機械設備器具安全標準(民國 111 年 5 月 11 日修正)

Safety Standard of Machinery, Equipment and Tools (2022.5.11 Modified)

第 一 章 總則	
Chapter I General Provisions	
第 1 條	本標準依職業安全衛生法(以下簡稱本法)第六條第三項、第七條第二項及第八條第五項規定訂定之。
Article 1	In accordance with the Occupational Safety and Health Act (hereinafter referred to as the Act) Article 6 Paragraph 3, Article 7 Paragraph 2 and Article 8 Paragraph 5, the standard is enacted.
第 2 條	本標準適用之機械、設備、器具如下： 一、本法施行細則第十二條規定者。 二、中央主管機關依本法第八條第一項規定公告者。 前項機械、器具之構造、性能及安全防護，不得低於本標準之規定。
Article 2	This standard is applicable to machinery, equipment or tools stated below: 1. Those specified in Article 12 of the Enforcement Rules of the Act. 2. Those announced by the central competent authority in according with Paragraph 1, Article 8 of the Act. The structures, performances and safe guards of the abovementioned machinery, equipment or tools shall not below the requirements of this standard.
第 3 條	本標準用詞，定義如下： 一、快速停止機構：指衝剪機械檢出危險或異常時，能自動停止滑塊、刀具或撞錘 (以下簡稱滑塊等)動作之機構。 二、緊急停止裝置：指衝剪機械發生危險或異常時，以人為操作而使滑塊等動作緊急停止之裝置。 可動式接觸預防裝置:指手推刨床之覆蓋可隨加工材之進給而自動開閉之刃部接觸預防裝置。
Article 3	Terms of the standard are defined as follows: 1. A protective stop mechanism: referred to automatically stop a slider, a cutter or a ram (hereinafter referred to as the slider) when a press machine or a shear machine detecting dangerous or abnormal condition. 2. An emergency stop device: referred to stop the slider moving by manual operation when the press or the shear machine detecting dangerous or abnormal condition. 3. A self-adjusting contact-preventive device: referred to the safeguard of a hand-fed planer that can automatically open or close with the feeding of processing material to prevent a blade from touching.
第 二 章 動力衝剪機械	
Chapter II Power presses or shear machines	
第 一 節 安全護圍	

Section I Safetyguards	
第 4 條	以動力驅動之衝壓機械及剪斷機械（以下簡稱衝剪機械），應具有安全護圍、安全模、特定用途之專用衝剪機械或自動衝剪機械（以下簡稱安全護圍等）。但具有防止滑塊等引起危害之機構者，不在此限。 因作業性質致設置前項安全護圍等有困難者，應至少設有第六條所定安全裝置一種以上。 第一項衝剪機械之原動機、齒輪、轉軸、傳動輪、傳動帶及其他構件，有引起危害之虞者，應設置護罩、護圍、套胴、圍柵、護網、遮板或其他防止接觸危險點之適當防護物。
Article 4	Except that has mechanism to prevent hazard from the slider, a power press machine or a power shear machine (hereinafter referred to as the press or shear machine) shall have a safeguard, a safety die, be a particular-purpose press or shear machine, be an automatic press or shear machine (hereinafter referred to as the safeguard). Because the nature of jobs to lead difficulties for making the safeguard, it should be at least provided with one or more safety devices set by Article 6. Motors, gears, rotating-shafts, driving- wheels, driving-belts and other components of the press or shear machine referred to the first paragraph and those having a risk of causing hazards, shall have guard-shields, guard-fences, guard-grilles or other appropriate means to prevent a body part touching danger points.
第 5 條	前條安全護圍等，應具有防止身體之一部介入滑塊等動作範圍之危險界限之性能，並符合下列規定： 一、安全護圍：具有使手指不致通過該護圍或自外側觸及危險界限之構造。 二、安全模：下列各構件間之間隙應在八毫米以下： (一)上死點之上模與下模之間。 (二)使用脫料板者，上死點之上模與下模脫料板之間。 (三)導柱與軸襯之間。 三、特定用途之專用衝剪機械：具有不致使身體介入危險界限之構造。 四、自動衝剪機械：具有可自動輸送材料、加工及排出成品之構造。
Article 5	The safeguard referred to the preceding Article, shall be capable of preventing a body part intervening the hazard zone of the slider moving and meet the following provisions: 1. Safeguard: being capable of preventing fingers touching through it or from outside. 2. Safety die: a gap between as following two members being less than 8 millimeters. (1) the upper-half die and the lower-half die when the slider at the top dead center. (2) for having a stripper, this referred to that between the upper- half die and the stripper, and that between the stripper and the lower-half die when the slider at the top dead center. (3) the guide post and bushing.

	3. A particular-purpose press or shear machine : having a construction to prevent a body part intervening a hazard zone. 4. An automatic press or shear machine: having a construction automatically to feed material, process and discharge finished workpiece.
第 二 節 安全裝置	
Section II Safety devices	
第 6 條	衝剪機械之安全裝置，應具有下列機能之一： 一、連鎖防護式安全裝置：滑塊等在閉合動作中，能使身體之一部無介入危險界限之虞。 二、雙手操作式安全裝置： （一）安全一行程式安全裝置：在手指按下起動按鈕、操作控制桿或操作其他控制裝置 (以下簡稱操作部)，脫手後至該手達到危險界限前，能使滑塊等停止動作。 （二）雙手起動式安全裝置：以雙手作動操作部，於滑塊等閉合動作中，手離開操作部時使手無法達到危險界限。 三、感應式安全設置：滑塊等在閉合動作中，遇身體之一部接近危險界限時，能使滑塊等停止動作。 四、拉開式或掃除式安全裝置：滑塊等在閉合動作中，遇身體之一部介入危險界限時，能隨滑塊等之動作使其脫離危險界限。 前項各款之安全裝置，應具有安全機能不易減損及變更之構造。
Article 6	The safety device of the press or shear machine shall have one of the following functions: 1. Interlocked guard safety device: it can prevent a body part intervening to the hazard zone while the slider in closingaction. 2. Two-hand control safety device: (1) Safe-single-stroke safety device: It can make the slider stopped before two hands releasing from start buttons, control levers or other control devices (hereinafter referred to as the operating portion) reach the hazard zone. (2) Two-hand start safety device: It can prevent two hands releasing from the operating portion to reach the hazard zone while the slider in closing- action. 3. Sensing safety device: it can make the slider stopped if a body part is closing to the hazard zone while the slider in closing- action. 4. Pull-back or push-out safety device: it can follow the slider moving to withdraw or push a body part out from the hazard zone. The safety devices referred in the preceding subparagraphs shall be not easy impairment or alteration.
第 7 條	衝剪機械之安全裝置，應符合下列規定： 一、具有適應各該衝剪機械之種類、衝剪能力、每分鐘行程數、行程長度及作業

<table>
<tr><td></td><td>方法之性能。
二、雙手操作式安全裝置及感應式安全裝置，具有適應各該衝剪機械之停止性能。</td></tr>
<tr><td>Article 7</td><td>The safety device of the press or shear machine shall meet the following provisions:
1. Adapting to the type of the press or shear machine, the capacity, the numbers of stroke per minute, stroke and operating ways.
2. Adapting to the stop performance of each type of the press or shear machine for a two-hand control safety device or a sensing safety device respectively.</td></tr>
<tr><td>第 8 條</td><td>前條第二款所定雙手操作式安全裝置或感應式安全裝置之停止性能，其作動滑塊等之操作部至危險界限間，或其感應域至危險界限間之距離，應分別超過下列計算之值：
一、安全一行程雙手操作式安全裝置：
D＝1.6（Tl＋Ts）
式中
D ：安全距離，以毫米表示。
Tl：手指離開安全一行程雙手操作式安全裝置之操作部至快速停止機構開始動作之時間，以毫秒表示。
Ts：快速停止機構開始動作至滑塊等停止之時間，以毫秒表示。
二、雙手起動式安全裝置：
D＝1.6Tm
式中
D ：安全距離，以毫米表示。
Tm：手指離開操作部至滑塊等抵達下死點之最大時間，以毫秒表示，並以下列公式計算：
Tm＝（1/2＋1/離合器之嚙合處之數目）×曲柄軸旋轉一周所需時間）
三、光電式安全裝置：
D＝1.6（Tl＋Ts）+C
D：安全距離，以毫米表示。
Tl：手指介入光電式安全裝置之感應域至快速停止機構開始動作之時間，以毫秒表示。
Ts：快速停止機構開始動作至滑塊等停止之時間，以毫秒表示。
C：追加距離，以毫米表示，並採下表所列數值：
<table>
<tr><td>連續遮光幅：毫米</td><td>追加距離 C：毫米</td></tr>
<tr><td>30 以下</td><td>0</td></tr>
<tr><td>超過 30，35 以下</td><td>200</td></tr>
<tr><td>超過 35，45 以下</td><td>300</td></tr>
<tr><td>超過 45，50 以下</td><td>400</td></tr>
</table>
</td></tr>
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<table>
<tr>
<td>Article 8</td>
<td>
The distance between the operating portion of the slider and the hazard zone, or the distance between the sensing zone and the hazard zone, that related to the stop performance of the twohand control safety device or the sensing safety device set in the preceding Article subparagraph 2, shall be over the value calculated by the following equations separately :
1. Two-hand control safety device for safe- single -stroke:
D＝1.6（Tl＋Ts）
Where,
D: the safety distance, in millimeters.
Tl: the time that hands releasing from the operating portion of that device to the starting action of the protective stop mechanism, in millimeters.
Ts: the time that the protective stop mechanism starting action to the slider stopping, in milliseconds.
2. Two-hand start safety device:
D = 1.6Tm
Where,
D: the safety distance, in millimeters.
Tm: the maximum time that hands releasing from the operating portion to the slider reaching the lower dead center, in millimeters and calculated by the following formula,
Tm =(1/2 + 1 / numbers of clutch engagement) × the time required for one revolution of the crankshaft)
3. Photoelectric safety device: D＝1.6（Tl＋Ts）+C D: the safety distance, in millimeters.
Tl: the time that fingers intervening the sensing zone of that device to the starting of the protective stop mechanism, in millimeters.
Ts: the time that the protective stop mechanism starting action to the slider stopping, in milliseconds.
C: an additional distance, in millimeters, and the adopted value as shown in the following table:
<table>
<tr><td>continuous shading width: mm</td><td>additional distance C: mm</td></tr>
<tr><td>below 30</td><td>0</td></tr>
<tr><td>over 30，below 35</td><td>200</td></tr>
<tr><td>over 35，below 45</td><td>300</td></tr>
<tr><td>over 45， below50</td><td>400</td></tr>
</table>
</td>
</tr>
</table>

第 9 條	連鎖防護式安全裝置應符合下列規定： 一、除寸動時外，具有防護裝置未閉合前，滑塊等無法閉合動作之構造及於滑塊等閉合動作中，防護裝置無法開啟之構造。 二、滑塊等之動作用極限開關，具有防止身體、材料及其他防護裝置以外物件接觸之措置。
Article 9	The interlocked guard safety device shall meet the following provisions: 1. Except in an inching state, it has a construction that the slider cannot be closed until the guard device is closed and it cannot be opened while the slider in closing-action. 2. Limit switches that enact the slider can prevent a body part, materials or others not belong to the protective device contacting.
第 10 條	雙手操作式安全裝置應符合下列規定： 一、具有安全一行程式安全裝置。但具有一行程一停止機構之衝剪機械，使用雙手起動式安全裝置者，不在此限。 二、安全一行程式安全裝置在滑塊等閉合動作中，當手離開操作部，有達到危險界限之虞時，具有使滑塊等停止動作之構造。 三、雙手起動式安全裝置在手指自離開該安全裝置之操作部時至該手抵達危險界限前，具有該滑塊等可達下死點之構造。 四、以雙手操控作動滑塊等之操作部，具有其左右手之動作時間差非在零點五秒以內，滑塊等無法動作之構造。 五、具有雙手未離開一行程操作部時，備有無法再起動操作之構造。 六、其一按鈕之外側與其他按鈕之外側，至少距離三百毫米以上。但按鈕設有護蓋、擋板或障礙物等，具有防止以單手及人體其他部位操作之同等安全性能者，其距離得酌減之。 七、按鈕採用按鈕盒安裝者，該按鈕不得凸出按鈕盒表面。 八、按鈕內建於衝剪機械本體者，該按鈕不得凸出衝剪機械表面。
Article 10	The two-hand control safety device shall meet the following provisions: 1. It has a safe- single- stroke safety device, except the press or shear machine with single- stroke- single- stop mechanism and a two-hand start safety device. 2. It has a safe- single-stroke safety device to make the slider stopped when released hands having a risk to reach the hazard zone. 3. It has a two-hand start safety device to make the slider to reach the lower dead center before released hands intervening to the hazard zone. 4. It has a construction that the operating portion for activating the slider cannot be activated except the different of operating time between two hands is less than 0.5 second. 5. It has a construction that the press or shear machine cannot be restarted if two hands do not release from the single stroke operating portion.

