

COOMET EURO-ASIAN COOPERATION OF NATIONAL METROLOGICAL INSTITUTIONS (COOMET)

The minutes
of COOMET technical committee session
TC 1.10 “Thermometry and Thermal Physics”

Mendeleyev VNIIM
St-Petersburg, Russia on February 13, 2007

1. The session opening, the program adoption, the session participants presentation

The session was opened by Acting Chairman of COOMET technical committee “Thermometry and Thermal Physics” TC 1.10, deputy director of FGUP “D.I. Mendeleyev VNIIM” Dr. Anatoly I. Pokhodun, Russia.

A.I. Pokhodun greeted TC members, who were present at the session, and asked them to introduce themselves. The representatives of five countries: Byelorussia (BelGIM), Russia (VNIIM), Kazakhstan (KazInMetr), Ukraine (NSC “Institute of Metrology”), and Moldavia (National Institute of Standardization and Metrology) took part in the session.

BYELORUSSIA

Mr. Nikolai Ye. Martynov, the manager of production & research department of measurements of heat engineering quantities of Belorussian National Institute of Metrology.

KAZAKHSTAN

Miss Kuralai K. Duisebayeva, principal specialist of South- Kazakhstan branch of RSE “KazInMetr”.

MOLDAVIA

Mr. Konstantin Bordiyanu, the manager of the laboratory of thermal quantities measurements of the National Institute of Standardization and Metrology.

RUSSIA

Mr. Anatoly I. Pokhodun, Dr. Tech. Sc., deputy director, the manager of the department of thermodynamics of All-Russian D.I. Mendeleyev Scientific Research Institute of Metrology.

Miss Alina G. Ivanova, Cand. Tech. Sc., leading researcher of All-Russian D.I. Mendeleyev Scientific Research Institute of Metrology.

Mr. Mikhail S. Matveyev, Cand. Tech. Sc., senior researcher of All-Russian D.I. Mendeleev Scientific Research Institute of Metrology.

UKRAINE

Miss Rimma P. Sergiyenko, Cand. Tech. Sc., senior researcher of National Scientific Centre “Institute of Metrology”.

A.I. Pokhodun greeted the session participants and acquainted them with the activity of D.I. Mendeleev VNIIM.

2. The session participants’ reports

The session participants made short reports on the system of metrological assurance and actual problems of metrological activity in the field of temperature and thermalphysic measurements in their countries.

Dr. A.I. Pokhodun, VNIIM, Russia, informed about the activity of Consultative Committee on Thermometry and its working groups. He acquainted the meeting participants with the new rules of the estimation of uncertainties at preparation of the data on the measurement capabilities of the national metrological institutes (NMI) in the field of thermometry. He underlined that uncertainties are only calculated on the basis of key comparisons. So, the data on NMI measurement capabilities can be only presented to the interregional investigation after completion of the comparisons and confirmation of their legitimatization by Consultative Committee on thermometry.

3. Discussion of the course of the subjects realization on COOMET program

Subject 205/RU-a/00 “Development of the methods of research and control of metrological and technical characteristics of dry-block thermostats in the measurement range of minus 40 to plus 650 °C” The coordinator is Ye. V. Vasiliev, VNIIMS (Russia).

Dr. Pokhodun, VNIIM, Russia, read the letter, which coordinator of the work Ye. V. Vasiliev informed in that the organization EUROMET has developed the Recommendation “Calibration block calibrators”. Besides, European association on accreditation developed the document EA 1-/13 “Guidance on calibration of block calibrators of temperature”. In this connection the further continuation of the work on subject **205/RU-a/00** loses significance. So Ye. V. Vasiliev proposes to stop the work on this subject. The participants of the meeting TC 1.10 supported the coordinator’s proposal and voted for the stoppage of the work on subject **205/RU-a/00** and its exclusion from the plan of the work.

Subject 220/UA-a/00 “Comparison of the national scales MTS-90 the range of 1084.6 to 2000 °C”. The coordinator is L.A. Nazarenko, NSC “Institute of Metrology” (Ukraine)

Miss R.P. Sergiyenko made the proposal on specification of the work content and the subject name. She proposed to conduct comparisons not in all the temperature range of 1084.6 to 2000 °C, but only at the defined points of silver, gold and copper, which determine the temperature scale higher 961.78 °C. The technical committee members supported R.P. Sergiyenko’s proposal.

