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National Metrology Institute

The 10th AFRIMETS TC-M Working Group

By

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INTRODUCTION

The Intra Africa Metrology System (AFRIMETS) was formed by a constituting General assembly in July, 2007, spearheaded by Southern African Development Community Cooperation in Measurement Traceability (SADCMET) and supported by the National Metrology Institute of Germany (PTB) under the auspices of the African Union (AU). AFRIMETS covers Scientific, Industrial and Legal metrology. AFRIMETS is an African Regional Metrology Organisation (RMO) under the International committee on weights and measures -mutual recognition arrangement (CIPM MRA). The main objective of AFRIMETS is to use metrology as a vital tool in dismantling technical barriers to trade (TBTs) by harmonizing measurements. The 10th AFRIMETS working group meetings were held in Cairo, Egypt from 25-28 July 2016.

PURPOSE OF MEETINGS

Fedeth Mutsimba is a mass metrologist and the head of the mass metrology department at SIRDC-National Metrology Institute and a Technical Committee Member for the SADCMET and AFRIMETS mass working group who travelled to Egypt to participate in the TC- Mass working group meetings.

PROCEEDINGS

TC Working Group Meetings

Fedeth Mutsimba participated in the working group on Mass and related quantities.

MASS WORKING GROUP TC-M

The AFRIMETS Technical Committee for Mass was chaired by Dr Alaa Eltaweel of Egypt from National Institute Standards (NIS).

- (a) The meeting kicked off with presentations by each TC-M member on a brief history of their NMIs, their present capabilities and future plans. Fedeth Mutsimba gave an update on Zimbabwe's, SIRDC-NMI mass laboratory status

and activities that will lead to the registration of Calibration Measurement Capabilities (CMCs).

- (b) Dr Alaa Eltaweel from Egypt's National metrology Institute (NIS) made a presentation on NIS capabilities in mass, pressure, volume and force metrology areas. He also presented a list research and development activities that are going on at NIS. The main advantage of NIS is that it has highly qualified personnel and the majority of them are doctors and professors a thing which is lacking at most African NMIs.
- (c) Thomas Mautjana of National Institute of South Africa (NMISA) reported on the progress made about the Afrimets mass intercomparison done in 2014. He presented the results of the comparison and the participants voted for the approval and finalization of the intercomparison (AFRIMETS.M.M. S6). There was also another intercomparison which was planned and it will start any time from now with South Africa being the pilot laboratory.
- (d) The TCL members agreed that the main reason for having such a meeting is to address among other things
 - Inter Laboratory Comparisons
 - Piloting Comparisons
 - Knowledge sharing
 - Discussing new trends in Mass Metrology
 - Collaboration in projects, research and Length toolkit development
 - Reviewing calibration measurement capabilities and enabling BIPM

Redefinition of the mass SI unit

The TCM chairman Dr Alaa Eltaweel gave a presentation on the redefinition of the kilogram. Much of the work has been done in preparation for the redefinition. He gave an assurance that the kg will definitely be redefined using physical constants in 2018. The CCM will choose between using the silicon sphere or the watt balance.

CONCLUSION

AFRIMETS TC Working group is a forum that has the broad objective of enabling NMIs to provide traceability of measurement by anchoring the national measurement systems to the international system of units (SI) through organizing NMIs' participation in key, supplementary and bilateral inter-comparisons. As a result AFRIMETS helps NMIs to

contribute to the development of calibration and testing methods and participation in intercomparisons and posting of CMCs into the BIPM Key Comparison Data Base (KCDB). The forum also helps emerging and established NMIs to Network and collaborate in R & D activities in metrology.