	6. The distance between one button outside and the other button outside is at least 300 millimeters. It can be reduced for the buttons with covers, baffles, barriers or others having the same safety function to prevent them being operated by a hand or other part of the body. 7. If the buttons are set in boxes, they cannot protrude the button-box surface. 8. If the buttons are built into the body of the press or shear machine, they cannot protrude the surface of the machine.
第 11 條	感應式安全裝置，應為光電式安全裝置、具起動控制功能之光電式安全裝置、雷射感應式安全裝置或其他具有同等感應性能以上之安全裝置。
Article 11	The sensing safety device shall be a photoelectric safety device, a photoelectric safety device with start control function, a laser-sensing safety device or others with equal or over performance.
第 11-1 條	光電式安全裝置之構造及性能，應符合國際標準 IEC 61496 系列或與其同等之標準相關規定。
Article 11-1	The constructure and performances of the photoelectric safety device shall comply with the international standard IEC 61496 series or other equivalents.
第 12 條	光電式安全裝置應符合下列規定： 一、衝剪機械之光電式安全裝置，應具有身體之一部將光線遮斷時能檢出，並使滑塊等停止動作之構造。 二、衝壓機械之光電式安全裝置，其投光器及受光器須有在滑塊等動作中防止危險之必要長度範圍有效作動，且須能跨越在滑塊等調節量及行程長度之合計長度（以下簡稱防護高度）。 三、投光器及受光器之光軸數須具二個以上，且將遮光棒放在前款之防護高度範圍內之任意位置時，檢出機構能感應遮光棒之最小直徑（以下簡稱連續遮光幅）在五十毫米以下。但具啟動控制功能之光電式安全裝置，其連續遮光幅為三十毫米以下。 四、剪斷機械之光電式安全裝置，其投光器及受光器之光軸，從剪斷機械之桌面起算之高度，應為該光軸所含鉛直面和危險界限之水平距離之零點六七倍以下。但其值超過一百八十毫米時，視為一百八十毫米。 五、前款之投光器及受光器，其光軸所含鉛直面與危險界限之水平距離超過二百七十毫米時，該光軸及刀具間須設有一個以上之光軸。 六、衝剪機械之光電式安全裝置之構造，自投光器照射之光線，僅能達到其對應之受光器或反射器，且受光器不受其對應之投光器或反射器以外之其他光線感應。但具有感應其他光線時亦不影響滑塊等之停止動作之構造者，不在此限。
Article 12	The photoelectric safety device shall comply with the following provisions: 1. The photoelectric safety device for the press or shear machine can make the slider stopped when detecting the light cut off by a body part.

	2. The photoelectric safety device for the press machine can effectively act to prevent hazard from the slider in required distance including adjustment length and stroke(hereinafter referred to as the protective height). 3. The optical-axis of the emitter and receiver shall be over two and can detect the minimum diameter of a shading rod (hereinafter referred to as the continuous shading width) being below 50 millimeters when it is placed anywhere in the protective height referred in the preceding subparagraph. The continuous shading width shall be less than 30 millimeters for that has a function of start control. 4. The optical-axis height from the desktop of the shear machine shall be less than 0.67 times of the horizontal distance between the vertical plane including the optical- axis and the hazard zone. The height could be concerned as 180 millimeters when over 180 millimeters. 5. The emitter and receiver referred in the preceding subparagraph shall have at least one another optical-axis between the former optical-axis and the cutter when the horizontal distance from the vertical plane including the former optical-axis to the hazard zone is over 270 millimeters. 6. The photoelectric safety device for the press or shear machine has a construction that the light from the emitter can only reach its corresponding receiver or reflector, and cannot be sensed by other sensors. It is unrestricted for that not affecting the slider motion even being other light sensed.
第 12-1 條	具有光電式安全裝置之衝剪機械，其檢出機構之光軸與台盤前端之距離，有足使身體之一部侵入之虞者，應設置防止侵入之安全圍柵或中間光軸等設施。
Article 12-1	If the distance between the optical- axis of a detecting mechanism and the front edge of a bolster is enough to be intervened by a body part, the press or shear machine with a photoelectric safety device shall have a safety fence or a middle optical-axis to prevent intervening.
第 12-2 條	置有材料送給裝置之衝壓機械，安裝之光電式安全裝置，其投光器及受光器符合下列各款規定者，得具使該送料裝置之檢知機能無效化之構造，不受第十二條第二款規定之限制： 一、檢知機能無效化之切換，須使用鑰匙或軟體等其他方式，且設定於每一光軸。 二、送料裝置變更時，具有非再操作前款檢知機能無效化之設定，滑塊等無法動作之構造。 三、使檢知機能無效化之送料裝置拆除時，具有立即恢復投光器及受光器在防止滑塊等作動致生危險所必要長度範圍內有效作動之構造。
Article 12-2	The photoelectric safety device for the press machine with a material feeder can make that feeder detecting invalidated without restricting by Article 12, subparagraph 2 if the emitter and receiver of that safety device complies with the provisions in subparagraph as follows:

<table>
<tr><td></td><td>1. The switching to make that detecting invalidated, shall be used by a key , software or others for each optical-axis.
2. When changing a material feeder device, the slider cannot be activated except the detecting invalidated in the preceding subparagraph is reset.
3. When the material feeder is taken away, it has a construction immediately to restore the effective action that the emitter and receiver within the required length can prevent the hazard of the slider motion.</td></tr>
<tr><td>第 12-3 條</td><td>具起動控制功能之光電式安全裝置，應具有身體之一部將光線遮斷時能檢出，並使滑塊等停止動作之構造。
衝剪機械使用具起動控制功能之光電式安全裝置者，應符合下列規定：
一、台盤之水平面須距離地面七百五十毫米以上。但台盤面至投光器及受光器下端間設有安全圍柵者，不在此限。
二、台盤深度須在一千毫米以下。
三、衝程在六百毫米以下。但衝剪機械已設安全圍柵等，且投光器及受光器之防護高度在六百毫米下以者，不在此限。
四、曲軸衝床之過定點停止監視裝置之停止點設定，須在十五度以內。
具起動控制功能之光電式安全裝置，其投光器及受光器，應具不易拆卸或變更安裝位置之構造。
使用具起動控制功能之光電式安全裝置，應能防止滑塊等意外動作，且應符合下列規定：
一、具起動控制功能之光電式安全裝置之構造，須使用鑰匙選擇其危險防止之機能。
二、使滑塊等作動前，須具起動準備必要操作之構造。
三、在三十秒內未完成滑塊等作動者，須具重新執行前款所定起動之準備作業之構造。
具起動控制功能之光電式安全裝置準用第八條及第十二條之規定。但第八條所定光電式安全裝置安全距離之追加距離之值，縮減如下表：
<table>
<tr><td>連續遮光幅：毫米</td><td>追加距離 C：毫米</td></tr>
<tr><td>14 以下</td><td>0</td></tr>
<tr><td>超過 14，20 以下</td><td>80</td></tr>
<tr><td>超過 20，30 以下</td><td>130</td></tr>
</table>
</td></tr>
<tr><td>Article 12-3</td><td>The photoelectric safety device with a start control function shall have a construction to make the slider stopped when it detect a body part cutting the light. The press or shear machine using a photoelectric safety device with start control function, shall meet the following provisions:
1. The distance of the bolster surface from the ground is above 750 millimeters but it</td></tr>
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is unrestricted for having a safety fence between the bolster surface and the lower end of the emitter and receiver.
2. The depth of the bolster is less than1,000 millimeters.
3. Stroke is less than 600 millimeters but it is unrestricted for the press or shear machine having a safety fence and the protective height of the emitter and receiver being less than 600 millimeters.
4. The stop- point-setting of the over- fix-point monitor for a crankshaft press machine is within 15 degrees.
The emitter and receiver of the photoelectric safety device with a start control function shall have the construction not easily to be disassembled or to be changed its mounting place. When using the photoelectric safety device with the start control function, it shall be able to prevent the slider moving unexpectedly and meet the following provisions:
1. The photoelectric safety device with the start control function shall use a key to select the hazard-preventive function.
2. It shall have the construction to finish the necessary start preparing operation before making the slider moved.
3. It shall have the construction to finish the necessary start preparing operation related in the preceding subparagraph if the slider do not move within 30 seconds.
The photoelectric safety device with the start control function corresponds with the application of Article 8 and Article 12 provisions. However, the additional safety distance for that device set in Article 8 is reduced as following table:
<table>
<tr><td>Continuous shading width: millimeters</td><td>Additional distance C: millimeters</td></tr>
<tr><td>less than 14</td><td>0</td></tr>
<tr><td>more than 14 and less than 20</td><td>80</td></tr>
<tr><td>more than 20 and less than 30</td><td>130</td></tr>
</table>
</td></tr>
<tr><td>第 12-4 條</td><td>
摺床用雷射感應式安全裝置，應具有下列性能：
一、具有檢出機構，且於身體有被夾之虞者，遇身體之一部將光線遮斷時能檢出，並使滑塊等停止作動之構造。
二、滑塊等在閉合動作中，檢知身體之一部或加工物遮斷光線，或滑塊等到達設定位置仍須使滑塊等繼續動作者，具有能將滑塊等之移動速度降為每秒十毫米以下（以下簡稱低閉合速度）之構造。
雷射感應式安全裝置，適用於符合下列規定之摺床：
</td></tr>
</table>

	一、滑塊等在閉合動作時，具有可將滑塊等之速度調至低閉合速度之構造。 二、使滑塊等在低閉合速度動作時，具有非在操作部操控，無法作動滑塊等之構造。 摺床用雷射感應式安全裝置之檢出機構，應具有下列性能： 一、投光器及受光器須設置在能檢知身體之一部可能受滑塊等夾壓之位置；摺床採滑塊等下降動作者，其檢出機構具有與滑塊等動作連動之構造。 二、滑塊等在閉合動作中，且在低閉合速度時，具有得使檢知機能無效化之構造。
Article 12-4	A laser-sensitive safety device for a press brake shall have the following performances: 1. A construction can make the slider stopped when it detects a body part shading the light and the slider has a risk to catch the body. 2. A construction can make the slider speed reduced to be less than 10 millimeters (hereinafter referred to as the low closing speed) when it detects a body part or a workpiece shading the light or the slider is asked to keep moving in closing action even the slider having reached a set position. A laser-sensing safety device can be applied to a press brake complying with the following provisions: 1. A construction can adjust the slider to the low closing speed when it is in closing move. 2. A construction can make the slider not activated in the low closing speed except it is operated at the operating portion. The detecting construction of the laser-sensitive safety device for a press brake shall have the following performances: 1. The emitter and receiver is provided at the location where a body part may be caught by the slider. If the slider of the press brake is a dropping type, the construction of the detector has the motion in conjunction with the slider motion. 2. A construction can make detecting function invalidated while the slider is in closing motion and the low closing speed.
第 13 條	拉開式安全裝置應符合下列規定： 一、設有牽引帶者，其牽引量須能調節，且牽引量為盤床深度二分之一以上。 二、牽引帶之材料為合成纖維；其直徑為四毫米以上；已安裝調節配件者，其切斷荷重為一百五十公斤以上。 三、肘節傳送帶之材料為皮革或其他同等材質之材料；且其牽引帶之連接部能耐五十公斤以上之靜荷重。
Article 13	The pull-back safety device shall meet the following provisions: 1. If it is set by traction cables, the cables are able to adjust the amount of traction and that is more than a half of the bolster depth. 2. The cable material is a synthetic fiber with the diameter more than 4 millimeters. In

	adjustable metal parts fitted state, the breaking load of it is over 150 kgf (1.5 kN). 3. The toggle- transfer belt is made of leather or other equivalent material and the cable connection portion can withstand more than 50kgf (0.49kN) static load.
第 14 條	掃除式安全裝置應符合下列規定： 一、具有掃臂長度及振幅能調節之構造。 二、掃臂設置當滑塊等動作中能確保手部安全之防護板。 三、前款防護板之尺寸如下： (一)寬度：在金屬模寬度二分之一以上。但金屬模寬度在二百毫米以下者，其防護板寬度為一百毫米。 (二)高度：在行程長度以上。但行程長度超過三百毫米者，其防護板高度為三百毫米。 (三)掃臂振幅：在金屬模寬度以上。 四、掃臂及防護板具有與手部或人體其他部位接觸時能緩和衝擊之性能。
Article 14	The push-out safety device shall meet the following provisions: 1. It has a construction that the length and the amplitude of a push-out arm are adjustable. 2. The push-out arm sets a hand- guard plate to ensure the hand safety when the slider moving. 3. Sizes of the hand- guard plate in the preceding subparagraph are as follows: (1) the width: more than one half width of a die but it being concerned as 100 millimeters for that less than 200 millimeters. (2) the height: more than the stroke but it being concerned as 300 millimeters for the stroke more than 300 millimeters. (3) the amplitude of the push-out arm: more than the die width. 4. The push-out arm and the hand- guard plate have the performance mitigating the impact when they contact with hands or a body part.
第 14-1 條	衝壓機械非符合下列所定規格者，不得設置掃除式安全裝置： 一、構造屬使用確動式離合器者，且操作滑塊等起動之操作部，須用雙手為之。 二、行程長度須在四十毫米以上，且在防護板寬度以下。 三、每分鐘行程數須在一百二十以下。 衝壓機械採腳踏式快速停止機構者，不得使用掃除式安全裝置。但併用第六條第一款至第三款所定安全裝置之一者，不在此限。
Article 14-1	The press machine cannot provide the push-out safety device except that complies with the following provisions: 1. The construction is a positive clutch type and the operating portion to start the slider shall be controlled by two hands. 2. The stroke must be more than 40 millimeters and less than the protect-plate width. 3. Strokes per minute must be less than 120. The press machine with the protective

	stop mechanism operated by a foot type cannot use a push-out safety device except it use one of safety devices set in Article 6 subparagraph 1 through 3.
第 15 條	衝剪機械之安全裝置，其機械零件、電氣零件、鋼索、切換開關及其他零配件，應符合下列規定： 一、本體、連接環、構材、控制桿及其他主要機械零件，具有充分之強度。 二、承受作用力之金屬零配件： （一）材料符合國家標準 CNS 3828「機械構造用碳鋼鋼料」規定之 S45C 規格之鋼材或具有同等以上之機械性能。 （二）金屬零配件承受作用力之部分，其表面實施淬火或回火，且其硬度值為洛氏 C 硬度值四十五以上五十以下。 三、鋼索： （一）符合國家標準 CNS 10000「機械控制用鋼纜」規定之規格或具有同等以上之機械性能。 （二）滑塊、控制桿及其他類似機件使用之鋼索，須以線夾、夾鉗等緊結具確實安裝。 四、安全裝置使用之螺栓、螺帽等，有因鬆弛致該安全裝置發生誤動作或零配件脫落之虞者，具有防止鬆脫之性能；對絞鏈部所用之銷等，具有防止脫落之性能。 五、繼電器、極限開關及其他主要電氣零件，具有充分之強度及耐久性，以確保安全裝置之機能。 六、具有電氣回路者，設置能顯示該安全裝置之動作、繼電器開閉不良及其他電氣回路故障之指示燈。 七、繼電器、電晶體、電容器、電阻等電氣零件安裝部分，具有防振性能。 八、電氣回路於該安全裝置之繼電器、極限開關等電氣零件故障，或停電時，具有使滑塊等不致發生意外動作之性能。 九、操作用電氣回路之電壓，在一百六十伏特以下。 十、外部電線符合國家標準 CNS 6556「600V 聚氯乙烯絕緣及被覆輕便電纜」規格或具有同等以上之絕緣效力、耐油性、強度及耐久性。 十一、切換開關： （一）以按鍵切換者，具有使該按鍵分別選取切換位置之裝置。 （二）具有確實保持各自切換位置之裝置。 （三）於各自切換位置，具有安全裝置狀態之明顯標示。
Article 15	Mechanical parts, electrical parts, wires, switches or other parts for the safety device of the press or shear machine shall meet the following provisions: 1. The body, the linkage material, the lever and other major mechanical parts have sufficient strength. 2. Linking parts: (1) Their materials comply with the national standard CNS 3828

