

**RULE OF THE CENTRAL BUREAU OF WEIGHTS AND MEASURES**

**ON RULES, PROCEDURE, AND CRTIERIA IN RESPECT OF INSPECTION AND VERTIFICATION OF**

**A WATER METER OF A LICENSE HOLDER TO BE AN INSPECTOR AND VERIFICATION OF A**

**WATER METER B.E. 2550 (2010)**

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To ensure that a license holder to be an inspector and to verify water meter performs his duty to inspect and verify the water meter in an accurate and consistent manner:

By virtue of sections 6 (3) (5) and 42 of the Weights and Measures Act of B.E. 2542 (1999) and the provisions of clauses 10, 11, 17, 54, 76, 77, 78, and 79 of the Ministerial Regulation prescribing the measuring devices under the jurisdiction of the Weights and Measures Act of B.E. 2542 (1999), type(s), characteristics, manufacturing material details, maximum permissible error rate, the certification of the weighing and measuring instruments and the criteria and procedure of registration of private mark of B.E. 2546 (2003), the Director-General of the Department of Internal Trade as the Commander of the Central Bureau of Weights and Measures hereby issues the Rule as follows:

**Clause 1.** This rule is called the “Rule of the Central Bureau of Weights and Measures on Criteria, Procedure, and Conditions in respect of inspection of a water meter of a license holder to be an inspector and to verify the water meter of B.E. 2550 (2007)”.

**Clause 2.** This Rule shall come into force on the day after the date of notification in the Government Gazette.

**Clause 3.** A license holder to be an inspector of a volume meter shall perform inspection and verification of water meter as follows:

(1) The water meter to be inspected and verified must have the correct characteristics as prescribed in the Weights and Measures Act of B.E. 2542 (1999) and the ministerial regulation, and must inform the details of the water meter in accordance with the

form *Chor Wor. Thor Ror. 001* at the end of this rule to the central bureau or branch bureau together with the application.

The water meter must display the following details – private mark, name or trade mark, model, serial number, specified flow rate, level of metering reliability, year of manufacturer, sign showing the direction of water flow, and the maximum working pressure if more than 1,000 kilopascal.

(2) The test of pressure resistance

- a. collect samples which account for 1 percent of the water meter in each size and level of metering reliability as indicated in the application. In case the number of the water meters do not amount to 100 units, it shall be considered as if there were 100 units;
- b. test the water meter according to a) by using the pressure of at least 1,000 kilopascal and maintain the pressure continuously for no less than 1 minutes. The water meter, which does not leak and not change the appearance, passes the inspection.

If every unit of the water meter in a) passes the test, the water meter in the application passes the inspection. If one of the units of the water meter fails the test, the water meter in the application fails the inspection. In the latter case, every unit of the water meter in the application shall be tested. Any units that fail the test shall be fixed before applying for re-inspection and re-verification.

(3) The test for loss of water pressure

- a. Collect samples which account for one unit in every 1,000 units of the water meters in each size and level of reliability as indicated in the application. In case the number of the water meters do not amount to 100 units, it shall be considered as if there were 100 units;
- b. Test the water meter according to a) by finding the loss of water pressure of the water flow through the water meter in the following steps;
  - i. set up two pressure meters which are apart from each other at the distance at least equal to the length of the water meter;

ii. before setting up the water meter, determine the loss of water pressure of water that flows through the pipe, the distance of which is as long as that in i), at the minimum flow rate and maximum flow rate of the water meter in the inspection;

iii. after setting up the water meter, determine the loss of water pressure at the minimum and maximum flow rates;

iv. determine the difference between the loss of water pressure in ii) and iii);

and,

v. the difference of the loss of water pressure must not exceed 25 kilopascal at the minimum flow rate, and the difference of the loss of water pressure must not exceed 100 kilopascal at the maximum flow rate, in order to pass the test.

If every unit of the water meter in a) passes the test, the water meter in the application passes the inspection. If one of units of the water meter in a) fails the test, the water meter in the application fails the inspection. In the latter case, every unit of the water meter in the application shall be tested. Any units that fail the test shall be fixed before applying for re-inspection and re-verification.

(4) The test for the protective ability against the magnetic field

a. Collect samples of at least 1 per cent of the water meters in each size and level of reliability as indicated in the application. In case the number of the water meters do not amount to 100 units, it shall be considered as if there were 100 units;

b. Test the water meter according to a) by setting up a magnetic field with intensity of 5,000 lines per square centimeters. The magnet shall be placed at only one position on each unit, arranging alternately either from the left or right hand side, or either at the top or bottom. Subsequently, the test shall be done in order to determine the reliability of water supply of the water meter according to size, specified flow rate, range flow rate and minimum flow rate, using the minimum tested volume as specified in levels A, B, and C of the table of levels of reliability attached to the end of this rule.

The reliability of water supply of the water meter when compared with the water container used to inspect the water volume must have the margin of error not exceeding the permissible error range at both the maximum and minimum ends as set in the table of levels of reliability. The margin of error within the said range passes the test.

If every unit of the water meter in a) passes the test, the water meter in the application passes the inspection. If one of units of the water meter in a) fails the test, the water meter in the application fails the inspection. In the latter case, every unit of the water meter in the application shall be tested. Any units that fail the test shall be fixed before applying for re-inspection and re-verification.

- (5) The reliability test
  - a. Every unit of the water meters shall be subject to the test.
  - b. The test in a) shall be the test of reliability of the water supply of the water meter according to size, specified flow rate, range flow rate, and minimum flow rate, using the minimum tested volume as specified in levels A, B, or C at the end of this rule.

The reliability of water supply of the water meter when compared with the water container used to inspect the water volume must have the margin of error not exceeding the permissible error range of measurement. The margin of error within the said range passes the test.

If any unit of the water meter does not pass the test, that unit shall be fixed before being subject to re-inspection and re-verification.

- (6) The result of the tests in (2), (3), (4) and (5) must be reported according to the forms *Chor Wor. Thor Ror.* 002, 003, 004, and 005 at the end of this rule to the central bureau or branch bureau, together with the report of the license holder.

- (7) Only the water meter that passes the tests in (1), (2), (3), (4), and (5) shall be stamped with a certification mark, which is placed at the position that prevents any change or alteration of the reliability of the water volume meter. The certificate of verification of

weighing and measuring instruments s in case that Form *Chor Wor.* 108 is used for the certificate of verification of weighing and measuring instruments , arranging from the smaller number in the same manner as the identification number of the weighing and measuring instruments .

(8) Upon receiving the result of the inspection in (1), (2), (3), (4), and (5), the license holder or an agent sign the forms *Chor Wor. Thor Ror.* 001, 002, 003, 004, and 005.

**Clause 4.** The Director-General of the Department of the Internal Trade shall have charge and control of the execution of this rule.

Given on the 29<sup>th</sup> of January B.E. 2550 (2007)

Siripon Yordmuangcharoen

Director-General of the Department of Internal Trade

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