



AFRIMETS
Intra-Africa Metrology System
Système Intra-Africain de Métrologie



2019 TCM report
8 July –9 July 2019
Helnan Dreamland Hotel
Giza, Egypt

Dr. Alaaeldin A. Eltawil

19 attendee from 14 countries.

Research & technical activities within the group

- Establishment and characterization of reference system for calibration of dynamic pressure sensors **SHAKER GELANY-NIS**
- Design of a Novel All-Terrains Wearable Vehicle for Calibrating Heavy Capacity Balances with Human Sensing. **BIKHEET SAYED-NIS**
- NIS new multifunction torque machine **KHALED ABD ELAZIZ-NIS**
- Some development/improvement activities in the mass and related quantities at NMISA **THOMAS MAUTJANA- NMISA.**
- Some factors influencing primary and standard masses values dissemination and determination **SAYED EMIRA-NIS.**
- A Parametric Study of Performance of A Sonic Nozzle under Different Operating Conditions. **FATMA KASSEM-NIS**

Research & technical activities within the group

- The impact of the redefined kilogram **THOMAS MAUTJANA-NIMSA**
- Activities toward the new definition of the kilogram at NIS. **MOHAMMED HAMDI-NIS**
- Development in the mass and related quantities at KEBS **DOMINIC ONDORO-NIS.**
- Some statistical methods for ensuring the validity of results **KHALED ABD ELAZIZ-NIS**
- Upgrading the NIS Solid Density Hydrostatic Weighing System up to 20 kg **MOHAMMED HAMDI-NIS**
- Two-Phase flowmetry at NIS **ALI ZAHRAN-NIS**

Comparison plan review

Year	Identifier	Description	Participants	Pilot	Status
2020	AFRIMETS .M.P-x?	Pressure 0 MPa – 70 Mpa, artefact NMIE	NIS, NMISA, Tanzania, Uganda, Ghana, Morocco, Kenya, Botswana, Mauritius and Nigeria	NIS/N MIE	Planned
2020	AFRIMETS .M.M-S?	Mass (F1 100 mg – 5kg), artefact NMIE	NMIE, Mauritius, Ghana, Uganda, Nigeria, Tanzania, BOBS, Kenya, Rwanda, Zimbabwe	NMIE	Planned
2020	AFRIMETS .-K?	Torque Wrenches (500 Nm) –artefact from LPEE/LNM	LPEE/LNM, NIS, KEBS, NMIE, TBS, UNBS, GSA, RBS (Rwanda)	NIS	Planned
2020	AFRIMETS .M.F-S?	Force (100 kN compression force calibration of force testing machines, artefact from NIS	LPEE/LNM, KEBS, NIS	NIS	Planned

Comparison plan review

Year	Identifier	Description	Participants	Pilot	Status
2021	AFRIMET S.M.T-K?	Torque Transducers(artefact to be decided)	NMISA, NIS, LPEE/LNM, KEBS to be determined	NIS	Planned
2019	Afrimets. M.FF?	Gas Fluid Flow (50- 5000ml/min), artefact from NMISA	NMISA, INRIM, MIKES	INRIM/ NMISA	planned
2020	Afrimets. M.FF?	Volume, 20 L	KEBS, to be decided	KEBS	Planned

Update on AFRIMETS.M.P.K-2 comparison

- NMISA, NIS & PTB completed their scheduled measurements
- Ethiopia & Morocco, still have to perform measurements.
- Expected completion of measurements December 2019

Update on AFRIMETS.FF-k4.2.2015

- Draft B has now been approved and the committee has recommended it for publication

Update on AFRIMETS M.M.K7

- Still ongoing. NIS, ZABS, LPEE, METAS & NMISA have completed measurements.
- KEBS & NIS(second time) still to perform measurement
- Expected completion of measurements – December 2019

Update on AFRIMETS M.D-S4

- Measurements have been completed at CENAM, NMISA and NIS
- Draft A being prepared by NIS Expected completion October 2019

Update on AFRIMETS M.F-S2

- Measurements have been completed at KEBS & PTB
- NMISA to do measurements
- Measurements to be completed September 2019

Update on AFRIMETS M.F-S1

- Measurements have been completed at KEBS & PTB
- Draft A being prepared by KEBS by September 2019

2019-2021 TC-M Strategy and executive committee members (if any changes)

- Chairperson: **Thomas Mautjana** / Vice chairperson: **Dominic Ondoro**

Sub working group	Chair	Vice Chair
Mass	Mr. Thomas Mautjana	Mr. Lhossain Mechkour
Pressure	Dr. Shaker Gelany	Mr. Prince Tawiah
Force	Dr. Khaled Abdelaziz	Mr. Bangi Josephat
Fluid Flow	Ms. Deona Jonker	Dr. Ali Zahran
Viscosity & density	Prof. Dr. Mostafa Mekawy	Mr. Beatrice Lugadiru

Suggestion for next TCM Meeting

- Proposed half day session training for review of CMCs for members to increase the number of capable reviewers in the TC