	"mechanical-structure-usage carbon-steel material" S45C or others having equivalent or more mechanical properties. (2) The surface of linking parts is treated by quenching and tempering, and their hardness must be above 45 to 50 in Rockwell C scale. 3. Wire cables: (1) They comply with the national standard CNS 10000 "machinery-control-usage cable" or others having equivalent or more mechanical properties. (2) They are tightly fixed on the slider, levers and others with clips, clamps and so forth. 4. Preventing loosing shall be applied to bolts, nuts and others on the safety device that may lead the device being malfunction or fitting parts falling off. Preventing falling off shall be applied to pins on the hinge portion too. 5. Relays, limit switches or other major electrical parts shall have sufficient strength and durability to ensure safety device performances. 6. The safety device with electrical circuits shall have indicators to display its actuated states, relay malfunction or failure of other circuits. 7. Mounting portions for relays, transistors, capacitors, resistors or other electrical parts have vibration-proof performance. 8. Circuits in safety device have the performance to prevent the slider accidental action when relays, limit switches or others are failure or power-failure. 9. Operating voltage for the electrical circuit shall be less than 160 volts. 10. External wires shall meet the national standard CNS 6556 "600V PVC insulated and coated light weight cables" or have equivalent or more insulation, oil-resistance, strength and durability. 11. Switches: (1) For a button-switching type of the safety device, it shall have a construction to let buttons selecting switching positions respectively. (2) It can exactly keep holding at each switching position. (3) It is clearly to mark the state of the safety device related to each switch position.
第 三 節 機構及裝置	
Section III Mechanisms and Devices	
第 16 條	衝剪機械具有下列切換開關之一者，在任何切換狀態，均應有符合第四條所定之安全機能： 一、具有連續行程、一行程、安全一行程或寸動行程等之行程切換開關。 二、雙手操作更換為單手操作，或將雙手操作更換為腳踏式操作之操作切換開關。 三、將複數操作台更換為單數操作台之操作台數切換開關。 四、安全裝置之動作置於「開」、「關」用之安全裝置切換開關。
Article 16	The press or shear machine having one of the following switches shall have the safety

	function to comply with that in Article 4 in any switching state. 1. The switch for the switching of a continuous- stroke, a single- stroke, a safe-single- stroke , an inching-stroke and so forth. 2. The switch for one- hand control instead of two-hand control, or pedal control in stead of two-hand control. 3. The switch for one- console control instead of multi- control consoles. 4. The switch of the safety device for setting the operation of that switching in "On" or "Off" .
第 17 條	衝壓機械之行程切換開關及操作切換開關，應符合下列規定： 一、須以鑰匙進行切換者，鑰匙在任何切換位置均可拔出。但有下列情形之一者，不在此限： (一)衝壓機械在任何切換狀態，具有第六條第一項第一款至第三款所定安全機能之一。 (二)切換開關之操作，採密碼設定。 (三)切換開關具有其他同等安全管制之功能。 二、能確實保持在各自切換位置。 三、明顯標示所有行程種類及操作方法。
Article 17	The stroke changing switch and operation changing switch for the press machine shall comply with the following provisions: 1. For those being a key-switching type, their keys can be taken away in any switching position. It is without restrict for anyone of following states: (1) The press machine in any switching state has one of safety functions in Article 6 subparagraph 1 through 3. (2) Switchings are operated by a password. (3) The switches have other equivalent safety control functions. 2. Swithes can exactly be held in the respective switching position. 3. Switchings shall clearly mark all stroke modes and operation means.
第 18 條	衝壓機械應具有一行程一停止機構。
Article 18	The press machine shall have an one- stroke- one- stop mechanism.
第 18-1 條	伺服衝壓機械使用伺服系統為滑塊等之減速或停止者，其伺服系統之機能故障時，應具有可停止滑塊等作動之制動裝置之構造。 伺服衝壓機械遇前項之制動發生異常時，滑塊等應停止動作，且具有操控再起動操作亦無法使滑塊等起動之構造。 伺服衝壓機械使用皮帶或鏈條驅動滑塊等作動者，具有可防止皮帶或鏈條破損引發危險之構造。
Article 18-1	A servo press machine with a servo system to make the slider reduced or stopped shall have a braking construction to stop the slider when the servo system fails. When the braking in the preceding paragraph occurs abnormal, the slider shall be

	stopped and cannot be started even the restarted operated. The servo press using a belt or a chain to drive the slider shall have the construction to prevent hazard from the belt or the chain broken.
第 19 條	衝壓機械應具有快速停止機構。但有下列情形之一者，不在此限： 一、使用確動式離合器。 二、具有不致使身體介入危險界限之構造。 三、具有滑塊等在動作中，能使身體之一部不致介入危險界限之虞之構造。 衝壓機械應具有在快速停止機構作動後，未再起動操作時，無法使滑塊等動作之構造。
Article 19	The press machine shall have the protective stop mechanism except one of the following states: 1. Using a positive clutch. 2. Having a construction to prevent a body part entering the hazard zone. 3. Having a construction to prevent a body part entering the hazard zone during the slider in moving. The press machine shall have a construction that the slider cannot move without re-start operating after the protective stop mechanism activated.
第 20 條	具有快速停止機構之衝壓機械，應備有緊急情況發生時，能由人為操作而使滑塊等立即停止動作之緊急停止裝置。 衝壓機械應具有在緊急停止裝置作動後，未使滑塊等返回最初起動狀態之位置時，無法使滑塊等動作之構造。
Article 20	The press machine with the protective stop mechanism shall have a device that the protective stop mechanism can be manually operated to make the slider stopped when an emergency occurs. The press machine shall have a construction that the slider cannot move if it do not return to the original-start position after the emergency stop device activated.
第 21 條	衝壓機械緊急停止裝置之操作部，應符合下列規定： 一、紅色之凸出型按鈕或其他簡易操作、可明顯辨識及迅速有效之人為操作裝置。 二、設置於各操作區。 三、有側壁之直壁式衝壓機械及其他類似機型，其台身兩側之最大距離超過一千八百毫米者，分別設置於該側壁之正面及背面處。
Article 21	The operating portion for the emergency stop device of the press machine shall meet the following provisions: 1. They have red- protruding- type buttons or others with significant identification to be quickly, efficiently and manually operated. 2. They are provided in each operating zone. 3. For the press machine with straight sides or other similar models, whose maximum distance between both straight sides is over 1800 millimeters, the emergency stop

	devices shall be set respectively in the front side and the rear side.
第 22 條	具有快速停止機構之衝壓機械，應備有寸動機構。 前項寸動機構，應具有下列可限制滑塊動作構造之一： 一、限制滑塊移動速度，在每秒十毫米以下者。 二、限制每段滑塊移動行程，不得超過六毫米，且未離開操作部，無法再起動操作者。 第一項之衝壓機械，具有防止身體介入危險界限之安全裝置者，其寸動機構不受前項之限制。
Article 22	The press machine with the protective stop mechanism shall have an inching mechanism. The above- mentioned inching mechanism shall have at least one of the following devices for controlling the slide movement: 1. slow closing speed (equal or less than 10 mm/s) of the slides; 2. The slide movement shall not exceed 6 mm per inching step, while the press or shear machine cannot be restarted if the operator has not released their two hands from the operating portion. If the press referred to in the first paragraph is equipped with safety devices to prevent a body part entering the hazard zone, their inching mechanism is not restricted by the requirements of the first paragraph in this Article.
第 23 條	衝壓機械，應具有防止滑塊等意外下降之安全擋塊或固定滑塊之裝置，且備有在使用安全擋塊或固定裝置時，滑塊等無法動作之連鎖機構。但下列衝壓機械使用安全擋塊或固定裝置有因難者，得使用安全插栓、安全鎖或其他具有同等安全功能之裝置： 一、摺床。 二、摺床以外之機械衝床，其台盤各邊長度未滿一千五百毫米或模高未滿七百毫米。 前項但書規定之安全插栓及安全鎖，應符合下列規定： 一、安全插栓：配置於衝壓機械之每一操作區。 二、安全鎖：具有能遮斷衝壓機械主電動機電源之性能。 第一項安全擋塊或滑塊固定裝置，應具有支持滑塊及上模重量之強度。
Article 23	The press machine shall have a safety stopper or a fix- slider device to prevent the slider accidently falling, while featuring an interlocked construction that cannot activate the slider when the stopper or the fix- slider device is used. As the following press machines find it difficult to use that, they can use a safety plug, a safety lock or other devices with an equivalent function. 1. A press brake. 2. Except the press brake, the machine press with each bolter-side-length below 1500 millimeters or the die-height below 700 millimeters.

	The proviso for the safety plug or the safety lock in the preceding paragraph shall meet the following provisions: 1. The safety plug is provided in each operating zone of the press machine. 2. The safety lock can block the main motor power of the press machine. The safety stopper or the fix-slider device in the paragraph 1 shall have the strength to support the total weight of the slider and the upper half die.
第 24 條	衝剪機械之操作部，應具有下列之構造： 一、防止誤觸致滑塊等非預期起動者。 二、未進行操作，無法使滑塊等動作者。 前項衝剪機械具模式切換及連續行程者，應具有防止因模式切換操作錯誤致滑塊等動作之機制或構造。
Article 24	The operating portion of the press or shear machine shall have one of the following constructions: 1. to prevent the slider unexpectedly starting up due to inadvertent touching. 2. the slider cannot move without re-starting the operation. The above-mentioned machinery with mode switching and continuous-stroke shall have a mechanism and construction to prevent the movement of the slider in the case of mistaken operation of the mode switching.
第 25 條	衝壓機械之電氣系統，應符合下列規定： 一、設置能顯示運轉狀態之指示燈或其他具有同等指示功能之裝置。 二、繼電器、電晶體、電容器、電阻等電氣零件之安裝部分，或控制盤、操作盤與衝壓機械本體之安裝部分，具有防振性能。 三、主電動機之驅動用電氣回路，具有停電後恢復供電時，未重新起動操作，主電動機無法驅動之回路。但具有不致使身體介入危險界限之構造者，不在此限。 四、控制用電氣回路及操作用電氣回路，具有繼電器、極限開關等電氣零件故障、電壓下降或停電時，不致發生滑塊等意外動作之性能。但具有不致使身體介入危險界限之構造者，不在此限。 五、操作用電氣回路之電壓，在一百六十伏特以下。 六、外部電線具有符合國家標準 CNS 6556「600V 聚氯乙烯絕緣及被覆輕便電纜」規定之規格或具有同等以上之絕緣效力、耐油性、強度及耐久性。 七、控制用電氣回路及操作用電氣回路之繼電器、極限開關及其他主要電氣零件，具有充分之強度及耐久性。
Article 25	The electrical systems of the press machine shall meet the following provisions: 1. Indicators or other equivalent functional devices are provided to show operating status. 2. Mounting zones for relays, transistors, capacitors, resistors, other electrical parts, control panel, the operation panel or the main body of the press machine have

