



### Search Laws

Title: [Regulations for Safety Inspection of Existing Hazardous Machines and Equipment](#) ( 2014.07.03 Modified ) [Ch](#)

#### Article Content

##### [Article 1](#)

These Regulations are enacted pursuant to the provisions of Paragraph 4 of Article 16 of Occupational Safety and Health Act (Hereinafter referred to as the Act), for the purpose of having the existing hazardous machines and equipment under the control of the inspection supervision.

##### [Article 2](#)

The existing hazardous machines and equipment as referred to in these Regulations are listed as follows:

1. Those that have already been installed before the date when Occupational Safety and Health Act came into force, and that have currently not been qualified by the inspection.
2. Those that have already been installed before the date when the Regulations for Safety Inspection of Hazardous Machines and Equipment were promulgated and became effective, and that have currently not been qualified by the inspection.
3. Those that have already been installed before the date when the construction specifications were regulated by the relevant national standards or the hazardous machines and equipment regulations, and that have currently not been qualified by the inspection.
4. Those that have already been installed before the date when the central competent authority designates the applicable foreign inspection standards, and that have currently not been qualified by the inspection.

The requirements in the Regulations for Safety Inspection of Hazardous Machines and Equipment shall be applied, for any not stipulated in these Regulations,.

##### [Article 3](#)

The existing hazardous machines and equipment may be exempted from the requirements for the type, welding, and construction, as stipulated in these Regulations for the Hazardous Machines and Equipment, in case the application for inspection of the existing ones is submitted to the labor inspection authority or the deputed inspection agency designated by the central competent authority (hereinafter all referred to as the Inspector) in compliance with Article 16 of the Act.

##### [Article 4](#)

To apply for inspection of the existing hazardous machines, the Owner shall fill up and submit an Application form for Inspection (Annex 1) and a detailed construction list along with the supporting documents as listed below:

1. The assembly sketches and strength calculation sheets.
2. Area plan and fundamental summary of the fixed crane.
3. Area plan of the construction lift.
4. Setting means of fixing for the derrick crane.
5. The related evidences showing the installation date in compliance with the requirements as stipulated in the preceding Article 2.

The format of the above-mentioned detail list shall be formulated in conformity with the requirements stipulated in the Regulations for the Hazardous Machines and Equipment.

##### [Article 5](#)

When the Owner's submittal appears lacking of the original documents as required and listed in the preceding Article, the Inspector shall proceed with the inspection in accordance with the following stipulations:

1. With respect to those cases where the relevant documents evidenced with the original manufacture's signature are available, the material property and strength may be qualified by review of the said documents.
2. With respect to those cases where the material specification utilized are unclear, the minimum material strength may be considered to be used.
3. An overall construction drawing, to be prepared by the Owner, with the dimensions indicated thereon, may be accepted. In case it is difficult to prepare the said overall construction drawing for some portion, the photographs which have the equivalent effectiveness to show the outline, shape and the assembling configuration of the said portion may be accepted to be used.
4. In review of the material strength, the original design standards or the related standards existing at the manufacturing stage may be adopted.
5. With respect to those cases where the original strength calculation report does not appear in a completed form, the strength calculations performed by the Owner for the major components including the truss, jib, loading cage and etc. may be considered to be acceptable.

##### [Article 6](#)

The hoisting or carrying capacities of the existing hazardous machines, which are fully documented as per the requirements stipulated in the preceding Article 4, may be judged and determined by the Inspector based on the review of the original design and the results of the inspection through

implementation of the inspection procedure.

The hoisting or carrying capacities of those existing hazardous machines, which are not fully documented, may be determined by the Inspector based on the review of the related documents ( including the detailed construction list, the assembly sketches and the strength calculation sheets) and the results of the inspection.

Article 7 After the Employer's application for inspection of the existing hazardous machines and equipment has been received and docketed, the Inspector shall notify the applicant of the scheduled inspection date.

Article 8 The Employer himself or his designated personnel shall be in company with the Inspector in the course of carrying out the inspection for the existing hazardous machines. The test loads and necessary hoisting instruments for the load test and stability test shall also be prepared in advance by the Employer.

Article 9 The items to be inspected for the existing hazardous machines shall be in compliance with the same as inspected for completion inspection or usage inspection stipulated in the Regulations for Safety Inspection of Hazardous Machines and Equipment

Article 10 In case the installation space between the existing hazardous machines and the building is inadequate, but still not jeopardizing the operation safety, the Inspector may proceed with the inspection in accordance with the following stipulations, and make remarks on the related documents:

1. During the outage for maintenance or overhaul, the trolley of the overhead crane shall be moved and fixed in between the two trusses, and a minimum headroom of 1.8 meter shall be maintained between the building top and the walkway; or a canopy shall be installed at least 1.5 meter above the walkway with a warning notice posted on a significantly distinct location.
2. If it is impractical to provide a walkway for the overhead crane in compliance with the requirements, an inspection platform equipped with fall arresting measures shall be installed as an alternative.
3. If the safe-headroom above the top of the construction lift or the depth of the pit is inadequate, the safety facilities and measures, as required for performing the maintenance or overhaul tasks, shall be provided. In addition, a warning notice shall be posted at a distinct location.

Article 11 To apply for inspection of the existing hazardous equipment, the Employer shall fill up and submit the Application Form (Annex 2) and a detailed list together with the following documents:

1. The detailed structure drawings and the strength calculation sheets.
2. The test results of the mechanical properties for the welded parts,
3. The test results of the non-destructive examination, as necessary.
4. The construction drawing of the safety valves and the blow-down capacity calculation sheets, as necessary.
5. The location plan of the equipment and the plot plan showing its surrounding conditions,
6. The related evidences showing the installation date in compliance with the requirements as stipulated in the preceding Article 2.

