

既有危險性機械及設備安全檢查規則(民國 103 年 07 月 03 日修正)

Regulations for Safety Inspection of Existing Hazardous Machines and Equipment

(2014.07.03 Modified)

第 1 條	為使既有危險性機械及設備納入檢查管理，依職業安全衛生法（以下簡稱本法）第十六條第四項規定訂定本規則。
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.
第 2 條	本規則所稱既有危險性機械及設備如下： 一、職業安全衛生法施行前，已設置且目前未經檢查合格者。 二、危險性機械及設備安全檢查規則施行前，已設置且目前未經檢查合格者。 三、國家標準或危險性機械及設備法規規範相關構造規格前，已設置且目前未經檢查合格者。 四、中央主管機關指定適用國外檢查標準前，已設置且目前未經檢查合格者。 本規則未規定者，適用危險性機械及設備安全檢查規則之規定。
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.
第 3 條	事業單位對於既有危險性機械及設備，依本法第十六條規定，向勞動檢查機構或中央主管機關指定之代行檢查機構（以下合稱檢查機構）申請檢查時，得不受危險性機械及設備安全檢查規則所定型式檢查、熔接檢查及構造檢查等規定之限制。
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.
第 4 條	事業單位申請既有危險性機械檢查時，應填具檢查申請書（附表一）及明細表，並檢附下列書件： 一、組配圖及強度計算書。 二、固定式起重機之設置場所平面圖及基礎概要。 三、營建用升降機之設置場所四周狀況圖。 四、人字臂起重桿或吊籠之設置固定方式。 五、符合第二條規定之設置時間相關證明文件。 前項明細表，依危險性機械及設備安全檢查規則所定格式。
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.
第 5 條	事業單位依前條檢附書件之原始資料欠缺者，檢查機構依下列規定辦理：

	<p>一、具有原製造廠簽署之相關證明文件者，得以資料審查方式認定材質及強度。</p> <p>二、使用材質不明者，得依最低強度採計。</p> <p>三、事業單位自行繪製之整體組配圖，並註明尺寸者，得予採認。但繪製整體組配圖有困難者，得就繪圖困難部分採用能表明各該部位之外觀、形狀及組配情形，並具有同等圖示效果之拍攝影像採認之。</p> <p>四、得依原設計標準或製造當時之相關標準實施強度計算。</p> <p>五、原始強度計算書不全者，得依事業單位實施桁架、伸臂、搬器等主要結構之強度計算，予以採認。</p>
Article 5	<p>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:</p> <p>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.</p> <p>2. With respect to those cases where the material specification utilized are unclear, the minimum material strength may be considered to be used.</p> <p>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.</p> <p>4. In review of the material strength, the original design standards or the related standards existing at the manufacturing stage may be adopted.</p> <p>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.</p>
第 6 條	<p>檢查機構對於事業單位依第四條檢附之書件資料齊全者，於實施檢查時，得依原設計內容審查，並依檢查結果核定既有危險性機械之吊升荷重或積載荷重。</p>

	事業單位檢附證明資料不齊全者，檢查機構得依其提供之構造明細表、組配圖、強度計算書等相關文件審查，並依檢查結果核定吊升荷重或積載荷重。
Article 6	<p>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.</p> <p>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.</p>
第 7 條	檢查機構對事業單位申請既有危險性機械及設備檢查，應於受理檢查後，將檢查日期通知申請人。
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.
第 8 條	檢查機構實施既有危險性機械檢查時，雇主或其指派人員應在場，並應事先準備荷重試驗、安定性試驗用荷物及必要之吊掛器具。
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.
第 9 條	既有危險性機械檢查項目，依危險性機械及設備安全檢查規則所定竣工檢查或使用檢查項目。
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.
第 10 條	<p>既有危險性機械與建築物間之設置空間不足，如無礙使用安全者，得依下列規定辦理，並註記於相關檢查文件：</p> <p>一、於保養、檢修時，將架空式起重機駛至兩橫樑間加以固定，使屋頂與其人行道間保持一點八公尺以上或於其人行道設置高一點五公尺以上</p>

	<p>有簷之頂蓬，並於顯著地點懸掛警告標示。</p> <p>二、架空式起重機無法依規定設置人行道時，得改設具有防止人員墜落設施之檢點台。</p> <p>三、營建用升降機之頂部安全距離或機坑深度不足者，得採取維修保養之必要安全設施及措施，並顯著標示。</p>
Article 10	<p>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:</p> <p>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.</p> <p>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.</p> <p>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.</p>
第 11 條	<p>事業單位申請既有危險性設備檢查時，應填具檢查申請書（附表二）及明細表，並檢附下列書件：</p> <p>一、構造詳圖及強度計算書。</p> <p>二、熔接部之機械試驗結果。</p> <p>三、必要之非破壞試驗結果。</p> <p>四、安全閥構造圖及必要吹洩量計算書。</p> <p>五、設備設置場所及其周圍狀況圖。</p> <p>六、符合第二條規定之設置時間相關證明文件。</p> <p>前項明細表，依危險性機械及設備安全檢查規則所定格式。</p>
Article 11	<p>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:</p> <p>1. The detailed structure drawings and the strength calculation</p>