	vibration prevention capacity. 3. The electrical circuit for the main motor driving has the function that the main motor cannot be restarted after the end of a power outage unless restart is activated. The above-mentioned requirements may not apply if the machinery is constructed to prevent a body part entering a hazard zone. 4. The electrical circuit for control or operation has the function to prevent unexpected action by the slider in the case of failures by relays, limit switches or other electrical parts, voltage drops or power outage. The above-mentioned requirements may not apply if the machinery is constructed to prevent a body part entering a hazard zone. 5. The operating voltage for the electrical circuit is less than 160 volts. 6. External wires shall meet the national standard CNS 6556 "600V PVC insulated and coated light weight cables" or others having equivalent or more insulation, oil-resistance, strength and durability. 7. Relays, limit switches or other major electrical parts in electrical circuits for controlling or operating shall have sufficient strength and durability.
第 26 條	衝壓機械之機械系統使用之彈簧、螺栓、螺帽、襯套及插銷等，應符合下列規定： 一、彈簧有因破損、脫落而導致滑塊等意外動作之虞者，採用壓縮型彈簧，並採用桿、管等引導之。 二、螺栓、螺帽、襯套或其他零件有因鬆動而導致滑塊等意外動作或零件脫落之虞者，具有防止鬆脫之性能。 三、插銷有因脫落而導致滑塊等意外動作或零件脫落之虞者，具有防止脫落之性能。
Article 26	Springs, bolts, nuts, bushings, pins or others for the press machine shall meet the following provisions: 1. Springs are compression type and guided by rods, pipes or others if the slider have an accident motion risk because of springs broking or dropping out. 2. Preventing loosing shall be applied to bolts, nuts, bushings and others that may lead the slider to unexpectedly move or fitting parts to fall off. 3. Preventing loosing shall be applied to pins that may lead the slider to unexpectedly move or fitting parts to fall off.
第 四 節 機械系統	
Section IV Mechanical systems	
第 27 條	機械衝床之離合器，應具有在嚙合狀態而滑塊等停止時，其主電動機無法驅動之構造。但機械衝床具有不致使身體介入危險界限之構造者，不在此限。
Article 27	A clutch of the mechanical press shall have a construction that a main motor cannot be driven when the clutch is in engagement state and the slider stopped but it is unrestricted for having a construction to prevent a body part intervening a hazard

	zone.
第 28 條	置有滑動銷或滾動鍵之離合器之機械衝床，其行程數不得超過附表一所定之數值。
Article 28	The stroke numbers of a mechanical press with a sliding-pin clutch (hereinafter referred to as the pin clutch mechanical press) or a rolling-key clutch (hereinafter referred to as the key clutch mechanical press) cannot be over that in Attachment table 1.
第 29 條	置有滑動銷或滾動鍵之離合器之機械衝床，其離合器之材料，應符合附表二所定國家標準之規格或具有同等以上之機械性質。
Article 29	Materials used in the clutches related to that mechanical press in preceding Article 28 shall have mechanical properties to comply with the national standard in Attachment table 2 or others having equivalent or more.
第 30 條	置有滑動銷或滾動鍵之離合器之機械衝床，其離合器之熱處理方法及表面硬度值，依機械衝床種類及離合器構成部分，應符合附表三之規定。
Article 30	The heat treatment and surface hardness of those clutches related in Article 28 shall base on the type of the mechanical press and the construction of those to comply with provisions in Attachment table 3.
第 31 條	機械衝床之離合器藉由氣壓作動者，應具有彈簧脫離式構造或具同等以上安全功能之構造。
Article 31	For those clutches in Article 28 which is pneumatic activating, shall have a spring-release construction or others having equivalent or more safety functions.
第 32 條	置有滑動銷之離合器之機械衝床，其離合器應具有在離合器作動用凸輪未超過壓回離合器滑動銷範圍前，能停止曲軸旋轉之擋塊。 前項離合器使用之托架，應具有固定位置用之定位銷。 離合器之作動用凸輪，應具有不作動即無法壓回之構造。 離合器之作動用凸輪之安裝部，應具有足以承受該凸輪所生衝擊之強度。
Article 32	The clutch of the pin clutch mechanical press shall have a stopper to stop the crankshaft revolution before a clutch driving cam do not exceed the scope of the clutch slide- pin yet to return back. The clutch bracket used by the clutch in the preceding paragraph shall have a positioning pin to fix its position. The clutch-driving cam shall have a construction that it cannot be pressed back if not being acted. The mounting portion for the clutch-driving cam shall have enough strength to support the impact on the cam.
第 33 條	機械式摺床之離合器，應使用摩擦式離合器。
Article 33	The clutch of a mechanical press brake shall use a friction-type clutch.
第 34 條	置有曲軸等偏心機構之機械衝床（以下稱曲軸衝床），其制動裝置應具有制動面

	不受油脂類侵入之構造。但採濕式制動者，不在此限。
Article 34	The brake device of the mechanical press with an eccentric mechanism such as a crankshaft (hereinafter referred to as the crankshaft press) shall have a construction that its braking surface cannot be invaded by fat, oil or others but it is unrestricted for the wet-braking type.
第 35 條	曲軸衝床之制動裝置藉由氣壓作動離合器者，應具有彈簧緊固型構造或具有同等以上之安全功能。 前項衝床以外之曲軸衝床，其制動裝置應為帶式制動以外之型式。但機械式摺床以外之曲軸衝床且壓力能力在一百噸以下者，不在此限。
Article 35	The brake device of the crankshaft press that braking is activated with a pneumatic clutch, shall be a spring- fastening type or others having equivalent or more safety function. The brake device of the crankshaft press except the press mentioned in the preceding paragraph, shall be a non- band braking type but it is unrestricted for a crankshaft press with a capacity less than 100 tons and not a mechanical press brake.
第 36 條	曲軸衝床應於明顯部位，設置能顯示曲軸等旋轉角度之指示計或其他同等指示功能之裝置。但具有不致使身體介入危險界限之構造者，不在此限。
Article 36	The crankshaft press shall have indicators or others having equivalent function to show the angle of the crank rotation in obvious position.
第 37 條	置有滑動銷或滾動鍵之離合器之機械衝床，曲軸偏心軸之停止角度應在十度以內。但具有不致使身體介入危險界限之構造者，不在此限。 前項停止角度，指由曲軸偏心軸之設定停止點與實際停止點所形成之曲軸中心角度。
Article 37	The stopping angle of the crankshaft for the pin clutch or the key clutch mechanical press shall be within 10 degrees but it is unrestricted for having a construction to prevent a body part intervening a hazard zone. The above mentioned stopping angle refers to the crank center angle formed by the set stop point and the actual stop point.
第 38 條	曲軸等之轉速在每分鐘三百轉以下之曲軸衝床，應具有超限運轉監視裝置。但依規定無須設置快速停止機構之曲軸衝床及具有不致使身體介入危險界限之構造者，不在此限。 前項<u>所稱</u>超限運轉監視裝置，指當曲軸偏心軸等無法停止在其設定停止點時，能發出曲軸等停止轉動之指令，使快速停止機構作動者。 <u>前項設定停止點，從設定停止位置起算，其停止角度，應在二十五度以內。</u>
Article 38	The crankshaft press with a crankshaft revolution below 300 revolutions per minute shall have a system to monitor excessive speed. But the above-mentioned requirements may not apply to crankshaft presses which do not need to include the protective stop mechanism according to rules, or which are constructed to prevent a

	body part entering the hazard zone. The monitor in the preceding paragraph means that a directive can activate the protective stop mechanism when the crankshaft cannot be stopped at the set-stop point. The above-mentioned set-stop point shall have a stopping angle within 25 degrees from the set-stop position.
第 39 條	機械衝床以氣壓或液壓控制離合器或制動裝置者，應設置下列電磁閥： 一、複動式電磁閥。但機械衝床具有不致使身體介入危險界限之構造者，不在此限。 二、常閉型電磁閥。 三、以氣壓控制者，其電磁閥採壓力回復型。 四、以液壓控制者，其電磁閥採彈簧回復型。
Article 39	The mechanical press that clutch or brake is controlled by pneumatic or hydraulic shall provide the following solenoid valves: 1. Multi-acting solenoid valves except that having a construction to prevent a body part intervening the hazard zone. 2. Normally closed solenoid valve. 3. Being pressure-return type for the solenoid valve controlled by the pneumatic. 4. Being spring-return type for solenoid valve controlled by the hydraulic.
第 40 條	前條機械衝床，應具有防止離合器或制動裝置之氣壓或液壓超壓之安全裝置，並具有在氣壓或液壓低於設定壓力時，自動停止滑塊等動作之機構。但超壓時，其伺服系統可防止誤動作者，不在此限。
Article 40	The mechanical press mentioned in the preceding Article shall have a safety device to prevent excess pressure of the pneumatic or hydraulic pressure of the clutch or brake and to cause the slider to stop automatically when the pressure is below the set value, which may not apply if the safety requirement is met by using a servo-system that can prevent inadvertent action when the pneumatic or hydraulic pressure goes beyond the set value.
第 41 條	機械衝床以電動機進行滑塊等調整者，應具有防止滑塊等超出其調整量上限及下限之裝置。
Article 41	The mechanical press with a slider adjusting by an electric motor shall have a device to prevent the slider adjusting beyond its upper or lower limits.
第 42 條	機械衝床滑塊等之平衡器，應符合下列規定： 一、彈簧式平衡器：具有當彈簧等零件發生破損時，防止其零件飛散之構造。 二、氣壓式平衡器： (一)具有當活塞等零件發生破損時，防止其零件飛散之構造。 (二)在制動裝置未動作時，滑塊等及其附屬品須維持在行程之任何位置，並具有在氣壓低於設定壓力時，自動停止滑塊等動作之構造。

Article 42	The counter-balancer of the slider for the mechanical press shall meet the following provisions: 1. A spring-type counter-balancer : a construction to prevent spring or other parts scattered when it occurs damage. 2. A pneumatic-type counter-balancer: (1) a construction to prevent piston or other parts scattered when it occurs damage. (2) a construction that the slider and its accessories shall be held at any position in the stroke when the brake device is not operated, and it can automatically stop the slide acting when the pressure falls below the set.
第 43 條	使用確動式離合器之機械衝床，其每分鐘行程數在一百五十以下，且壓力能力在一百五十噸以下，置有操作用腳踏開關或腳踏板者，應具有在滑塊等動作中防止身體之一部介入危險界限之構造或具有快速停止機構。
Article 43	The positive-clutch mechanical press with a foot control switch or a foot pedal, strokes per minute less than 150, and the capacity below 150 tons, shall have a construction that can prevent a body part entering the hazard zone or have the protective stop mechanism.
第 44 條	使用確動式離合器之機械衝床，其每分鐘行程數超過一百五十或壓力能力超過一百五十噸者，不得置有快速停止機構。
Article 44	The positive- clutch mechanical press with strokes per minute over than 150 or the capacity over 150 tons shall not be provided the protective stop mechanism.
第 五 節 液壓系統	
Section V Hydraulic systems	
第 45 條	液壓衝床應具有液壓泵起動後，未進行該液壓衝床之起動操作，無法使滑塊等動作之構造。
Article 45	A hydraulic press shall have a construction that the slider cannot be activated without doing the start operation after a hydraulic pump started.
第 46 條	液壓衝床之快速停止機構，當滑塊等以最大速度下降時，使其作動，滑塊等之慣性下降值，不得超過附表四所定之值。
Article 46	An over drop distance (inertial descending value) of the slider shall be less than the value in Attachment table 4 when the protective stop mechanism in the hydraulic press acts on the slider being of a maximum dropping speed.
第 47 條	液壓衝床應具有足以支撐滑塊等及其上模重量之安全擋塊。
Article 47	The hydraulic press shall have a safety stopper to support the total weight of the slider and the upper half die.
第 48 條	液壓衝剪機械之電磁閥，應為常閉型，並具有彈簧回復型之構造。
Article 48	The solenoid valve in the hydraulic press or shear machine shall be a normally closed type with a spring-return construction.
第 49 條	液壓衝剪機械，應具有防止液壓超壓之安全裝置。

Article 49	The hydraulic press or shear machine shall have a safety device to prevent that hydraulic pressure goes beyond the set value.
第 三 章 手推刨床	
Chapter III Hand-fed planer	
第 50 條	攜帶用以外之手推刨床，應具有符合下列規定之刃部接觸預防裝置。但經檢查機構認可具有同等以上性能者，得免適用其之一部或全部： 一、覆蓋應遮蓋刨削工材以外部分。 二、具有不致產生撓曲、扭曲等變形之強度。 三、可動式接觸預防裝置之鉸鏈部分，其螺栓、插銷等，具有防止鬆脫之性能。 四、除將多數加工材料固定其刨削寬度從事刨削者外，所使用之刃部接觸預防裝置，應使用可動式接觸預防裝置。但直角刨削用手推刨床型刀軸之刃部接觸預防裝置，不在此限。 手推刨床之刃部接觸預防裝置，其覆蓋之安裝，應使覆蓋下方與加工材之進給側平台面間之間隙在八毫米以下。
Article 50	A hand-fed planer except a portable shall have a cutter contactpreventive device complying with the following provisions. It might be exempted from a part or all of them if it has equivalent or more performance accredited from the inspection agency. 1. It has a guard to cover the portion except the wood-piece being planned. 2. It has strength to withstand deflection and distortion. 3. It has function to prevent bolts, pins and others of the hinge in a self-adjusting contact-preventive device from loosening or dropping out. 4. A self-adjusting contact-preventive device shall be used for those pushing a wood-piece by hands. If most wood-pieces with a same form, a same planning width and no risk of hands contacting with the shaper, a fixed cutter contact-preventive device can be used too but it is unrestricted for the cutter contactpreventive device used in a spindle shaper. The cutter contact-preventive device for the hand-fed planer shall make the gap between the low-edge of a cover and a material-fed table be less than 8 millimeters.
第 51 條	手推刨床應設置遮斷動力時，可使旋轉中刀軸停止之制動裝置。但遮斷動力時，可使其於十秒內停止刀軸旋轉者，或使用單相線繞轉子型串激電動機之攜帶用手推刨床，不在此限。
Article 51	The hand-fed planer shall have a device to make a rotating cutter block stopped and braked when the power shut down. There is unrestricted if it can make cutter block stopped within 10 seconds as the power shut down or a portable planer using a motor with a single-phase series wound motor.
第 52 條	手推刨床，應具有防止更換刨刀時發生危害之構造。
Article 52	The hand-fed planer shall have a mechanism that can prevent hazards when changing the cutter.