The format of the above-mentioned detailed list shall be formulated in conformity with the requirements stipulated in the Regulations for the Hazardous Machines and Equipment.

Article 12 When the Owner are lacking of the original documents as listed in the preceding Article, the Inspector shall proceed with the inspection in accordance with the following requirements:

1. With respect to those cases where the relevant documents evidenced with the original manufacture's signature are available, the radioactive examination, welding efficiency, material property and strength may be qualified by review of the said documents.
2. With respect to those cases where the material specification utilized are unknown, the minimum material strength may be considered.
3. In review of the material strength, the original design standards or the related standards existing at the manufacturing stage may be adopted.
4. The welding and construction inspections may be deemed as acceptable, if the prior acceptance stamps of the same inspections can be identified.
5. An overall construction drawing to be prepared by the Owner, indicating the inner diameter of vessel, length, end plate, type of tube sheet, thickness, size and location of the holes, arrangement of the heat transfer tubes and etc. may be accepted.
6. With respect to those cases where the Owner's submittal does contain the mechanical test results for the welded components, or in case the required non-destructive examination results, or the strength calculation sheets do not appear in a completed form, a strength calculation report for the major components including the fire tubes, vessel body, end plate, tube sheet and etc., which is

prepared by the Owner and has been checked and acknowledged by a registered professional mechanical engineer, may be considered to be acceptable.

Article 13 To implement the inspection with the Owner's submitted documents which completely fulfill the requirements as stipulated in the above Article 11, the Inspector may proceed with the review of the contents of the original design, and decide the maximum operation pressure or design pressure based on the result of the inspection.

In case the documents submitted by the Owner, do not completely fulfill the above said requirements, the Inspector may implement the inspection by review of the construction list, construction detail drawings, strength calculation sheets, and the set pressure of the safety valves, and decide the maximum operation pressure or design pressure based on the result of the inspection.

Article 14 The inspection of the existing hazardous equipment shall be carried out by the Inspector, in company with the Employer himself or his designated personnel. The preparation items listed below shall be

made ready in advance:

1. Placement of the objects to be inspected at a location convenient for inspection.
2. Preparation for pressure tests like hydraulic pressure test and etc.

[Article 15](#)

The scope of inspection of the existing hazardous equipment shall include the material thickness, construction, dimension, maximum operation pressure, review of the strength calculation, manhole, inspection hole, cleaning hole, number of the safety valve, blow-down test, number of the pressure gauge, safety device, pressure test and other inspection items, as required.

[Article 16](#)

If there has difficulty in performing the pressure test of the existing hazardous equipment, the Inspector may proceed with a substitutive test in accordance with the following requirements:

1. To perform a hydraulic test at the pressure of 1.1 times the maximum operation pressure for the boilers or the steam pressure vessels.
2. To perform a pressure test with respect to the contents or the harmless liquid contained therein, at the pressure of 1.1 times the normal operation pressure for the high pressure gas vessels, the super-low temperature vessels, the vessels containing special contents such as catalyst, or other vessels which appear to be difficult to receive a hydraulic test.

In case there appears to be difficulty in performing the pressure test with liquid as stipulated in the preceding paragraph, a pressure test performed with air, nitrogen, or other harmless gases at the equivalent pressure may be used as a substitution.

The pressure tests stipulated in the above two paragraphs may be exempted, if there are evidences by means of records to show that the same tests have been implemented and qualified within one (1) year.

[Article 17](#)

The inspection of the existing hazardous equipment shall be implemented both internally and externally. The content of external inspection shall include visual surface examination, detections of the external corrosion, cracks, distortion, defilement and leakage on the surfaces, as well as the necessary non-destructive detection, ultrasonic thickness measurement at specified points vulnerable to corrosion, and other inspections, as required.

In case a leakage is found during the external inspection stipulated in the preceding paragraph, the Inspector may request the Owner to remove the insulation enclosure on the equipment at the discretion of the Inspector's own judgment.

The content of the internal inspection shall include surface examination, detections of thickness, corrosion, cracks, distortion, defilement and etc., as well as the necessary non-destructive detection and other inspections, as required.

The pressure test may be used as the substitute for the internal inspection stipulated in the preceding paragraph, if the said internal inspection turns out to be difficult to be performed.

However, a make-up internal inspection shall be implemented during the next coming annual overhaul of the equipment.

[Article 18](#)

The inspection serial number shall be stamped, for identification purpose, on the distinct portion of the existing hazardous machines and equipment which have been successfully qualified through the inspection. In the mean time, the Inspector shall fill up a final inspection report and issue an inspection qualification certificate (annexes 3, 4) with validity date of one (1) year. The said validity date may be less than one (1) year at the discretion of the Inspector based on the actual inspection results.

The final inspection report mentioned in the preceding paragraph shall be formulated in conformity with the format as specified per the Regulations for Safety Inspection of Hazardous Machines and Equipment.

[Article 19](#)

The employer shall apply to the Inspector for the periodic inspection of the existing hazardous machines and equipment in accordance with the Regulations for the Hazardous Machines and Equipment, no later than one (1) month before the expiry date of the previous inspection's qualification certificate.

[Article 19-1](#)

The provisions stipulated in these Regulations relating to the Employer shall apply mutatis mutandis to the self-supporting labor regardless the work is accomplished either independently by himself or cooperatively by working with the labors belonging to other Employer.

[Article 20](#)

These regulations come into force as of the same date of promulgation.

These regulations come into force as of the same date of being revised on July 3, 2014.