UDC 629.3.01

Yu. Radchenko, Master

SYSTEM OF LABORATORIES MANAGEMENT FOR ROAD VEHICLES TESTING

The peculiarities of the development and implementation of the system of testing laboratory management for conducting investigations of road vehicles are described. The main objects of the test laboratory are the self-designed vehicles which used to be in operation.

To prevent the non-conforming products from entering the market is only possible by adjusting the corresponding control and testing. The guarantee that the test results are reliable is the availability of an accreditation certificate for demands compliance at the test laboratory [1].

Testing is the only source of almost all reliable information obtaining on the properties and quality of wheeled and tracked vehicles at all stages of the life cycle.

The control system of the testing laboratory in accordance with the requirements of DSTU ISO/IEC 17025:2006 [1] is based on eight fundamental quality management principles stated in [2] and consists of two sections: the administrative requirements and technical requirements.

The first stage of work on the development of management systems is the formulation and discussion of the quality policy application. It should be emphasized that in [1] there were established quite clear requirements for it to meet. The next step is external training of laboratory specialists and developing guidelines concerning the quality requirements and procedures carrying out.

The proposed model of quality control testing laboratory is shown in Fig. 1. In this model there are reflected all the requirements [1] with the exception for paragraph 5.6. This is because VL TPA does not use in its work the standards and standard samples. In the case of non-standardized test methods application, such methods are evaluated for suitability.

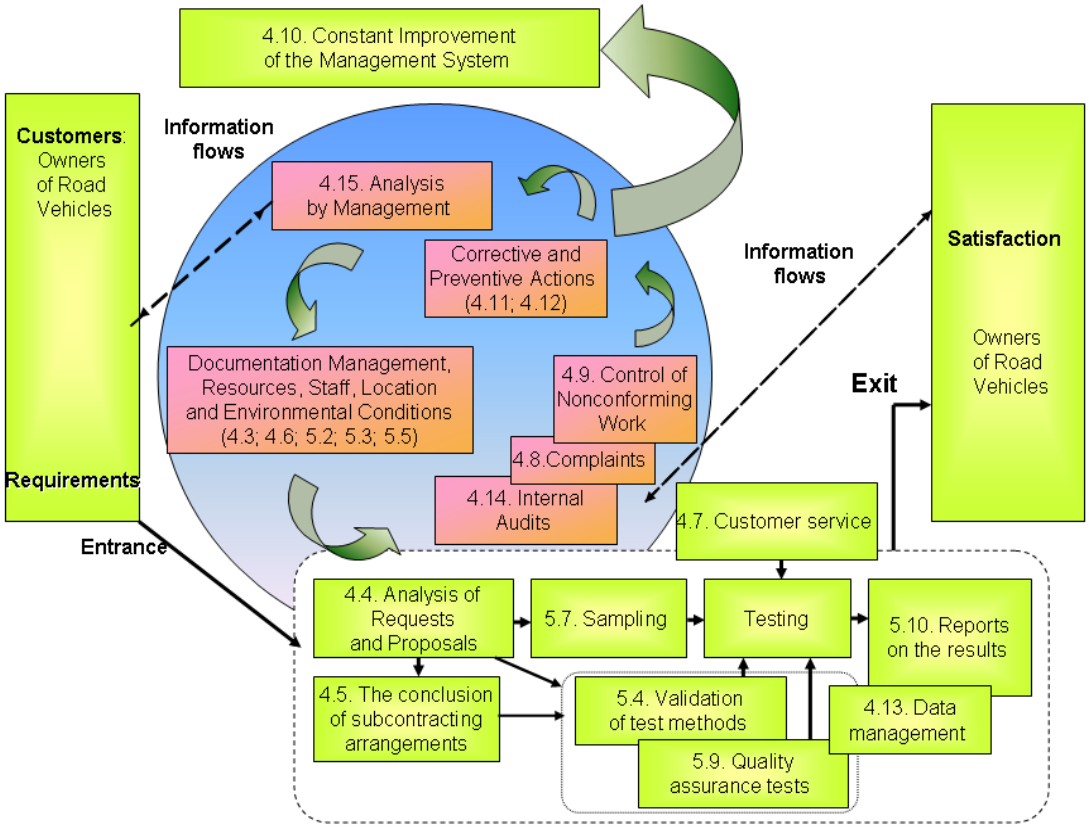

Fig. 1 – The model of a control system testing laboratory

The current level of technological development and technology requires the development of new non-standardized methods of testing and evaluation of standardized methods for their suitability and compliance with current requirements. Particularly relevant and not fully explored is the problem of the suitability assessment (validation) of test methods.