第 53 條	手推刨床應設置不離開作業位置即可操作之動力遮斷裝置。 前項動力遮斷裝置應易於操作，且具有不因意外接觸、振動等，致手推刨床有意外起動之虞之構造。
Article 53	The hand-fed planer shall have a power shut off device that can be operated without leaving a job position. The power shut off device related in the preceding paragraph shall be easily operated and has a construction to prevent an accident start from unexpected contacting, vibrating or the like.
第 54 條	攜帶用以外之手推刨床，其加工材進給側平台，應具有可調整與刃部前端之間隙在三毫米以下之構造。
Article 54	Except the portable planer, the hand-fed planer shall have a device to adjust the gap between the wood- fed table and the cutter tip being less than 3 millimeters.
第 55 條	手推刨床之刀軸，其帶輪、皮帶及其他旋轉部分，於旋轉中有接觸致生危險之虞者，應設置覆蓋。但刀軸為刨削所必要之部分者，不在此限。
Article 55	The cutter block of the hand-fed planer, pulley, belt or other rotating parts shall have guards if they may cause a risk because of contacting with a body part. There is unrestricted except the necessary planed zone by the cutter block.
第 56 條	手推刨床之刃部，其材料應符合下列規定之規格或具有同等以上之機械性質： 一、刀刃：符合國家標準 CNS 2904「高速工具鋼鋼料」規定之SKH2規格之鋼料。 二、刀身：符合國家標準 CNS 2473「一般結構用軋鋼料」或國家標準CNS 3828「機械構造用碳鋼鋼料」規定之鋼料。
Article 56	The material for the cutter of the hand-fed planer shall comply with the following provisions or others having equivalent or more mechanical properties: 1. cutter: complying with SKH2 set in the national standard CNS 2904 “high speed tool steel material”. 2. cutter block: complying with the national standard CNS 2473 “the general-structural-using rolled steel material” or the national standard CNS 3828 “mechanical- structure-using carbon steel material”.
第 57 條	手推刨床之刃部，應依下列方法安裝於刀軸： 一、國家標準 CNS 4813「木工機械用平刨刀」規定之 A 型（厚刀）刃部，並至少取其安裝孔之一個承窩孔之方法。 二、國家標準 CNS 4813「木工機械用平刨刀」規定之 B 型（薄刀）刃部，其分軸之安裝隙槽或壓刃板之斷面，使其成為尖劈形或與其類似之方法。
Article 57	The cutter shall be fitted in the cutter block in accordance with the following way: 1. Based on the national standard CNS 4813 “flat plan cutter for wood machine”, at least one of fitted holes shall be a slot hole for the A type cutter (thickness cutter). 2. Based on the national standard CNS 4813 “flat plan cutter for wood machine”,

	fitted slots or a cutter-compressing plate for the B type cutter (thin cutter) shall be a wedge-shaped or other similar ways.
第 58 條	手推刨床之刀軸，應採用圓胴。
Article 58	Only a cylindrical cutter block can be used on the hand-fed planer.
第 四 章 木材加工用圓盤鋸	
Chapter IV Woodworking circular saws	
第 59 條	木材加工用圓盤鋸（以下簡稱圓盤鋸）之材料、安裝方法及緣盤，應符合下列規定： 一、材料：依圓鋸片種類及圓鋸片構成部分，符合附表五規定之材料規格或具有同等以上之機械性質。 二、安裝方法： （一）使用第三款規定之緣盤。但多片圓盤鋸或複式圓盤鋸等圓盤鋸於使用專用裝配具者，不在此限。 （二）固定側或移動側緣盤以收縮配合、壓入等方法，或使用銷、螺栓等方式固定於圓鋸軸。 （三）圓鋸軸之夾緊螺栓，具有不可任意旋動之性能。 （四）使用於緣盤之固定用螺栓、螺帽等，具有防止鬆脫之性能，以防止制動裝置制動時引起鬆脫。 三、圓盤鋸之緣盤： （一）使用具有國家標準 CNS 2472 灰口鐵鑄件規定之 FC150 鑄鐵品之抗拉強度之材料，且不致變形者。 （二）緣盤直徑在固定側與移動側均應等值。
Article 59	Materials, installation ways and flanges for woodworking circular saws (hereinafter referred to as the circular saw) shall meet the following provisions. : 1. Materials shall comply with the specifications in attachment table 5 or other equivalents or more mechanical properties depending on the type of circular saw blades and their components. 2. Mounting: (1) Using the flange set in subparagraph 3, except a gang rip or a multiple sizer that uses special assembly tools. (2) fixed- or movable- flange being fixed on a saw shaft in a shrink fit, press or the like, or with pins, bolts. (3) The fastening bolts on the shaft of the circular saw shall be of an appropriate tightness. (4) Nuts, bolts and others for fastening the flange must be capable of preventing loosening while the saws are being braked. 3. Flange: (1) Uses material that has a tensile strength of FC150 iron castings set in the national

	standard CNS 2472 “gray iron castings,” and not causing deformation. (2) Flange diameters being equal on the fixed- side and the movable- side.
第 60 條	圓盤鋸應設置下列安全裝置： 一、圓盤鋸之反撥預防裝置 (以下簡稱反撥預防裝置) 。但橫鋸用圓盤鋸或因反撥不致引起危害者，不在此限。 二、圓盤鋸之鋸齒接觸預防裝置 (以下簡稱鋸齒接觸預防裝置)。但製材用圓盤鋸及設有自動輸送裝置者，不在此限。
Article 60	The circular saw shall have the following safety devices: 1. An anti-kickback device for the circular saw (hereinafter referred to as the anti-kickback device) except the cross cut circular saw or others not causing danger to workers because of wood kickback. 2. A teeth contact-preventive device for the circular saw (hereinafter referred to as the teeth contact-preventive device) except that for lumber or with an automatic feeding device.
第 61 條	反撥預防裝置之撐縫片 (以下簡稱撐縫片) 及鋸齒接觸預防裝置之安裝，應符合下列規定： 一、撐縫片及鋸齒接觸預防裝置經常使包含其縱斷面之縱向中心線而和其側面平行之面，與包含圓鋸片縱斷面之縱向中心線而和其側面平行之面，位於同一平面上。 二、木材加工用圓盤鋸，使撐縫片與其面對之圓鋸片鋸齒前端之間隙在十二毫米以下。
Article 61	A riving knife of the anti-kickback device (hereinafter referred to as the riving knife) or a teeth-contact preventive device shall meet the following provisions: 1. The installation of the riving knife and the teeth contactpreventive device must be in the condition that the longitudinal cross section plane formed by their longitudinal cross section planes containing their longitudinal center lines and the longitudinal cross section plan containing the longitudinal center line of the blade are always on the same plan. 2. The gap between the riving knife and the top of that opposite blade teeth is less than 12 millimeters.
第 62 條	圓盤鋸應設置遮斷動力時可使旋轉中圓鋸軸停止之制動裝置。但下列圓盤鋸，不在此限： 一、圓盤鋸於遮斷動力時，可於十秒內停止圓鋸軸旋轉者。 二、攜帶用圓盤鋸使用單相串激電動機者。 三、設有自動輸送裝置之圓盤鋸，其本體內藏圓鋸片或其他不因接觸致引起危險之虞者。 四、製榫機及多軸製榫機。
Article 62	When the power blocked, the circular saw shall have a brake device to make its

	rotating shaft stopped except the following circular saw: 1. The circular saw is capable of stopping its shaft within 10 seconds when the power blocked. 2. The portable circular saw use a single-phase series wound motor. 3. The circular saw has an automatic feeder which blade is built into the body or others that do not cause a dangerous risk because of bodily contact. 4. It is a tenoning machine or a multi-axis tenoning machine.
第 63 條	圓盤鋸應設置可固定圓鋸軸之裝置，以防止更換圓鋸片時，因圓鋸軸之旋轉引起之危害。
Article 63	The circular saw shall have a device to fix its shaft to prevent the hazard from shaft rotating when replacing the blade.
第 64 條	圓盤鋸之動力遮斷裝置，應符合下列規定： 一、設置於操作者不離開作業位置即可操作之處。 二、須易於操作，且具有不因意外接觸、振動等致圓盤鋸有意外起動之虞之構造。
Article 64	The power blocking device for the circular saw shall meet the following provisions: 1. Setting in a place that the operator can control it without leaving the operating position. 2. Being easily to control and having a construction that no risk of unexpectedly starting when accidently contacting or vibrating and so forth.
第 65 條	圓盤鋸之圓鋸片、齒輪、帶輪、皮帶及其他旋轉部分，於旋轉中有接觸致生危險之虞者，應設置覆蓋。但圓鋸片之鋸切所必要部分者，不在此限。
Article 65	Blades, gears, pulleys, belts and other rotating parts of circular saws those have a dangerous risk because of bodily contacting shall have covers except the necessary cut portion by the blade.
第 66 條	傾斜式萬能圓盤鋸之鋸台傾斜裝置，應為螺旋式或不致使鋸台意外傾斜之構造。
Article 66	A tilt device of the table of an universal tilt circular saw shall be a spiral type or a structure not to cause an accident tilting.
第 67 條	攜帶式圓盤鋸應設置平板。 前項加工材鋸切側平板之外側端與圓鋸片鋸齒之距離，應在十二毫米以上。
Article 67	The portable circular saw shall provide a surface plate. The distance between the outer end of the surface plate in cutting side and the teeth top of the blade shall be over12 millimeters.
第 68 條	撐縫片應符合下列規定： 一、材料：符合國家標準 CNS 2964「碳工具鋼鋼料」規定之 SK5 規格或具有同等以上之機械性質。 二、形狀： （一）使其符合依第一百十六條規定所標示之標準鋸台位置沿圓鋸片斜齒三分之二以上部分與圓鋸片鋸齒前端之間隙在十二毫米以內之形狀。

	（二）撐縫片橫剖面之刀形，具有輸送加工材時阻力較少之形狀。 三、一端固定之撐縫片（以下簡稱鐮刀式撐縫片），依第一百十六條規定所標示之標準鋸台位置之寬度值應依圓鋸片直徑，不得低於附表六所定之值。 四、所列標準鋸台位置沿圓鋸片斜齒三分之二之位置處之鐮刀式撐縫片寬度，不得低於附表六所定之值之三分之一。 五、兩端固定之撐縫片（以下簡稱懸垂式撐縫片），其寬度值應依圓鋸片直徑，不得低於附表七所定之值。 六、厚度為圓鋸片厚度之一點一倍以上。 七、安裝部具有可調整圓鋸片鋸齒與撐縫片間之間隙之構造。 八、安裝用螺栓： （一）安裝用螺栓之材料為鋼材，其螺栓直徑應依其撐縫片種類及圓鋸片直徑，不得低於附表八所定之值。 （二）安裝螺栓數在二個以上。 （三）安裝螺栓具有盤形簧墊圈等防止鬆脫之性能。 九、支持配件之材料為鋼材或鑄鐵件，且具有充分支撐撐縫片之強度。 十、圓鋸片直徑超過六百一十毫米者，該圓盤鋸所使用之撐縫片為懸垂式者。
Article 68	The riving knife shall meet the following provisions: 1. Materials: complying with SK5 specifications set in the national standard CNS 2964 "carbon tool steel " or other equivalent or more mechanical properties. 2. Shapes: (1) A shape of the riving knife is formed to comply a gap within 12 millimeters to two third of the slope teeth of the blade related to the standard table surface in accordance with Article 116. (2) The cross section shape of the riving knife shall be the form that resistance is less to feed the wood-piece. 3. Being related to the standard table position based on Article 116, the width of a riving knife with one end fixed (hereinafter referred to as the sickle-type riving knife) shall be in accordance with the diameter of the blade and not less than the value in Attachment table 6. 4. The width of the sickle-type riving knife in a two-thirds position of the blade reverse teeth from the standard table position is not less than one third of the value in Attachment table 6. 5. The width of the drape-type riving knife fixed at both ends (hereinafter referred to as the drape-type riving knife) shall be in accordance with the diameter of the blade and not less than the value in Attachment table 7. 6. The thickness of the riving knife shall be more than 1.1 times of that of the blade. 7. The mounting portion has a structure to adjust the gap between the blade and the riving knife.

