPL, United Kingdom, because there were no relevant experts in COOMET.

The next stage was inter-regional review of Russian CMC by the EUROMET and APMP experts. Russian NMIs performed modification of the CMC for «AUV» taking into account inter-regional review results which culminated into Russian CMC publication on the BIPM site abbreviated as COOMET.AUV. 1.2001.

At present, Ukrainian CMC for air acoustics and vibration and Belarussian CMC for air acoustics are under review in COOMET.

The COOMET experts participated in the review of CMC for «AUV» of two RMOs (EUROMET and APMP).

The first meeting of the COOMET corresponding members for «AUV» was held in the Belarussian State Institute of Metrology, Minsk on October 1-2, 2001 to intensify cooperation.

It was attended by the corresponding members and representatives of NMI of five countries as follows: Belarus, Moldova, Russia, Slovakia and Ukraine.

The participants have stressed the role of information exchange and international cooperation in this field. The meeting proposed to cancel the project No 172/RU/99 «Comparison of national standards of a sound pressure unit in air» (partner institutions: SMU, Slovakia; GUM, Poland; VNIIFTRI, Russia), for no relevant activities were carried out. At the EUROMET meeting in Istanbul, May, 2001, VNIIFTRI representative, Russia (contact person in EUROMET) initiated to carry out COOMET interlaboratory comparisons for calibration of laboratory standard microphones, LS1P type using reciprocity method and proposed PTB, Germany to be the pilot laboratory. Additionally, expected partners on project 172/RU/99 joined. Later, CCAUV accepted this comparison as key comparison CCAUV COOMET.AUV.A - K1. According to Dr T. Fedtke, the coordinator of project 226/DE/01, this project goes in line with the time schedule despite of some formal difficulties.

The following issues were included in the meeting agenda for discussion:

- Possibility to carry out COOMET interlaboratory comparisons by pressure calibration using an electrostatic exciter technique and applying correction for an electrostatic exciter;
- Establishing a Working Group for (both internal and inter-regional) review of CMC for «AUV»;

The second «AUV» Technical Committee Meeting will take place in the spring 2003, in Russia. The meeting will decide to carry out key comparisons of 1/2 inch microphones over the range up to 25 kHz, discuss the possibility to perform comparisons by field, note the proposals from VNIIM, Russia, concerning key comparisons for vibration and discuss the results of project 226/OE/01 comparisons.

I am grateful to the Russian, German, Ukrainian and Slovakian experts, Dr S. Robinson, NPL, United Kingdom, as well as to colleagues from regional metrology organizations for cooperation.

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