Dr. A.I. Pokhodun proposed to include Slovakian national metrological institute in the staff of the subject participants. He informed that the preliminary agreement with the director of this institute C. Dyurish is available.

Summarizing the discussion of the course of subject **220/UA-a/00** realization, the meeting participants took the decision on its stoppage and arrangement of the new subject “Comparison of the national standards of the unit of temperature at the defined points of silver, gold, and copper”. R.P. Sergiyenko, NSC “Institute of Metrology” (Ukraine) was elected as the subject coordinator.

The work beginning is 2007.

Subject 227/UA-a/01 “Comparison of realizations of the defined points temperatures in the range of 273.16 to 429.7485 K (Tl, Ga, In) according to MTS-90. The coordinator is L.A. Nazarenko, NSC “Institute of Metrology” (Ukraine)

The meeting participants considered advisable to stop the work on this subject, as the comparisons of the national standards at these points have been realized within subject **285/RU/03**.

Subject 228/UA/01 “Comparison of the standards of combustion energy on the basis of benzoic acid”. The coordinator is L.A. Nazarenko, NSC “Institute of Metrology” (Ukraine)

The meeting participants considered necessary to continue the work on this subject. In connection with the transition of L.A. Nazarenko to other work, the meeting participants affirmed Ye. N. Korchagina, Cand. Tech. Sc., manager of the laboratory of All-Russian D.I. Mendeleev Scientific Research Institute of Metrology (Russia) as the coordinator of the subject.

Subject 310/UA/04 “Conducting comparisons of the standards of solids specific heat” The coordinator is L.A. Nazarenko, NSC “Institute of Metrology” (Ukraine)

The meeting participants noted that the work is coming to the end. The main task is preparation of the report and protocol of the comparisons. In connection with the transition of L.A. Nazarenko to other work, the meeting participants affirmed V.P. Slepushenko, manager of the laboratory of temperature and thermalphysic measurements of NSC “Institute of Metrology” (Ukraine) as the coordinator of the subject.

The meeting participants considered advisable to give Working group No. 9 of the Consultative Committee on thermometry, and the Joint Committee of regional organizations and MBMV the proposal to use the comparisons for support of COOMET CMC in the measurements of thermal capacity.

Subject 285/RU/03 “Regional comparisons of the national standards of the unit of temperature in the temperature range from the triple point of mercury to the freezing point of zinc”. The coordinator is A.I. Pokhodun, D.I. Mendeleyev VNIIM, Russia.

The meeting participants noted that the work is coming to the end. The main tasks are completing measurements at BelGIM, agreement of the protocol of comparisons with Working group No. 7 of the Consultative Committee on thermometry and preparation of the report on comparisons. The meeting participants considered advisable to specify the name of subject, formulating it as “Regional comparisons of the national standards of the unit of temperature in the temperature range from the triple point of water to the freezing point of zinc”.

Subject 376/RU-a/06 “Organization and conducting the 3-rd All-Russian and COOMET conference on temperature measurements TEMPERATURE 2007”. The coordinator is A.I. Pokhodun, D.I. Mendeleyev VNIIM, Russia.

The meeting participants noted that the subject is realized according to the plan, the large number of applications for participation in the conference came.

The meeting participants agreed that subjects **228/UA/01, 310/UA/04, and 285/RU/03 can be considered as agreed ones.**

4. The further cooperation in the field of temperature measurements

The meeting participants considered advisable to arrange the new work directed to CMC support. The name of the work is formulated as “Comparisons of ampoules of water triple point of the national standards of the unit of temperature”. The coordinator is T.I. Dikun, BelGIM (Byelorussia).

It is admitted advisable to begin the work on this subject since January 2008.

5. Time and place of TC 1.10 next session

The meeting participants agreed to conduct TC 1.10 next session in Minsk in 2008.

Signatures:

A.I. Pokhodun (Russia)

R.P. Sergiyenko (Ukraine)

K.K. Duisebayeva (Kazakhstan)

N. Ye. Martynov (Byelorussia)

K. Bordianu (Moldavia)