	8. Mounting bolts: (1) The material shall be steel. The diameter of bolts shall be according to the type of the riving knife and the diameter of the blade and not less than the values in Attachment table 8. (2) Numbers of mounting bolts shall be over two. (3) The mounting bolts shall use conical spring washers to prevent loosening. 9. Materials of support parts shall be steel or cast iron and have sufficient strength to support the riving knife. 10. The riving knife for the circular saw with the diameter over 610 millimeters shall be a drape-type.
第 69 條	供反撥預防裝置所設之反撥防止爪（以下簡稱反撥防止爪）及反撥防止輥（以下簡稱反撥防止輥），應符合下列規定： 一、材料：符合國家標準 CNS 2473「一般結構用軋鋼料」規定 SS400 規格或具有同等以上機械性質之鋼料。 二、構造： （一）反撥防止爪及反撥防止輥，應依加工材厚度，具有可防止加工材於圓鋸片斜齒側撥升之機能及充分強度。但具有自動輸送裝置之圓盤鋸之反撥防止爪，不在此限。 （二）具有自動輸送裝置之圓盤鋸反撥防止爪，應依加工材厚度，具有防止加工材反彈之機能及充分強度。 三、反撥防止爪及反撥防止輥之支撐部，具有可充分承受加工材反彈時之強度。 四、除自動輸送裝置之圓盤鋸外，圓鋸片直徑超過四百五十毫米之圓盤鋸，使用反撥防止爪及反撥防止輥等以外型式之反撥預防裝置。
Article 69	An anti-kickback preventive claw for an anti-kickback device (hereinafter referred to as the anti-kickback preventive claw) or an anti-kickback preventive roll (hereinafter referred to as the anti-kickback preventive roll) shall meet the following provisions: 1. Material : It is in accordance with the SS400 set the national standard CNS 2473 " the general- structure-using rolled steel " or the equivalent or others having more mechanical properties. 2. Construction: (1) The anti-kickback preventive claw or the anti-kickback preventive roll shall have the function to prevent processing material from lifting on the slope tooth side of the blade and be enough strength based on the wood-piece thickness but it is unrestricted for the anti-back preventive claw with an automatic feed device. (2) For the anti-back preventive claw with an automatic feed device, it shall have function to prevent processing material kickback and be enough strength based on the wood-piece thickness. 3. The support of the anti-back preventive claw or the anti-kickback preventive roll

	shall have sufficient strength against the processing material bounce. 4. Except the circular saw with an automatic feed device, the anti-kickback preventive device with the diameter over 450 millimeters shall use that neither the anti-kickback preventive claw nor the anti-kickback preventive roll.
第 70 條	圓盤鋸之鋸齒接觸預防裝置，應符合下列規定： 一、構造： (一)鋸齒接觸預防裝置使用於攜帶式圓盤鋸以外者，其覆蓋下端與輸送加工材可經常接觸之方式者（以下簡稱可動式），覆蓋須具有可將相對於鋸齒撐縫片部分與加工材鋸切中部分以外之其他部分充分圍護之構造。 (二)可動式鋸齒接觸預防裝置以外之鋸齒接觸預防裝置，其使用之覆蓋具有將相對於鋸齒撐縫片部分與輸送中之加工材頂面八毫米以外之其他部分充分圍護，且無法自其下端鋸台面調整升高二十五毫米以上之構造。 (三)前二目之覆蓋，具有使輸送加工材之操作者視線可見鋸齒鋸斷部分之構造。 二、前款覆蓋之鉸鏈部螺栓、銷等，具有防止鬆脫之性能。 三、支撐部分具有可調整覆蓋位置之構造；其強度可充分支撐覆蓋；支撐有關之軸及螺栓具有防止鬆脫之性能。 四、攜帶式圓盤鋸之鋸齒接觸預防裝置： (一)覆蓋：可充分將鋸齒鋸切所需部分以外之部分圍護之構造。且鋸齒於鋸切所需部分之尺寸，具有將平板調整至圓鋸片最大切入深度之位置，圓鋸片與平板所成角度置於九十度時，其值不得超過附圖一所定之值。 (二)固定覆蓋：具有使操作者視線可見鋸齒鋸斷部分之構造。 (三)可動式覆蓋： 1.鋸斷作業終了，可自動回復至閉止點之型式。 2.可動範圍內之任何位置無法固定之型式。 (四)支撐部：具有充分支撐覆蓋之強度。 (五)支撐部之螺栓及可動覆蓋自動回復機構用彈簧之固定配件用螺栓等，具有防止鬆脫之性能。
Article 70	The teeth-contact preventive device for the circular saw shall meet the following provisions: 1. Construction: (1) Except the teeth-contact preventive device for a portable circular saw, a cover that lower-end always contacts with fed wood-piece in the teeth-contact preventive device (hereinafter referred to as the movable teeth-contact preventive device) shall have a construction being capable of guarding all excluding the teeth opposite the riving knife and the cutting portion of the wood-piece. (2) Except the teeth opposite the riving knife and the portion of 8 millimeters above the top of feeding wood-piece, the cover being not a movable teeth-contact preventive device shall have a construction to guard all and cannot let the

	lower-end of the cover be adjusted over 25 millimeters above the saw table surface to intend use it. (3) The cover in the preceding two subparagraphs shall have a construction that the operator who is feeding the wood-piece can see the cutting portion of the saw blade. 2. Bolts, pins and others for the hinge portion of the cover related in the preceding subparagraph shall have function to prevent loosening. 3. The support portion of the teeth-contact preventive device have the construction to adjust the cover position and enough strength to support the cover. Preventing loosing or dropping out shall be applied to the shaft and bolts of the support portion. 4. The teeth- contact preventive device for the portable circular saw: (1) The cover: It has the construction to guard the portion except the cutting necessary portion. In the state, the necessary sizes for the saw blade cutting shall be not over the value in Attachment figure 1 when the surface plate is adjusted to the most cutting depth and the angle between the surface plate and the saw blade is 90 degrees. (2) Fixed-cover: It has a construction to let the operator see the cutting portion. (3) Movable cover: a. When cutting work is finished, it comes back to the closure point automatically. b. It cannot be fixed at any position in the movement range. (4) The support portion: It has sufficient strength to support the cover. (5) Preventing loosing or dropping out shall be applied to the bolts in the support portion and the bolts to fix metal fittings of the springs in the movable automatically return cover.
第 五 章 動力堆高機	
Chapter V Power lift-trucks	
第 71 條	以動力驅動、行駛之堆高機(以下簡稱堆高機)，應依堆高機負荷狀態，具有在附表九規定之坡度地面而不致翻覆之前後安定度及左右安定度。但屬配衡型堆高機以外型式之堆高機者，不在此限。
Article 71	A power driving lift- truck (hereinafter referred to as the lifttruck) except a non-counter-balancer shall base on set in Attachment table 9 to have front- rear and left-right stability without causing capsizing on the slope ground according to load states.
第 72 條	側舉型堆高機應依堆高機負荷狀態，具有在附表十規定之坡度地面而不致翻覆之前後安定度及左右安定度。
Article 72	According to load states, a side loading lift-truck shall base on set in Attachment table 10 to have front- rear and left- right stability without causing capsizing on the slope

	ground according to load states.
第 73 條	伸縮型堆高機及跨提型堆高機，應依堆高機負荷狀態，具有在附表十一規定之坡度地面而不致翻覆之前後安定度及左右安定度。
Article 73	According to load status, a reach truck or a straddle truck shall have front- rear and left- right stability without causing capsizing on the slope ground according to attachment table 11.
第 74 條	窄道式堆高機應依堆高機負荷狀態，具有在附表十二規定之坡度地面而不致翻覆之前後安定度及左右安定度。
Article 74	According to load states, a narrow lift-truck shall base on set in Attachment table 12 to have front- rear and left- right stability without causing capsizing on the slope ground according to load states.
第 75 條	堆高機應具有制止運行及保持停止之制動裝置。 前項制止運行之制動裝置，應依堆高機負荷狀態及制動初速度，具有在附表十三規定之停止距離內，使堆高機停止之性能。 第一項保持停止狀態之制動裝置，應依堆高機負荷狀態，具有在附表十四規定之坡度地面，使堆高機停止之性能。但依堆高機性能，可爬坡之最大坡度低於同表所列坡度者，以該堆高機可爬坡之最大坡度為準。
Article 75	The lift-truck shall have a braking device to stop running or keep stopping. According to lift-truck load states and initial braking speed, the braking device in the preceding paragraph shall have the function to stop running a lift-truck within a distance set in Attachment table 13. According to load states, a remaining-stop- state braking device in the first paragraph shall have the lift-truck stopped on the slope-ground set in table 14. But based on the lift-truck performance, its maximum slope climbing below that in the table, the former prevails.
第 76 條	堆高機應於其左右各設一個方向指示器。但最高時速未達二十公里之堆高機，其操控方向盤之中心至堆高機最外側未達六十五公分，且機內無駕駛座者，得免設方向指示器。
Article 76	The lift-truck shall have a left and right direction indicators. If it has a top speed less than 20 kilometers, the distance between the center of the steering wheel and the outermost less than 65 centimeters, and no driver seat, it is exempt to set the direction indicator.
第 77 條	堆高機應設置警報裝置。
Article 77	The lift-truck shall have a warning device.
第 78 條	堆高機應設置前照燈及後照燈。但堆高機已註明限照度良好場所使用者，不在此限。
Article 78	The lift-truck shall have headlamps and rear lamps except it has remarked only to be used in a good illumination place.

第 79 條	堆高機應設置符合下列規定之頂蓬。但堆高機已註明限使用於裝載貨物掉落時無危害駕駛者之虞者，不在此限： 一、頂蓬強度足以承受堆高機最大荷重之二倍之值等分布靜荷重。其值逾四公噸者為四公噸。 二、上框各開口之寬度或長度不得超過十六公分。 三、駕駛者以座式操作之堆高機，自駕駛座上面至頂蓬下端之距離，在九十五公分以上。 四、駕駛者以立式操作之堆高機，自駕駛座底板至頂蓬上框下端之距離，在一點八公尺以上。
Article 79	The lift-truck shall have a head- guard meeting the following provisions except it has remarked only to be used in cargo loading and no hazard risk to the driver when the load dropped. 1. The head-guard is strong enough to withstand the twice values of the lift-truck maximum load in static load distribution. The maximum load is taken by 4 tons if it is over 4 tons. 2. The width or length of the upper openings is not over 16 centimeters. 3. If a lift-truck operation is by means of a driver- siting, the distance between the top of the seat and the bottom of the head guard should be over 95 centimeters. 4. If the lift-truck operation is by means of a driver standing, the distance between the floor of the seat and the bottom of the upper frame of the head guard should be over 1.8 meters.
第 80 條	堆高機應設置後扶架。但堆高機已註明限使用於將桅桿後傾之際貨物掉落時無引起危害之虞者，不在此限。
Article 80	The lift-truck shall have a rear supporting frame except it has been remarked only to be used in the case without causing a dangerous risk even its mast is backward tilt and loads falling.
第 81 條	堆高機之液壓裝置，應設置防止液壓超壓之安全閥。
Article 81	Hydraulic device in the lift-truck shall have an over-pressure safety valve.
第 82 條	堆高機之貨叉、柱棒等裝載貨物之裝置（以下簡稱貨叉等），應符合下列規定： 一、材料為鋼材，且無顯著損傷、變形及腐蝕者。 二、在貨叉之基準承重中心加以最大荷重之重物時，貨叉所生應力值在該貨叉鋼材降伏強度值之三分之一以下。 產製或輸入堆高機，非屬新製品，且其既有貨叉符合國際標準 ISO 5057 規定者，得不受前項第二款之限制。
Article 82	Fork, ram and others to load goods (hereinafter referred to as the fork) of a forklift truck shall meet the following requirements: 1. There is no significant damage, deformation or corrosion if the material is steel. 2. The stress in the fork shall be below one third of the yield strength of steel used in

	the fork, when the maximum load is put in the base-load center. Forklift trucks, which are not new and of which the forks comply with ISO 5057, may not be subject to the restrictions stated in the subparagraph 2 of the preceding paragraph.
第 83 條	堆高機裝卸裝置使用之鏈條，其安全係數應在五以上。 前項安全係數為鏈條之斷裂荷重值除以加諸於鏈條荷重之最大值所得之值。
Article 83	A safety factor for chains used by the loading and unloading device of the lift-truck shall be over 5. The safety factor in the preceding paragraph gets from the breaking load of the chain divided by the maximum load imposed on it.
第 84 條	駕駛座採用升降方式之堆高機，應於其駕駛座設置扶手及防止墜落危險之設備。 使用座式操作之堆高機，應符合下列規定： 一、駕駛座應使用緩衝材料，使其於走行時，具有不致造成駕駛者身體顯著振動之構造。 二、配衡型堆高機及側舉型堆高機之駕駛座，應配置防止車輛傾倒時，駕駛者被堆高機壓傷之安全帶、護欄或其他防護設施。
Article 84	Where the forklift truck is equipped with a driver seat in a lifting manner, an armrest and a fall prevention device shall be provided. Forklift truck operated by driver-sitting shall comply with the following requirements: 1. The seat cushion shall be made of shock-absorption materials to prevent significant vibration of the body of the driver when the truck is moving. 2. The driver seat of a counter-balance type forklift truck and side loading type forklift truck shall be equipped with safety belts, guard rails or other protective devices that prevent the driver from crushing when the truck falls.
第 六 章 研磨機、研磨輪	
Chapter VI Grinders and grinding wheels	
第 85 條	研磨機之研磨輪，應具有下列性能： 一、平直形研磨輪、盤形研磨輪、彈性研磨輪及切割研磨輪，其最高使用周速度，以製成該研磨輪之結合劑製成之樣品，經由研磨輪破壞旋轉試驗定之。 二、研磨輪樣品之研磨砂粒，為鋁氧（礬土）質系。 三、平直形研磨輪及盤形研磨輪之尺寸，依附表十五所定之值。 四、第一款之破壞旋轉試驗，抽取試樣三個以上或採用同一製造條件依附表十五所定尺寸製成之研磨輪樣品為之。以各該破壞旋轉周速度值之最低值，為該研磨輪樣品之破壞旋轉周速度值。 五、使用於粗磨之平直形研磨輪以外之研磨輪，以附表十六所定普通使用周速度限度以內之速度（以下簡稱普通速度），供機械研磨使用者，其最高使用周速度值，應在前款破壞旋轉周速度值除以一點八所得之值以下。但超過附表十六表所列普通速度之限度值者，為該限度值。