We propose to divide the validation process into three stages (Fig. 2): the preparatory stage - formation of specification requirements for measurement and selection of appropriate measurement techniques, the main stage - identifying and evaluating performance techniques, the final stage - approval procedure. In case if the method was declared unfit, they research it in order to improve.

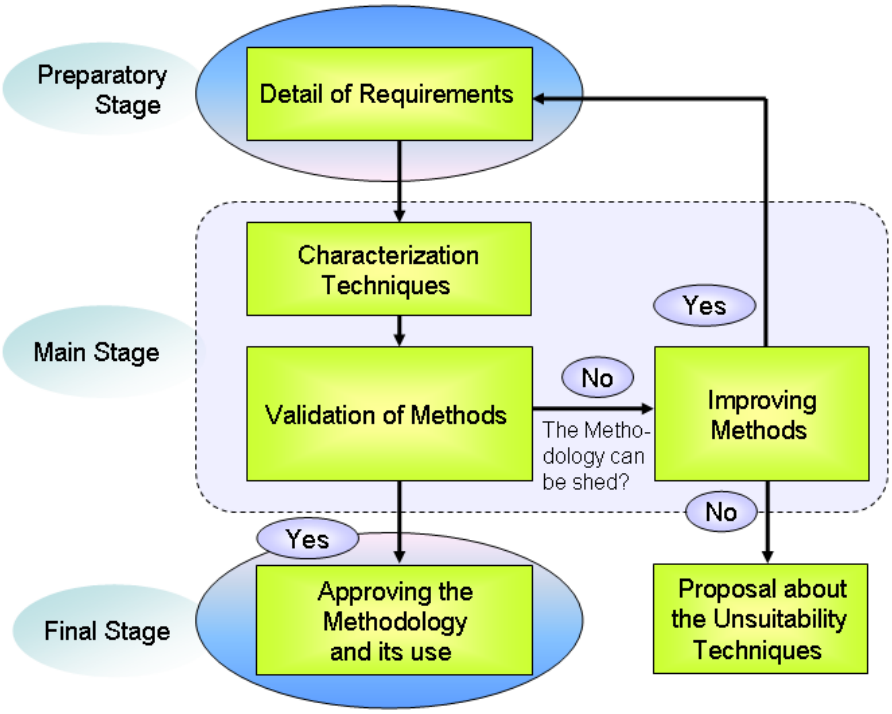

Fig. 2 – The Procedure Validation of Test Methods

During the validation of testing methods they evaluate the performance of intra-laboratory repeatability, investigate the stability of methods in the laboratory and evaluate the measurement inaccuracy. In addition to these features, at validation of methods of dynamic (running) tests, they verify the absorbability coefficient. This figure takes into account the compliance with the accepted model tests.

Conclusions. Implementation of control laboratory testing improves the quality of experimental tests based on utilization of the results of such tests.

References

1. Загальні вимоги до компетентності випробувальних та калібрувальних лабораторій : ДСТУ ISO/IEC 17025:2006 (ISO/IEC 17025:2005, IDT). –[Чинний від 2007-07-01]. К. : Держспоживстандарт України, 2007. – VI, 26 с. – (Національний стандарт України).
2. Системи управління якістю. Основні положення і словник термінів : ДСТУ ISO 9000:2007 (ISO 9000:2007, IDT). –[Чинний від 2007-07-01]. К. : Держспоживстандарт України, 2007. – VI, 26 с. – (Національний стандарт України).

Radchenko Yuliya Andrianivna – Master, Kharkiv National Automobile and Highway University.

Scientifics chief: Korobko Andrey Ivanovich, Candidate of Technical Science, Associate Professor of Engineering Techniques and Machine Repairs Department