

Unofficial Translation\*

(Garuda Sign)

The Office of the Ministry of Information

By the rules, procedures and conditions of inspection and certification.

Non-automated weighing platform mounted on a weighing platform with a capacity of twenty metric tons or more. The licensee is the inspector and the certifier.

B.E. 2554

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So that the licensee can check and Automatic Weighing Scale Fixed platform with fixed position Those twenty metric tons or more are manufactured correctly and There are standards directly benefiting farmers and consumers.

By virtue of Article 6 (3) (5) and Section 42 of the Measurement Act B.E. 2542 (1999) which contains certain provisions regarding the limitation of rights. And freedom of the person, which Section 29, together with Section 32, Section 33, Section 41 and Section 43 Of the Constitution of the Kingdom of Thailand Commandment By living To govern the provisions of the law. Director-General Department of Internal Trade The regulations are as follows.

Clause 1 This regulation is called "Regulation of the Central Office of Weights and Measures. With the methodology And the conditions to check and Automatic weighing platforms are not guaranteed. Twenty Metric Tons or more The licensee is the inspector and certifier of 2011"

Clause 2 This Regulation shall enter into force on the day following the date of publication in the Government Gazette.

Clause 3 of Regulation "Licensee" means the licensee to inspect and certify. Non-automatic weighing platform mounted on a platform with a capacity of twenty metric tons or

more produced. "Balance" means a non-automatic weighing scale fixed to a fixed position.  
Twenty Metric Tons or more

Clause 4 of the Internal Trade Department is in charge of this Rule

Category 1

General

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Clause 5 scales would check and make sure. The guarantee must be a balance in force. The Measurement Act B.E. 2542 (1999) is a type of detailed and detailed material used for production. In accordance with the Ministerial Regulations issued under the provisions of the Measurement Act B.E. 2542 (1999)

Clause 6. The licensee shall submit the request for the examination and c. To certify the scales they produce. According to the announcement of the Department of Internal Trade, the licensee's practice is to inspect and certify. Weighing Scale, dated January 27, 2006, with details of weight components. Transmission Weighing And the features of the scale Including the software used in Displayed weighing version, version and owner

Clause 7 shall apply to determine the validity of the scales a little weight to the article. Defined in the Department of Internal Trade regulations on the formulation, provision and provision or creation. The applicant's laboratory or facility is responsible for inspecting and certifying fixed weighing platforms. With the coordinates from 20 Metric tons up 2004, dated 19 August 2004

Clause 8. The licensee shall determine the general characteristics. And check the balance of the balance. According to the methodology And the conditions prescribed by this regulation prior to certifying the balance.

Category 2

Check the general appearance of the scale.

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Clause 9 The licensee shall determine the general characteristics of the scale below.

(1) The balance must show the following details: Difficult

(A) the name or trademark of the manufacturer;

(B) models which specify the type of scales

(C) manufacturer-specific identifiers

(D) the serial number prescribed by the competent official;

(E) the maximum capacity of the balance and the minimum balance of

the balance,

(F) Step value of the scale (d)

(G) Milestone (e)

(H) number of steps to be taken;

(J) weighing scale

(2) The display of the balance must have the following characteristics:

(A) analog display

1) Steps, sections, and pointers Must be properly designed and Work together

2) Steps, paragraphs, numbers, letters or symbols must be easy to read.

And make it difficult

3) If multiple values are present All must show the corresponding values.

4) If there is a print value. Printed values must match the displayed values.

(B) digital display

1) displaying values regardless of numbers, letters or other symbols. Come together or not Must not confuse reading.

2) If there are multiple values. All must show the correct value.

3) If there are both digital and analog displays Display value Digital must conform to analog display.

4) If there is a print value. Valid values must match the displayed values.

(3) weight display

(A) Scales with multiple values. All part weight values must be displayed. The weight difference does not exceed the absolute value of the allowance for that weight.

(B) digital display The values displayed at all sections must match.

(4) the markers of the controls, the display part and the equipment, and The balance switch must be easy to read. Clear and difficult

(5) Check the For balancing seals, you can prevent modifications. After the certification, which can be modified, modified or repaired, only when required. Apply the seal.

Clause 10 The licensee shall determine the manner of weighing scales or display their own half. Show your own values as follows.

(1) displaying the results of the weighing

(A) The display section must show the name or symbol of the weighing unit.

(B) Step values are given as  $1 \times 10^k$   $2 \times 10^k$  Or  $5 \times 10^k$  By k is Integer, positive, full, negative or zero

(2) analog display section

(A) the width of the mark must not be greater than the space between the mark

(B) The value identifier must have an approximate width equal to the width of the section.