	六、除第五款所列研磨輪外，第一款研磨輪最高使用周速度值，應在第四款破壞旋轉周速度值除以二所得之值以下。但於普通速度下使用者，其值超過附表十六所定普通速度之限度值時，為該限度值。 七、研磨輪之最高使用周速度值，應依附表十七所列之研磨輪種類及結合劑種類，依前二款規定之平直形研磨輪所得之最高使用周速度值乘以 附表十七所定數值所得之值以下。但環片式研磨輪者，得由中央主管機關另定之。
Article 85	A grinding wheel shall have the following functions: 1. A highest using peripheral speed for a straight grinding wheel, a dish grinding wheel, an elastic grinding wheel or a cutting- off grinding wheel shall be prescribed with models made by each of its bonder through a grinding wheel rotation-breaking test. 2. The grain of models shall be an aluminum oxide (alumina) series. 3. Sizes of the straight grinding wheel or the dish grinding wheel shall base on Attachment table 15. 4. For the grinding wheel rotation-breaking test in the subparagraph 1, it shall take over three models or samples processed in same conditions and having sizes based on Attachment table 15. The minimum rotation-breaking peripheral velocity in the tested models or samples shall be concerned as the rotation breaking peripheral velocity of the models or samples. 5. Except the straight grinding wheel for rough grinding, the highest using peripheral velocity of a grinding wheel for mechanical grinding with a normal using peripheral velocity (hereinafter referred to as the normal velocity) set in Attachment table 16 shall be below the value get from the rotation-breaking peripheral velocity in the preceding subparagraph 1 divided by 1.8, but the value is over the limit of the normal velocity listed in Attachment table 16, the limit is concerned. 6. Except grinding wheels in the subparagraph 5, the highest using peripheral velocity of the grinding wheel in the subparagraph 1 shall be below the value get from the rotation breaking peripheral velocity in the subparagraph 4 divided by 2, but it is over the limit velocity set in Attachment table 16 for that using in lower normal velocity, the limit velocity is concerned. 7. According to the type of the grinding wheel and kind of bonder, the highest using peripheral velocity of the grinding wheel shall be below the value get from the highest using peripheral velocity of the straight grinding wheel set in the preceding subparagraph 2 multiplied by the value set in Attachment table 17, but it can be prescribed by the central authority for a segment type.
第 86 條	直徑在一百毫米以上之研磨輪，每批製品應具有就該研磨輪以最高使用周速度值乘以一點五倍之速度實施旋轉試驗合格之性能。

	前項試驗用研磨輪，應取其製品數之百分之十以上；其值未滿五個時，為五個：實施前項旋轉試驗，試驗之研磨輪全數無異常時，該批製品為合格；異常率在百分之五以下時，除異常之研磨輪外，該批其他製品視為合格。但顯有異常之製品，得不列入研磨輪試驗數。 研磨輪應於不超過一個月之一定期間，實施第四項之定期破壞旋轉試驗，經試驗合格之研磨輪，得免除第一項之旋轉試驗；經定期破壞旋轉試驗未能合格之研磨輪，應依第二項規定處理。 對三個以上使用同種結合劑在普通速度下供研磨用之研磨輪，於實施定期破壞旋轉試驗時，其破壞旋轉周速度之最低值，供粗磨以外之機械研磨時，為最高使用周速度乘以一點八所得之值；其他研磨輪為最高使用周速度乘以二所得之值，就使用該結合劑於供普通速度下使用之研磨輪製品，均視為合格。
Article 86	Each lot of the grinding wheel with the diameter over 100 millimeters shall be taken a rotation test by the velocity which is the highest using peripheral velocity of that wheel multiplied by1.5. The grinding wheel for testing in the preceding paragraph shall be taken over 10 percent of that products. For a number below five, the five is concerned. If all tested grinding wheels are normal, the lot is qualified. If abnormal rate below 5 percent, the others of the lot are qualified except the abnormal grinding wheels. However, significantly abnormal products cannot be included in the number of that test. Grinding wheels shall implement a regular rotation-breaking test following the next paragraph. The qualified wheels can example the rotation test in the first paragraph. Failed grinding wheels in the regular rotation-breaking test shall be treated according to the second paragraph. The regular rotation-breaking test is implemented by taking more than three grinding wheels having the same kind of bonder and being used in the normal velocity. If the minimum rotation breaking peripheral velocity get from the test is over the highest using velocity multiplied by 1.8 in case of machine grinding except coarse grinding, or over that multiplied by 2 in case of other grinding, those products having this kind of bonder and being used in normal velocity are qualified.
第 87 條	盤形研磨輪應就每種同一規格之製品，實施衝擊試驗。但彈性研磨輪，不在此限。 前項衝擊試驗，應分別就二個以上研磨輪，以附圖二及附表十八所定之衝擊試驗機，向相對之二處施以九十八焦耳之衝擊。但直徑未滿七十毫米之研磨輪，得以直徑七十毫米之同一規格研磨輪樣品為之。 在衝擊試驗測得之衝擊值中最低數值，依研磨輪厚度及直徑，每平方毫米零點零二九七焦耳以上者，與該衝擊試驗相關規格之製品均視為合格。 前項衝擊值，依附表十九所列公式計算。
Article 87	Except the elastic grinding wheel, an impact test for the dish grinding wheel shall be

	implemented for each kind of specifications. The impact test in the preceding paragraph shall be taken two or more grinding wheels by impacting at two opposite points for each wheel with a 98J value as in Attachment figure 2 and Attachment table 18. For grinding wheels with a diameter not exceeding 70 millimeters, the test may be performed on grinding wheels with 70-millimeter diameter of the same type. If the minimum value get from the impact test is beyond 0.0297J per square millimeter according to the thickness and diameter of the tested grinding wheel, products of the same specification as that under test shall be deemed compliance. The impact test value shall be calculated in accordance with the formulas stated in Attachment table 19.
第 88 條	研磨輪之尺寸，應依研磨輪之最高使用周速度及研磨輪種類，具有附表二十所定之值。
Article 88	The sizes of the grinding wheel based on its highest using peripheral velocity and type shall have values in accordance with listed in Attachment table 20.
第 89 條	研磨輪，應使用符合第九十條至第九十四條所定規格之緣盤。但附表二十一所定之研磨輪種類，於使用同表規定之安裝器具者，不在此限。 固定側或移動側之緣盤，應以避免相對於研磨輪軸而旋轉之固定方式，固定於研磨輪軸上；其研磨輪軸之固定扣件螺絲，應具有適度鎖緊狀態。 以平直形研磨輪用之安全緣盤，將研磨輪安裝於研磨機時，應使用橡膠製墊片。
Article 89	The grinding wheel shall use the flanges in accordance with the specifications set in the Article 90 through 94 but those restrictions do not apply to those using the mounting tools set in attachment table 21. The fixed- and movable-side flange shall be fixed on the grinding wheel shaft with the fixtures that should avoid rotation relative to the grinding wheel shaft. Their fastening bolts on the shaft of the grinding wheel shall be of an appropriate tightness. When the grinding wheel is mounted on the grinding machine with a safety flange usually used by a straight grinding wheel, it shall use rubber-labels.
第 90 條	緣盤應使用具有相當於國家標準 CNS 2472「灰口鐵鑄件」所定 FC150 鐵鑄件之抗拉強度之材料，且不致變形者。 緣盤之直徑及接觸寬度，在固定側與移動側均應等值。但第九十四條附圖三所定之緣盤，不在此限。
Article 90	The material of the flange shall have the equivalent tensile strength to FC150 cast irons set in the national standard CNS 2472 "gray iron castings" and withstand distortion. The diameter and the contact width of the grinding wheel in the fixed- side and the moving- side shall be equal except the flange set in Article 94, Attachment figure 3.
第 91 條	直式緣盤之直徑，應在擬安裝之研磨輪直徑之三分之一以上；間隙值應在一點五

	毫米以上；接觸寬度，應依研磨輪直徑，具有附表二十二所定之值。 安裝於最高使用周速度在每分鐘四千八百公尺以下，經補強之切割研磨輪，其使用抗拉強度在每平方毫米七十一公斤以上之玻璃纖維絲網或其他同等強度之材料補強者，該切割研磨輪之直式緣盤之直徑，得為該研磨輪直徑之四分之一以上，不受前項規定之限制。
Article 91	The diameter of the straight flange shall be more than one third of the diameter of the grinding wheel to be mounted, a clearance be more than 1.5 millimeters and the contact width based on the diameter of the wheel be the value as shown in Attachment table 22. If the flange sets on the cutting-off grinding wheel which has the highest using peripheral velocity below 80 meters per second and which is reinforced by means of glass-cloth material with tensile strength over 71 kilograms or other equivalents, then the diameter of the straight flange for that wheel can be over one fourth of the diameter of that wheel regardless of the provisions in the preceding paragraph.
第 92 條	套式緣盤或接頭式緣盤之直徑，應依下列計算式計算所得之值： Ｄｆ≧K(D－H)＋H 式中，Ｄｆ、Ｄ、Ｈ及Ｋ值如下： Ｄｆ：固定緣盤之直徑 (單位：毫米) Ｄ：研磨輪直徑 (單位：毫米) Ｈ：研磨輪孔徑 (單位：毫米) Ｋ：常數，依附表二十三規定。 前項緣盤之接觸寬度，應依研磨輪直徑，不得低於附表二十四所定之值。 接頭式緣盤，不得安裝於使用速度逾普通速度之研磨輪。
Article 92	The diameter of a sleeve or an adaptive flange shall be calculated according to the following formula: Df ≧ K (D-H) + H Where: Df, D, H, and K are as follows: Df: diameter of the fixed- flange (millimeters) D: diameter of the grinding wheel (millimeters) H: inner diameter of the grinding wheel (millimeters) K: constant according to the rules in attachment table 23. The contact width in the preceding paragraph shall be in accordance with the diameter of the grinding wheel and not less than that given in attached table 24. The adapting flange shall not be set on the grinding wheel with a usable velocity higher than a normal velocity.
第 93 條	安全式緣盤之直徑，於供平直形研磨輪使用者，應在所裝研磨輪直徑之三分之二以上；供雙斜形研磨輪使用者，應在所裝研磨輪直徑之二分之一以上。 前項緣盤之間隙值，應在一點五毫米以上；接觸寬度應在該緣盤直徑之六分之一

	以上。 雙斜形研磨輪用緣盤與研磨輪之接觸面，應有十六分之一以上之斜度。
Article 93	The diameter of the safety flange using on the straight grinding wheel shall be over two thirds of the grinding wheel being mounted and on the tapered two-sides grinding wheel shall be over a half of that. The clearance of the flange in the preceding paragraph shall be over 1.5 millimeters and the contact width be over one sixth of the diameter of that flange. The contact face between the tapered two sides flange and the grinding wheel shall have taper over one sixteenth.
第 94 條	供盤形研磨輪使用之緣盤之形狀如附圖三及附圖四者，該緣盤之尺寸應依盤形研磨輪直徑，具有附表二十五及附表二十五之一所定之值。
Article 94	The sizes of the flange with a form as shown in Attachment figure 3 or figure 4 and used for the dish grinding wheel shall be the values in Attachment table 25 or table 25(1).
第 95 條	研磨機之研磨輪，應設置護罩，並具有第九十六條至第一百零四條所定之性能。 但依國家標準 CNS 16089 附錄 A 設置安全防護裝置者，不在此限。
Article 95	The grinding wheel shall be fitted with a guard with the functions in Article 96 through Article 104. However, when the safety protection devices are set up in accordance with the national standard CNS 16089 Appendix A, they are not required to comply with the requirements of the preceding paragraph of this Article.
第 96 條	研磨輪護罩之材料，應使用具有下列所定機械性質之壓延鋼板： 一、抗拉強度值在每平方毫米二十八公斤以上，且延伸值在百分之十四以上。 二、抗拉強度值(單位：公斤／平方毫米) 與延伸值 (單位：百分比) 之兩倍之和，在七十六以上。 攜帶用研磨機之護罩及帶狀護罩以外之護罩，應依研磨輪最高使用周速度，使用附表二十六所定之材料，不受前項規定之限制。 切割研磨輪最高使用周速度在每分鐘四千八百公尺以下者，其使用之護罩材料，得使用抗拉強度在每平方毫米十八公斤以下，且延伸值在百分之二以上之鋁，不受前二項規定之限制。
Article 96	The material of the grinding wheel guard shall use rolled steel with the following mechanical properties: 1. Tensile strength being over 28 kilograms per millimeter square and elongation over 40 percents. 2. The sum of the tensile strength (unit: kg / mm2) and the value of the twice elongation (unit: percent) being over seventy six. The material for a portable grinder guard or a non-band guard shall be that based on the highest using peripheral velocity in Attachment table 26 regardless of restrictions in the preceding paragraph.