	<p>sheets.</p> <ol style="list-style-type: none"> 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. <p>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.</p>
<p>第 12 條</p>	<p>事業單位依前條檢附書件之原始資料欠缺者，檢查機構依下列規定辦理：</p> <ol style="list-style-type: none"> 一、具有原製造廠簽署之相關證明文件者，得以資料審查方式認定放射線檢查、熔接效率、材質及強度。 二、使用材質不明者，得依最低強度採計。 三、得依原設計標準或製造當時之相關標準實施強度計算。 四、如具有前經熔接、構造檢查合格打印號碼可資識別者，得予採認。 五、事業單位自行繪製之整體組配構造詳圖，並註明容器內徑、長度、端板、管板型式、厚度、孔之尺寸及位置、傳熱管之配置等項目者，得予採認。 六、未檢附熔接部之機械試驗結果、必要之非破壞試驗結果或強度計算書不全者，事業單位如實施爐筒、胴體、端板、管板等主要結構之強度計算，經執業之機械技師簽認後，得予以採認。
<p>Article 12</p>	<p>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:</p> <ol style="list-style-type: none"> 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

	<p>adopted.</p> <p>4. The welding and construction inspections may be deemed as acceptable, if the prior acceptance stamps of the same inspections can be identified.</p> <p>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.</p> <p>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.</p>
第 13 條	<p>檢查機構對於事業單位依第十一條檢附之書件資料齊全者，於實施檢查時，得依原設計內容審查，並依檢查結果核定其最高使用壓力或設計壓力。事業單位檢附證明資料不齊全者，檢查機構得依其提供之構造明細表、構造詳圖、強度計算書、安全閥設定壓力等相關文件審查，並依檢查結果核定最高使用壓力或設計壓力。</p>
Article 13	<p>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.</p> <p>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.</p>
第 14 條	<p>檢查機構實施既有危險性設備檢查時，雇主或其指派人員應在場，並事先完成下列準備事項：</p> <p>一、應將受檢查物件放置於易檢查位置。</p> <p>二、準備水壓等耐壓試驗。</p>
Article 14	<p>The inspection of the existing hazardous equipment shall be carried</p>

	<p>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:</p> <ol style="list-style-type: none"> 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.
第 15 條	<p>既有危險性設備檢查項目為材料厚度、構造、尺寸、最高使用壓力、強度計算之審查、人孔、檢查孔、清掃孔、安全閥數量、吹洩試驗、壓力表數量、安全裝置、耐壓試驗及其他必要檢查項目。</p>
Article 15	<p>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.</p>
第 16 條	<p>檢查機構於實施既有危險性設備檢查之耐壓試驗有困難者，得依下列規定辦理：</p> <ol style="list-style-type: none"> 一、鍋爐、蒸氣類壓力容器，以最高使用壓力一點一倍以上壓力實施水壓試驗。 二、高壓氣體類設備、超低溫設備、內存觸媒等特殊內容物之設備或其他實施水壓試驗有困難者，以常用壓力一點一倍以上壓力就內容物或無危害之虞之液體實施耐壓試驗。 <p>前項耐壓試驗，以液體實施有困難者，得以同等壓力之空氣、氮氣或其他無危害之虞之氣體實施耐壓試驗。</p> <p>前二項耐壓試驗曾於一年內實施合格，並有紀錄證明者，得免實施。</p>
Article 16	<p>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:</p> <ol style="list-style-type: none"> 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

	<p>difficult to receive a hydraulic test.</p> <p>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.</p> <p>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.</p>
第 17 條	<p>既有危險性設備檢查時，應實施外部檢查及內部檢查。</p> <p>外部檢查為外觀檢查、外部腐蝕、裂痕、變形、污穢、洩漏之檢測、必要時實施之非破壞檢查、易腐蝕處之定點超音波測厚及其他必要檢查。</p> <p>前項外部檢查，檢查機構如發現有洩漏等情形時，得要求事業單位拆除保溫材被覆。</p> <p>內部檢查為內部之表面檢查、厚度、腐蝕、裂痕、變形、污穢等檢測、耐壓試驗、必要時實施之非破壞檢查及其他必要檢查。</p> <p>前項內部檢查確有困難者，得僅實施耐壓試驗。但應於歲修時補行實施。</p>
Article 17	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>
第 18 條	<p>檢查機構對於檢查合格之既有危險性機械及設備，應在被檢查物體上明顯</p>