(C) The distance between the pointers and the plane of the step shall not exceed 2 millimeters.

(D) The value identifier must be one half of the shortest threshold.

(3) digital display

(A) display at least one position at the rightmost position with a dot Decimal (.)

Or commas (,). Integer and decimal point and in Show this value to show the number to the left of the decimal point at least 1 position and display the number. To the right of the decimal point, all positions for zero display may be indicated by zeros. 1 The rightmost position without any markings.

(B) In the case of a scale, Must be in the same position

(4) The value display must show the maximum overload capacity not exceeding 9 times of the step value. Certification

(5) Scales with approximate values. Step value must be greater than 1 in 100 of the maximum strength and not less than 20 times the value of the test. The estimated value of the scale is considered as an aid in displaying the value.

(6) The value must be typed correctly. Height of letters and numbers Must be no less than 2 millimeters, print values will be printed only when the display is in equilibrium state. The balance is determined by the display section, which displays the constant. Or display two adjacent values alternately. For more than 5 seconds

(7) The recording section is only recorded when the display is in equilibrium state. Consider the (6)

(8) Weight scales must be characterized. As follows

(A) the value of the part of the weight shall be equal to the value of the weighing element. At any weight

(B) The automatic or semi-automatic load shall be weighted in the direction shown. The weight is reduced to the weight that weighs. And weight must not exceed the maximum rating. Maximum weight In case the scale has auto-weighting That part must not be unloaded unless The weighing process is completed.

(C) The weights will only work when the balance is in equilibrium.

(D) In the case of more than one weight and simultaneous weighing The balance must display or print all the weight values.

(E) If the total weight, net weight or weight is printed More than once 1 The value must be clearly marked as the weight of the total weight. Or net weight or weight

(9) Pre-determined weight

(A) The weight of the advance must be equal to the mileage. Scale section Or automatically adjust to the value of the scale of the scale.

(B) in the case of Weight Pre-weighted The specified value must not be modified or discarded while the workload is active.

(10) Where the balance has a locking part. Show your position, locks and weighing positions clearly. Weighing can only be carried out at weighing stations.

(11) Weighing scales To be in such a way that people related to the scale can see the show. Value clearly

(12) Electronic weighing scales must be characterized. As follows

(A) in case of external interference Electronic scales must be able to work. Correctly or to indicate that the error has occurred from the disturbance.

(B) In the event of a malfunction, it affects the accuracy of the balance. The balance must stop. Work automatically Or is displayed to the user scales know. And must be displayed until Disorder is gone.

(C) Where the balance is activated. Display values must show all symbols that Can be displayed

(D) a battery-powered balance must be able to function properly. Accurate Continuity Or do not show weight when the voltage received from the battery is too low. That the manufacturer determines.

(E) Prevention of electromagnetic interference. And the radio frequency is not there. Effect on the precision of the scale. And printable values

(F) If the scale has a computer system. Or peripheral devices through the device. External connection computer system Or accessories must not be Weighing and data results Weighing down and can not send Order or input data to the scale, which allows the scale to display the value of the calculation. Or save the value of the weighing result from when no such device is connected to the balance. And must be sealed External connection devices as wall.

(13) The connection of the weighing cable to the weight display and the weighing scale. Computer peripheral Computer systems connected to weighing scales must meet the following requirements:

(A) cable connection of the balance The effect on the weight display must be. According to the following requirements.

1) Load-transmitting devices, Load Cell) Each call to the signal box. And the signal line from the signal box to the weighing port. Load-measuring device (s) must not have any junction boxes or peripherals and walks. The signal line must be in such a way that it can be easily monitored.

2) Cable from the internal circuit board of the weighing unit to the connecting device. External Signals (Ports) No Signal Or other device to connect.

3) Set the cable from the internal circuit board of the weighing unit to each section. External connection devices (Ports) for connecting the weighing cable to the system. Computer and external display Each cable set can only be available.

A) the weighing signal line to the computer system; Or the value display Come out only

B) ground wire

4) The cable from the weighing port to the outgoing connector. (Remote Display), no separate cable box or any peripheral device. And it can be easily checked.

5) Modifications, modifications or additions to any device. No part weighs.

(B) Scales with computer peripheral systems. Computer system connected to weighing scale Weight must meet the following requirements.

1) The cable from the computer system must be connected to the connected device. Signal of weighing scale only

2) The computer system must be used only for weighing signals from the weighing scale.

3) Software used to display the scale must make the display of the scale. The computer comes directly from the live weighing The scale and can not be modified weighing results. The values are then

4) In the event of any type of scale. Transcripts must weigh at least. following details

A) Total Weight (heavy trucks with total weight of goods).

