Best Practices of CIPM MRA in Korea

September 2015

Korea Research Institute of Standards and Science
**DSME – BP, USA (2002)**

**Claim & Problem**
- Offshore plant order by BP, USA.
- **Calibration traceable to NIST required.**
- Since all calibrations in USA takes more than 2 months, it is impossible to meet the due date.

**Solution**
- DSME, accredited by KOLAS, a member of ILAC MRA, keeps maintaining its own standards traceable to KRISS.
- KRISS and NIST are all signatory to the CIPM MRA.
- **NIST confirmed** that “traceability to KRISS is equivalent to traceability to NIST” via the CIPM MRA.
- **BP accepted** the certificates traceable to KRISS issued by DSME.

**Benefit**
- DSME successfully met the requirements of BP without delay.
- if 2 month delay, penalty would be **US$ 10 million**

**CIPM MRA, ILAC MRA**

**Coming over technical barrier to trade**

**Economic benefits to global enterprises**
**Claim & Problem**

- SHI constructing an offshore platform ordered by SEIC, Russia.
- All the measuring instruments installed in the platform **required to be traceable to national measurement standard of Russia.**
- It would take more time if they are calibrated in Russia.

**Solution**

- KRISS and VNIIMS participate in the CIPM MRA.
- KRISS and VNIIMS concluded a protocol recognizing the equivalence of NMS of both countries.
- **SEIC approved** all the measuring instruments of SHI traceable to KRISS as traceable to VNIIMS.

**Benefit**

- **SHI successfully met the requirement of SEIC.**
  - Additional 3 months of delivery & Calibration
  - Possible penalty due to delay of delivery

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**SHI - SEIC, Russia (2003)**

- SHI: Samsung Heavy Industry
- SEIC: Sakhalin Energy Investment Company

[The dimensions of the platform is approximately 95 m x 130 m x 120 m]
**POSCO – India, Mexico (2004)**

**Claim & Problem**
- Mexican manufacturer of automobile parts demanded the proof of reliability of POSCO steel.
- Indian buyer of POSCO steel **required the certification from BIS.**
- It takes more time if they are retested in India

**Solution**
- POSCO’s testing laboratory had been accredited by KOLAS, a member of the ILAC MRA.
- **POSCO has a traceability to KRISS participating in the CIPM MRA.**
- **POSCO’s steel accepted** without being retested in India and Mexico.

**Benefit**
- **Period to test has shorten and fee for test has been saved.**
  - Cost in transportation/retesting at Mexican and Indian labs
  - Cost due to delay in delivery
According to US Repair Station Act, US FAA required KA to secure calibration certificates traceable to NIST.

It would take more time if all the instruments are calibrated in USA.

KRISS and NIST participate in the CIPM MRA.

FAA accepted all the KA measuring instruments traceable to KRISS as traceable to NIST.

KA has been successfully designated US Repair Station.
DHIC - Vietnam (2014)

**Claim & Problem**
- DHIC constructing thermal power plants in Vietnam as a subcontractor
- When performance test carry out after construction, US contractor requested that all the measuring instruments used in the test have to be traceable to NIST.

**Solution**
- The instruments were calibrated in the both KRISS and KRCMI, one of KOLAS accredited calibration lab which maintains its traceability through KRISS.
- **US contractor accepted** the traceability to KRISS by the virtue of CIPM MRA.

**Benefit**
- DHIC took performance test and more than 1 billion USD project has accomplished successfully.
Better Standards, Better Life!

**Fine Instruments - USA (2015)**

**Claim & Problem**
- Fine Inst., a SME in Korea, manufactures measuring instruments as an OEM supplier.
- US buyer requested evidence that Fine Inst.’s clamp meter is traceable to NIST.
- It would take more time if all the measuring instruments are calibrated in USA.

**Solution**
- The clamp meter was calibrated in KTL, one of KOLAS accredited calibration lab which maintains its traceability through KRISS.
- **Fine Inst. verifies its traceability to NIST** since the both NMIs are participating CIPM MRA.

**Benefit**
- Fine Inst. would supply the clamp meter to US buyer (on-going discussion).