	<p>部位打印檢查號碼，以資識別，並填具檢查結果報告表及核發檢查合格證明（附表三、附表四），其有效期限為一年。但檢查機構得依檢查結果，予以縮短之。</p> <p>前項檢查結果報告表，依危險性機械及設備安全檢查規則所定格式。</p>
Article 18	<p>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.</p> <p>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.</p>
第 19 條	<p>事業單位至遲應於既有危險性機械及設備檢查合格證明有效期限屆滿前一個月，依危險性機械及設備安全檢查規則之規定，向檢查機構申請定期檢查。</p>
Article 19	<p>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.</p>
第 19-1 條	<p>自營作業者，準用本規則有關雇主之義務規定。</p>
Article 19-1	<p>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.</p>
第 20 條	<p>本規則自發布日施行。</p> <p>本規則中華民國一百零三年七月三日修正條文，自一百零三年七月三日施行。</p>
Article 20	<p>These regulations come into force as of the same date of promulgation.</p> <p>These regulations come into force as of the same date of being revised on July 3, 2014.</p>

附表一 既有危險性機械檢查申請書

() 檢查申請書				編號：	
種類及型式		吊升荷重或 積載荷重		公噸	
設置地點	電話：				
※製造完成日期及製造編號	年	月	日	第	號
希望受檢地點					
希望檢查日期	年	月	日	備註	
此 致					
(檢查機構全銜)					
				設置事業單位：	印
				負責人：	印
				地址：	
中 華 民 國					
年					
月					
日					
<p>註：本表括號部分，請依既有固定式起重機、既有移動式起重機、既有人字臂起重桿、既有營建用升降機、既有營建用提升機或既有吊籠等種類填入一種。</p>					

附表二 既有危險性設備檢查申請書

() 檢查申請書 編號：					
使用單位名稱				電話	
				聯絡人	
裝設地址					
型式及名稱				傳熱面積	m ²
最高使用壓力	Kg/cm ²	最高使用溫度	°C	內容積	m ³
內容物名稱				有無毒性	
及製造年月	中華民國 年 月 製造				
希望受檢日期	中華民國 年 月 日			備註	
<p>此致</p> <p>(檢查機構全銜)</p> <p>申請人： 印</p> <p>地 址：</p> <p>中 華 民 國 年 月 日</p> <p>註： 本表括號部分，請依既有鍋爐、既有第一種壓力容器、既有高壓氣體特定設備或既有高壓氣體容器等種類填入一種。</p>					

附表三 既有危險性機械檢查合格證明存根（正面）

檢查機構全銜		字第		號
() 檢查合格證明		存根		
設置單位				
設置地點或 設置單位地址	電話：			
吊升荷重或 積載荷重	公噸	營建用提升 機之導軌或 升降路高度	公尺	
升降機具之 設置用途		編 號		
製造廠商		製造日期	年 月	
種類及型式		打印編號		
檢查日期	有 效 期 限			檢查員簽章
年 月 日	自	年 月 日	至	年 月 日
年 月 日	自	年 月 日	至	年 月 日
年 月 日	自	年 月 日	至	年 月 日
年 月 日	自	年 月 日	至	年 月 日
年 月 日	自	年 月 日	至	年 月 日
年 月 日	自	年 月 日	至	年 月 日
年 月 日	自	年 月 日	至	年 月 日
				檢 查 員

註：本表括號部分，請依既有固定式起重機、既有移動式起重機、既有人字臂起重桿、既有營建用升降機、既有營建用提升機或既有吊籠等種類填入一種。

附表三 既有危險性機械檢查合格證明（正面）

字第			號
() 檢查合格證明			
設置單位			
設置地點或 設置單位地址	電話：		
吊升荷重或 積載荷重	公噸	營建用提升機之 導軌或升降路高 度	公尺
升降機具之 設置用途	編 號		
製造廠商	製造日期		年 月
種類及型式	打印編號		
檢查日期	有 效 期 限		檢查員簽章
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
(檢查機構全銜)			
中 華 民 國 年 月 日			

註：本表括號部分，請依既有固定式起重機、既有移動式起重機、既有人字臂起重桿、既有營建用升降機、既有營建用提升機或既有吊籠等種類填入一種。

附表四 既有危險性設備檢查合格證明存根（正面）

檢查機構全銜 字第 號 （ ）檢查合格證明 存根			
事業單位名稱			
設置地址			
型式			
最高使用壓力	Kg/cm ²		
傳熱面積	m ² /m ³		
製造廠及 製造年月			
編號		合格打印號碼	
檢查日期	有效期限		檢查員簽章
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
年 月 日	自 年 月 日	至 年 月 日	
			檢查員簽章
（檢查機構全銜）			
中 華 民 國 年 月 日			

註：本表括號部分，請依既有鍋爐、既有第一種壓力容器、既有高壓氣體特定設備或既有高壓氣體容器等種類填入一種。

紙張標準：A4

附表四 既有危險性設備檢查合格證明存根（背面）

日期	記 事	檢 查 員 簽 章
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		

紙張標準：A4

附表四 既有危險性設備檢查合格證明（背面）

日期	記 事	檢 查 員 簽 章
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		
年 月 日		