B) heavy trucks

C) less weight, moisture, contaminants, etc. (if any).

D) weighing goods

E) the signature of the scale

F) The date, time and place to be to scale.

Clause 11 The licensee shall determine the nature and scale of the show itself, not below.

(1) scales with the balance shown in the balance pointer 2 point match point balance. Shall have the same thickness. And far less than the thickness of a balance point. In cases where the balance point. Thickness less than 1 mm to less than 1 mm apart.

(2) In the case of weighing the value type. The print is printed only when the scroll bars. Knob or slider Or a mechanism to change weight position. Position that corresponds to the number. The number of full field The Section

(3) Check the blade.

(A) The blade must be firmly attached to the Li River.



(B) the blade must be sharp, hard and taking all the parts that need to be on a knife edge.

(C) supporting the blade. Be smooth And hardness at least equal to the blade.

(D) the blade and the blade must be supported in such a way that when it's put on some weight gain. Equal to one-half of the rated capacity of up to drop the knife. Supported or sharp knife in the right direction to do. Ensure the reliability of the machines go wrong.

(E) if the scales have a barrier to prevent them from sliding to the blade length of the barrier. May experience a sharp knife to smooth. Hardness at least equal to the blade and the blade exposed to a minimum.

(4) to determine the meaning of Section.

(A) Section on the beam. It is a tick or a sawtooth either or. Both together Limit must be equidistant and parallel to each other.

Sawtooth be equally smooth And the line cut A tooth down to be equidistant and parallel to each line. If both match and sawtooth Underscores the need to sequence it. Sawtooth to indicate the rate of the teeth clearly and accurately.

(B) the definition section and the gap between the beam and the meaning of Section. The rate of weight on it Must be clearly legible and permanent manner.

(5) checking balance.

(A) The balance, the pendulum move. A large section refers to every section refers to the rate. Weight saved

(B) the balance, all vehicles must have a barrier to prevent them from sliding knob. Move too From Section Zero

(C) at the end of each beam to prevent slippage scroll knob to balance the need to keep. The balance firmly packed

(D) The balance must look at the balance, to the end zone to go. Balance shall return His own

(E) in the normal state. The balance needs to be, and if I have to swing the swing. Both sides

(6) monitoring bob slide.

(A) move the knob for the use of the balance of the section is meant to make the teeth with a pinch. Move the knob to the teeth in the correct position and pecking perched firmly.

(B) the pendulum hanging scroll type. The balance must be exposed and sharp, hard look at the cause. Bob slide it easily swing

(C) Move the knob to move easily and without treatment. The meaning of the statute and Sawtooth. On balance, fade Or wear-prone

(D) Remove the pendant drop can not be separated easily. And must not have a channel on bob slide

(E) the scroll knob can not be removed from the balance easily.

(F) bob slide and hanging on to the scales firmly.

(G) along for the suggested rate of weight. Or at the rate of weight that must sharp bob slide. RIM said, and for the weight to be parallel to the section on the beam.

(7) To determine weights clutter.

(A) All weights counterbalance weights used on any scale. Must be marked on the knob is shown. A knob used to weighing it. Mark shall not fade easily, and the defenses that must be used instead. How much weight with (

B) weights counterbalance this must be a mistake to let the pendulum normal weight.

(8) knob and slide the knob clutter. If there is a hole for the filler material to match the pendant. Require such knowledge only. Room only materials that make my move in pendulum and weights counterbalance to put off firmly attached to it.

(9) scales are applied to the switch. Or via available Those parts must be The change does not cause back or accuracy of the scales away.

(10) the scales are removable. Removing the need for The reliability of the machines go wrong unless. If a weighbridge to remove any leaves that will be used to scale the impossible.

(11) scales with the service. The machine noon That part must be firmly fixed. And the need You can easily change

Clause 12 scales must show the weight in a way that people relate to. Weighing all the weight can be read simultaneously. If it does not show the weight in such a way. The show must have a numerical value of weight increase by 1 for the parties involved to weigh all sides. Read the weight simultaneously.

Clause 13 components of the scales at the weigh must show the seal exclusion. To provide assurance that the review of the competent authority.

### Category 3

Audit brushed out of scale

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Clause 14. To check the reliability of the scale showing them manually or semi-scale display itself. test disc Christopher Smith Nations. Drop Weight Test Test your ability to repeat such a test. Place the weight on the position of the following.

(1) The test script is the Nation to conduct tests while weighing a test weight. (Section A pendulum weight) amounting to not less than 5 tonnes placed on the weighing platform.

