



TRAINING

Accreditation of training in legal metrology

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In recent years, the Australian technical training system has undergone a massive change in focus after Australian industry expressed concern that the courses being offered no longer developed the understanding and skills in graduating students that were required by industry. In effect, the training courses were not in tune with the current needs and requirements of industry, a situation intolerable for any industrialized nation. The response was the development of a method of training called Competency Based Training or CBT which is able to identify and respond to the training needs of any industry.

The design of CBT curriculum and programs is such that they will ensure that the student acquires the competency of understanding and skills to the appropriate standards that have been specified by the industry. Assessment is designed to enable the student to demonstrate that they have achieved the understanding and skills expressed as the competencies required by industry.

To guarantee that these courses meet the highest standard possible, the curriculum, course materials, training facilities and trainers are all rigorously assessed by both technical and educational experts. If successful, the training course will be given national accreditation and successful participants will qualify with nationally accepted credentials.

This accreditation of trainers and training materials is very similar in principle to the accreditation of a laboratory to ensure that it meets a certain standard*. Such accreditation can then be used to select a laboratory for a particular task with confidence in the standard and quality of the work to be provided.

The movement towards globalization and the elimination of technical barriers to trade both internationally and regionally has created an urgent need for mutual confidence and measurement consistency between national legal metrology systems. As a result, both bilateral and multilateral mutual recognition arrangements are being developed between trading partners.

* BIML note: Discussions have taken place within the OIML as to whether the word "accreditation" is most appropriate in the context of training. The use of "validation" or "certification" has been suggested, however no final decision has yet been made.



Fig. 1 APLMF industry training course on the requirements for pattern approval, Ottawa, Canada, 1999

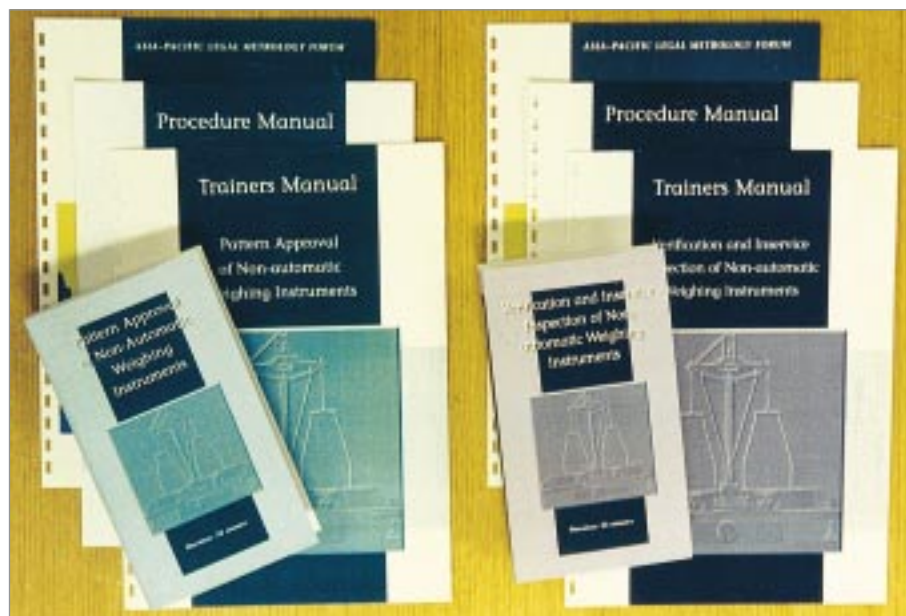


Fig. 2 CBT training packages developed by the APLMF to assist in the implementation of OIML R 76

This is all being strongly supported by the OIML's long pursuit of international metrological harmonization. In fact the fundamental importance of OIML Recommendations and Documents cannot be overstated as mutual recognition arrangements develop throughout the world.

To support this fundamental need, OIML Recommendations are only published after extensive research and very broad international consultation by the Technical Committee. Developing and producing OIML Recommendations and Documents is only the first step in a process to ensure that they are used effectively. To assist in this process many OIML Recommendations are now being supported by a set of detailed test procedures.

However, the satisfactory implementation of any OIML Recommendation depends on the development of similar interpretations and understandings of the Recommendation. Along with this, the same level of technical competence in carrying out the evaluation and verification test procedures needs to be developed throughout the many different systems around the world. This competence can only be achieved through joint discussion and personnel interaction as a function of training. Therefore, training has to cover the same content, ensure that the participants have achieved the same outcomes, and be presented by highly qualified and professional trainers in suitable training facilities.

Currently, countries and regional organizations are having to develop their own training packages and training courses in order to implement a Recommendation. This can be a very expensive and time-consuming task. Consequently, many countries and organizations

are seeking existing training packages to assist them in training their staff so that they can satisfactorily implement OIML Recommendations.

At present there is no way of judging whether or not any of these training packages provide a sound basis on which to build the understanding and skills necessary to implement the Recommendation to meet OIML requirements envisaged by the Technical Committee. Accreditation similar to the Australian model would mean that the training materials and trainers have to go through a rigorous appraisal by experts who would ensure that the criteria and requirements set by the OIML have been met.

To do this, the OIML would need to set out the style, required components and criteria that must be met in order to receive OIML accreditation. The accreditation of any training materials should focus on the assessment of the competency standards and content of courses to ensure:

- the educational standard of the materials;
- that the materials are technically correct;
- the use of appropriate international metrology language;
- relevance to industry and the community;
- that learning outcomes and content are appropriate to the technical skills required;
- that assessment methods are included and appropriate; and
- that the materials are easy to follow and can be used in a variety of situations.

Such a proposed process for OIML accreditation of training materials and courses based on OIML Recommendations would ensure quality training. Courses accredited under the OIML principles could then be listed on an international register within the OIML Bulletin and on the OIML web site (www.oiml.org) and be recognized internationally as OIML accredited courses.

The quality and effectiveness of any training course is also only as good as the appropriateness of the facilities and equipment being used, the communication and training skills of the trainer and the relationship between trainer and student. To guarantee the effectiveness of the training course there is also a need to accredit organizations and personnel as training providers.

Based on the above concept, countries, organizations and industries seeking training courses and/or a training provider would be able to select from this register. This would give them confidence that whatever

they select and use will be of a high standard and will assist them to implement OIML Recommendations to an appropriate level to meet international requirements.

It should also be mentioned here that a training course can only make personnel task-ready. To ensure competence, confidence and the mutual recognition of test results requires experience and other tools such as intercomparisons between laboratories. Training, however, must be one of the initial steps and as such be recognized as an essential part of the mutual recognition equation.

It is therefore of paramount importance to ensure that any available training and training resources meet a high standard which has been established and set by the OIML. To ensure the highest possible standard, the available training and training resources should be of a high educational standard as well as of a high technical standard. ■



Fig. 3 APLMF train the trainer course on the verification of nonautomatic weighing instruments, Bandung, Indonesia, 1999

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