(A) the scales show the analog so. The increase or decrease in weight is equal. The absolute value of the margin of error of the test weight. Weighing the need to increase or decrease. Not less than 0.7 times the weight increase or decrease.

(B) the scales show the digitally so. The increase or decrease in weight is equal. 1.4 times the basic meaning of Section scales. Scales to show the changes from the original.

(2) Test drop weight. The added weight on the test platform. (Section A pendulum weight). Since the weight center (No weight on the platform) to coordinate capacity of the scales. That can not be true The test has to put weight not less than 20 metric tons and then conduct tests. Reduced weight by lifting weights, test weights from the platform to the center. Weighing must have been wrong. Show the margin of error does not exceed the rate of weight on every test.

When using weights as heavy a weight test section. weighted combination of overload capacity. Maximum weighing up to 20 metric tons, or the weight of the materials or other items that weigh more weight reduction. For a scale with the digital display and is not a representation that makes the display resolution than ever before. The test procedure by putting heavy objects instead of a bob weight section according to the Article 17.

Test weights to drop weight test at least 5 different values. It covers both the highest rate of weight (not less than 20 metric tons) rated capacity and lowest around. The margin of error with a change rate of the scale as well.

The test weight or put on weight reduction test platform must act in such a way. An increase or decrease in weight steadily.

For the scales are displayed digitally and without the treatment. The section provides that the The show has more than (Read the fine shall not exceed 1 in 5 d) the operation of a wrong result. The value (the E the c ) the scale at the position, change the display settings according to Article 15.

The scales are set automatically or treatment center portion thereof may be active.

(3) testing capabilities repeated using test weights. (Section A pendulum weight). Fixed not less than 10 metric tons placed repeated three times in the middle of the platform. The difference in the values. Scale must not exceed the absolute value of the margin of error of the test weight.

(4) test weights placed at different positions, place the test weight (weight accompaniments. Section A), the position of those in (a), (b) or (c) as the case below.

(A) the scales are for weighing not more than 4 points, to divide the area into the platform. 4 sub-sections and place the test weight equal to one-third of the coordinates. The maximum capacity of the scale in each. Subsection in the same direction, respectively. In the absence of a test weight equal to one-third of the coordinates. The maximum capacity of the Scales test, place a weight of not less than 5 ton central area of the subdivision. Or if the pendulum weight A section is a weighted pendulum test to put Spread over an area of sub-section shall indicate the position. Put weight on his part in the audit report as well.

(B) The weighing platform supports a maximum of 4 points for the scales with a support platform. N and n is the number 4 to divide the platform into  $1 / n$  sub-sections and place the test weight. Equal to  $1 / (n-1)$  of rated maximum capacity of the scale in each sub-section in the same direction, respectively.

In the absence of test weights equal to  $1 / (n-1)$  coordinates of the maximum capacity of the scale. Place the test weight of at least 5 tons of sub-central area. If using a pendulum weight section. Several test weights are weights A place that supports the weight of the subject to show the position put weight. On an area of  $1 / n$  part in the audit report as well.

When weighing up the two points are closer together than would drop weight test. Add weight to be doubled. And drop weight test areas on both sides of the drag on the support platform. both

(C) the scales used for weighing things with wheels or rolling. The drop weight test A look at the size of a roll weighing scales in the state of normal operations may take the test weight. Equal weight scales, most often, but not more than 0.8 times that of the coordinates. The maximum capacity of the scales that position. On various platforms by placing the position of the start, middle and end of the platform in the direction of such a scale and regular. The test in the opposite direction as well

The difference in the value of the balance must not exceed an absolute value of the difference. The margin of error of the test weight. And the value put on weight for each test position. Must be within the margin of error as well.

For the scales are displayed digitally and without the treatment. The section provides that the The show has more than (Read the fine shall not exceed 1 in 5 d) the operation of a wrong result. The value (the E the c ) the scale at the position, change the display settings according to

Clause 15.If the scales are set to automatically shut down the operation of the section before the test. 15. The effect of the display ( $E_c$ ) the scales of values and digitally. No parts that make up the show, the show has the same profile. (Read the fine shall not exceed 1 in 5 d). At the position turning point for the show. The operation is as follows.

(1) drop weight test (L) on a scale from putting such weight in increments of 1 in 10. The meaning of the section of the scales ( $\Delta L$ ) until the scales show up more clearly in Section 1 for the definition. And to determine the weight on the scale shown before rounding out the equation.

$$P = l + 1/2 d - \Delta L.$$

P is the weight on the scale shown before rounding.

l was present when the scales drop weight test

L. d is the meaning of Section scales.

$\Delta L$  is the total weight placed in increments of 1 in 10 of the basic meaning of Section scales. The results for the first round of the equation.

$$E = P - L$$

E is the result of a wrong representation of the scales before rounding.

L is the test weights (weights and weight section). The results for the first round and then edit the value. By the following equation:

$$E_c = E - E_0 \leq MPE.$$

$E_c$  is the result of the first round and then edit the value.

$E_0$  is the wrong position, center-weighted or weighted value is calculated by the Center under Article 15 (2).

margin of error Weight of the test The result before rounding error correction values. Must not exceed the rate of margin of error. The test weight

(2) finding the wrong position, weight, center-weighted or center (the  $E_0$  the ).

(A) for the scales are not set up automatic and semi-automatic alignment. To the test center. The drop weight test (Section A pendulum weight) onto the scales so close. The position change of the values that make the most of the operations center when the scales show the weight. Center add weight increments of 1 in 10 of the Section of weighing scales to make the change. The value of the weight increase to a value of 1 means the statute. The result is not showing up first. Rounding a zero weight in accordance with Clause 15 (1).

(B) for the scales are set automatically or treatment center. Put on weight Scales with weights of up to 10 times the meaning of Section scales. Weighing up to show off the range. The automatic zero or the treatment center. Then place the weight in increments of 1 in 10 of the basic means. Section of weighing scales to make the change in the value increase was the first step to find out the meaning of Section wrong. The charge under Section 15 (1) (a result that the center position is equal to the weight of the offense. Position weight Near zero)

Clause 16. To check the reliability of the scales show the value itself is not a test. The sense of scale Drop Weight Test The ability to test for the left and put the test weight. The positions are as follows.

(1) Test your sense of balance to such testing, while the scales are weighted test. (Section A pendulum weight) at least 5 tonnes placed on the weighing platform. Put on weight at the same rate. Margin of error of the test weight to move the pointer from the old equilibrium, at least periodically. 5 mm

(2) Testing performed to drop the weight, as well as Article 14 (2).

(3) test the ability to perform repeated, as Article 14 (3).

(4) The weight placed on the position of the operation, as well as Article 14 (4).

The difference in the value of the balance must not exceed an absolute value of the difference. The margin of error of the test weight. And the value put on weight for each test position. Must be within the margin of error as well.

Clause 17 The test weight with an object instead of a pendulum weight shall be conducted. Respectively, as follows:

(1) to test the weight placed by Article 14 (2) as accompaniments add weight to the article. The maximum weight of the heavy weights in the existing statute. And the effect of the value of the scale. According to Article 15, Section A, then lift weights weight scales all out until there is no weight on the platform. The scales at the treatment center.

The remaining section of the pendulum weight 10 times. The meaning of the statute of the scale.

(2) to place objects weighing weights replace a section with a weight equal to the weight of the position. The turning point was the The result is a representation of the value of the scale (1), then place the test. Weight scales with weights, add a section to the next.

#### Section 4

#### Directors Pledge

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Clause 18 gives the licensee the mark or stamp. The certification according to Josh. 104. The scales have been audited in accordance with Chapter 2 a general nature and verified by noon. Volume 3 by stamping or the sheet number sequence regularly and that. Position protected To edit or modify the accuracy of scales everywhere.

Clause 19 gives the licensee the books. Showing the importance of the certification regular weighing and measuring. By Josh. 106 below.

(1) Details of the book shows the importance of the certification of regular weighing and measuring. Provide complete and accurate in all

(2) signed the letter shows the importance of providing qualified regular weighing and measuring.



(3) stamped or date, check and make sure the certificate and the date of expiry. Representations (representations age of 2 years from the date of providing certification) to.

(A) Number Pad No. regularly and is firmly attached to the weighing of weighing machine

(B) the book shows the importance of the certification of regular weighing and measuring. Correctly every edition

Clause 20 scales that do not pass inspection under Chapter 2, and the general appearance. Check midday as a Category 3 Do not give guarantees.

Clause 21 , the licensee shall report the results of operations in accordance with the regulations. Federal Office of Weights and Measures. The report on the performance of the licensee as auditors and the approval of weighing and measuring. 2549 dated 27 January 2549 together with the report of the audit and the certification. Scales according to Josh. Sq. A.ch. -1 end this mess to the office or center. The licensee offices. The request submitted to monitor and provide signed.

Given on the 31<sup>th</sup> Day of January B.E. 2554

Wachira Wimuktayon

(Wachira Wimuktayon)

Department Directors within brackets.