	The material of the guard for the cutting-off grinding wheel with the highest using peripheral velocity below 80 meters per second can use aluminum with tensile strength below 18 kilograms per millimeter square and elongation over 2 percent regardless of restrictions in the two preceding paragraphs.
第 97 條	研磨輪之護罩，應依下列規定覆蓋。但研磨輪供研磨之必要部分者，不在此限： 一、使用側面研磨之研磨輪之護罩：研磨輪周邊面及固定側之側面。 二、前款護罩以外之攜帶用研磨機之護罩，其周邊板及固定側之側板使用無接縫之單片壓延鋼板製成者：研磨輪之周邊面、固定側之側面及拆卸側之側面，如附圖五所示之處。但附圖五所示將周邊板頂部，有五毫米以上彎弧至拆卸側上且其厚度較第九十九條第一項之附表二十九所列之值增加百分之二十以上者，為拆卸側之側面。 三、前二款所列護罩以外之護罩：研磨輪之周邊、兩側面及拆卸側研磨輪軸之側面。 前項但書所定之研磨輪供研磨之必要部分，應依研磨機種類及附圖六之規定。
Article 97	Except a grinding necessary portion, the guard shall base on the following provisions to cover: 1. For the side-grinding wheel: covering the peripheral surface and the outside of fixed-side. 2. For a portable grinding wheel guard except that in the preceding subparagraph: If the peripheral plate and the fixed side plate are made of a piece of rolled steel with seamless, then the peripheral surface of that wheel, the outside of the fixed-side and the outside of the removing-side as shown in figure. 5 shall be covered. If the end of the peripheral plate is bent toward the removing-side by 5 millimeters as shown in Attachment figure 5 and its thickness is over that shown in Article 23(1) by 20 percentage, then the guard for the outside of the removing-side can be exempted. 3. Besides the guards in the two preceding subparagraph: The peripheral surface, the two sides including the side of the shaft end in the removing-side. The grinding necessary portion in the preceding proviso shall base on the grinder type and provisions in the Attachment figure 6.
第 98 條	帶型護罩以外之使用壓延鋼板為材料之護罩，其厚度應依研磨輪最高使用周速度、研磨輪厚度及研磨輪直徑，不得低於附表二十七所定之值。 護罩以鑄鐵、可鍛鑄鐵或鑄鋼為材料者，其厚度應依材料種類，在前項所定之厚度值乘以附表二十八所定之係數所得之值以上。
Article 98	Except the band-type guard, the thickness of the guard that is made of rolled steel shall base on the highest using peripheral velocity of the grinding wheel, the thickness and the diameter of that wheel to be the value no less than in Attachment table 27. Based on the type of material, the thickness of the guard that is made of cast iron,

	malleable iron or cast steel shall be over the thickness get from the preceding paragraph multiplied by the coefficient in Attachment table 28.
第 99 條	供盤形研磨輪及切割研磨輪以外之附表二十九所列研磨輪使用之護罩，其周邊板與固定側之側板係使用無接縫之單片壓延鋼板製成者，該護罩之厚度，應依研磨輪之最高使用周速度、研磨輪厚度、研磨輪直徑，以護罩板之區分，具有附表二十九規定之值，不受前條第一項規定之限制。 前項護罩之固定側之周邊板與拆卸側之側板採結合方式製成者，其拆卸側之側板頂端，應具有附圖七所示之彎曲形狀。
Article 99	Except the dish grinding wheel or the cutting-off grinding wheel, the thickness of the guard that peripheral plate and fixed-side plate are made of a piece of seamless rolled steel shall base on the highest using peripheral velocity, the thickness of grinding wheel, the diameter of that wheel and the guard-plate type to be the value listed in Attachment table 29 regardless the restriction of the first paragraph in the preceding Article 98 . The end of the removing- side plate in the preceding paragraph shall be bent as shown in the Attachment figure 7 if the construction of the peripheral plate in the fixed- side and the side plate in the removing- side is by means of a connection way.
第 100 條	使用於直徑在二百三十毫米以下之盤形研磨輪之護罩，其周邊板與固定側側板使用無接縫單片壓延鋼板製成者，該護罩之厚度，應依研磨輪厚度，不得低於附表三十所定之值，不受第九十八條第一項規定之限制。 前項護罩之頂端部分，應具有附圖八所示之彎曲形狀。
Article 100	A guard using for the dish grinding wheel with a diameter below 230 millimeters, its thickness shall base on the thickness of that wheel no less than the value in Attachment table 30 regardless of the restriction of the first paragraph in the preceding Article 98 if its peripheral plate and fixed-side plate is made of a piece of seamless rolled steel. The top end of the guard shall be bent as shown in Attachment figure 8.
第 101 條	於最高使用周速度在每分鐘四千八百公尺以下之切割研磨輪，使用壓延鋼板製作之護罩，其厚度應依研磨輪厚度、研磨輪直徑及護罩板區分，具有附表三十一所定之值，不受第九十八條第一項規定之限制。 使用鑄鐵、可鍛鑄鐵及鑄鋼等製成之護罩，供前項切割研磨輪使用者，其厚度準用第九十八條第二項之規定。 使用鋁製成之護罩，供第一項切割研磨輪使用者，其厚度不得低於鋁之抗拉強度值乘以附表三十二所定之係數所得之值。
Article 101	The thickness of the guard for the cutting-off grinding wheel with the highest using peripheral velocity below 80 meters per second and the guard being made of rolled steel shall base on the thickness and the diameter of that wheel and the guard-plate type to have the value listed in Attachment table 31 regardless of the restriction of the

	first paragraph in the preceding Article 98. The thickness of the guard made of cast iron, malleable iron or cast steel for that wheel in the preceding paragraph, can correspond with Article 98 paragraph 2. The thickness of the guard made of aluminum for the cutting-off grinding wheel in the first paragraph shall be no less than that the tensile strength of aluminum multiplied by the coefficient in Attachment table 32.
第 102 條	帶型護罩之厚度，應依研磨輪直徑，不得低於附表三十三所定之值。 前項護罩之設置，應依附圖九之規定。
Article 102	The thickness for the band- type guard shall base on the diameter of the grinding wheel to be a value no less than that in Attachment table 33. The setting of that guard shall base on Attachment figure 9.
第 103 條	護罩不得有降低其強度之虞之孔穴、溝槽等。
Article 103	The guard shall have no holes, slots or others that will reduce its strength.
第 104 條	桌上用研磨機及床式研磨機使用之護罩，應以設置舌板或其他方法，使研磨之必要部分之研磨輪周邊與護罩間之間隙可調整在十毫米以下。 前項舌板，應符合下列規定： 一、為板狀。 二、材料為第九十六條第一項所定之壓延鋼板。 三、厚度具有與護罩之周邊板同等以上之厚度，且在三毫米以上，十六毫米以下。 四、有效橫斷面積在全橫斷面積之百分之七十以上，有效縱斷面積在全縱斷面積之百分之二十以上。 五、安裝用螺絲之直徑及個數，依研磨輪厚度，具有附表三十四所定之值。
Article 104	The guard for a bench grinder or a bed grinder shall have a tongue plate or other means to adjust the gap between the peripheral of grinding necessary portion and the guard to be below 10 millimeters. The tongue plate in the preceding paragraph shall meet the following provisions: 1. It is of a plate shape. 2. The material is rolled steel set in Article 96(1). 3. The thickness is equivalent or over that of the peripheral plate of the guard , moreover it shall be over 3 millimeters and below 16 millimeters. 4. The effective cross-section area in the entire cross-section area shall be over 70 percent and the effective vertical section area in the entire vertical-section be over 20 percent. 5. The diameter and number for mounting bolts shall base on the thickness of grinding wheel in Attachment table 34.
第 105 條	研磨機應設置不離開作業位置即可操作之動力遮斷裝置。 前項動力遮斷裝置，應易於操作，且具有不致因接觸、振動等而使研磨機有意外起動之虞之構造。

Article 105	The grinder shall have a power blocking device that the operator can control it without leaving operating position. The power blocking device in the preceding paragraph shall have a construction that it is easily controlled and can prevent the unexpected starting of the grinder from touching, vibrating or others.
第 106 條	使用電力驅動之攜帶用研磨機、桌上用研磨機或床式研磨機，應符合下列規定： 一、電氣回路部分之螺絲，具有防止鬆脫之性能。 二、充電部分與非充電金屬部分間之絕緣部分，其絕緣效力具有國家標準 CNS 3265「手提電磨機」規定之絕緣性能。 三、接地構造之設置，應符合國家標準 CNS 3265「手提電磨機」之接地規定。
Article 106	The portable grinder with power-driving, the bench grinder or the bed grinder shall meet the following provisions: 1. Screws in the electrical circuit can prevent loosing and dropping out. 2. Insulating effectiveness between the charging part and non-charging metal part has insulating performance set in national standard CNS 3265 "the electric portable grinder." 3. It has a dedicated ground terminal which shall be in compliance with that specified in CNS 3265 “the electric portable grinder.”
第 107 條	桌上用研磨機或床式研磨機，應具有可調整研磨輪與工作物支架之間隙在三毫米以下之工作物支架。
Article 107	The bench grinder or the bed grinder shall have a worksupport that can be adjusted the gap between the peripheral of grinding wheel and the worksupport to be below 3 millimeters.
第 108 條	攜帶用空氣式研磨機，應設置調速機。但研磨機之公稱尺寸未滿六十五毫米者，不在此限。
Article 108	A portable air-type grinder shall have a governor except the nominal size is below 65 millimeters.
第 109 條	直徑未滿五十毫米之研磨輪及其護罩，不適用本章之規定。
Article 109	The grinding wheel with the diameter below 50 millimeters and its guard do not be applied to the provisions of this chapter.
第 七 章 防止爆炸及感電危害設備	
Chapter VII Explosion-proof and electroshock-proof equipment	
第 110 條	用於氣體類之防爆電氣設備，其性能、構造、試驗、標示及危險區域劃分等，應符合國家標準 CNS 3376 系列、國際標準 IEC 60079 系列或與其同等之標準規定。 前項國家標準 CNS 3376 系列與國際標準 IEC 60079 系列有不一致者，以國際標準 IEC 60079 系列規定為準。
Article 110	Performances, constructions, testings, markings, danger zone dividings and the like of explosion-proof electrical equipment for a gas category shall comply with the

	provisions in national standard CNS 3376 series, international standard IEC 60079 series or its equivalent. Where there are discrepencies between CNS 3376 series and IEC 60079 series, IEC 60079 series shall govern.
第 111 條	用於粉塵類之防爆電氣設備，其性能、構造、試驗、標示及塵爆場所區域劃分等，應符合國家標準 CNS 3376、CNS 15591 系列、國際標準 IEC 60079、IEC 61241 系列或與其同等之標準相關規定。 前項國家標準 CNS 3376、CNS 15591 系列與國際標準 IEC 60079、IEC 61241 系列有不一致者，以國際標準 IEC 60079、IEC 61241 系列規定為準。
Article 111	Performances, constructions, testings, markings, danger zone dividings and the like of explosion-proof electrical equipment for a powder-dust category shall comply with the provisions in national standards CNS 3376 and CNS 15591 series, international standards IEC 60079 and IEC 61241 series or their equivalent. Where there are discrepencies between CNS 3376 and CNS 15591 series and IEC 60079 and IEC 61241 series, IEC 60079 and IEC 61241 series shall govern.
第 111-1 條	交流電焊機用自動電擊防止裝置之構造及性能，應符合國家標準 CNS 4782。
Article 111-1	The structures and performances of the voltage reducing devices for AC arc welding equipment shall comply with the requirements of CNS 4782.
第 八 章 標示	
Chapter VIII Markings	
第 112 條	衝壓機械之安全裝置，應標示下列事項： 一、製造號碼。 二、製造者名稱。 三、製造年月。 四、適用之衝壓機械種類、壓力能力、行程長度(雙手操作式安全裝置除外)、每分鐘行程數(雙手操作式安全裝置及光電式安全裝置除外) 及金屬模之大小範圍。 五、雙手操作式安全裝置及光電式安全裝置，應依下列規定標示： （一）安全一行程雙手操作式安全裝置：手離開操作部至快速停止機構開始動作之時間（Tl），以毫秒表示。 （二）雙手起動式安全裝置：手離開操作部至適用之衝壓機械之滑塊等達到下死點之最大時間（Tm），以毫秒表示。 （三）光電式安全裝置：手將光線遮斷至快速停止機構開始動作之時間（Tl），以毫秒表示。 （四）適用之衝壓機械之停止時間：快速停止機構開始動作至滑塊等停止之時間（Ts），以毫秒表示。但標示最大停止時間（Tl +Ts）者，得免分別標示 Tl 及 Ts。 （五）安全一行程雙手操作式安全裝置及光電式安全裝置依前目所定之停止時

	間；雙手起動式安全裝置依第二目規定之最大時間，分別對應之安全距離。雙手操作式安全裝置，為操作部與危險界限之距離；光電式安全裝置，為光軸與危險界限之距離，以毫米表示。 六、光電式安全裝置，除前款之標示外，應另標示下列事項： （一）有效距離：指投光器與受光器之機能可有效作用之距離限度，以毫米表示。 （二）適用之衝壓機械之防護高度，以毫米表示。 七、摺床用雷射感應式安全裝置，除第一款至第三款之標示外，應另標示下列事項： （一）自遮斷雷射光，快速停止機構開始動作至滑塊等停止時之時間，以毫秒表示。 （二）對應前目之時間，摺床雷射光軸與危險界限之距離，以毫米表示。 （三）有效距離：雷射光軸可有效作用之距離限度，以毫米表示。 八、掃除式安全裝置，除第一款至第四款之標示外，應另標示掃臂之最大振幅，以毫米表示。
Article 112	The safety device for the power press machine shall be marked the following items: 1. manufacture number. 2. manufacturer. 3. manufacture date. 4. applicable the press machine type, capability, stroke (except the two-hand control safety device), the number of strokes per minute (except the two-hand control safety device and the photoelectric safety device) and die sizes. 5. The two-hand control safety device or the photoelectric safety device shall be marked in accordance with the following provisions: (1) for the safe-one-stroke-two-hand control safety device: the time (Tl, in milliseconds) that hands releasing from the operating portion of that device to the starting action of the protective stop mechanism. (2) for the two-hand start safety device: the maximum time (Tm) that hands releasing from the operating portion to the slider of the applicable press machine reaching the lower dead center, in millimeters (3) for the photoelectric safety device: the time that fingers intervening the sensing zone of that device to the starting of the protective stop mechanism, in millimeters. (4) the stop time (Ts, in milliseconds) of the applicable press machine: the time that the protective stop mechanism starting action to the slider stopping, in milliseconds. But that marked the maximum stop time (Tl+Ts) being exempt from separately marking Tl and Ts. (5) for the safe-one-stroke- two-hand control safety device or the photoelectric safety

	device: according to the set stopping time in the preceding subparagraph. For the two-hand start safety device: in accordance with the maximum time separately corresponding to the safe distance set in the preceding subparagraph (2). For two-hand control safety device: the distance between the operating portion and the hazard zone, in millimeters, for photoelectric safety device: the distance between the optical axis and the hazard zone, in millimeters. 6. The photoelectric safety device, in addition to the marking in the preceding subparagraph, shall mark the followings: (1) the effective distance: referring to the distance that the emitter and receiver can effectively function, in millimeters. (2) the protective height for the applicable press machine, in millimeters. 7. The laser-sensitive safety device for the press brake, in addition to the marks in the preceding subparagraph 1 through 3, shall separately mark the followings: (1) the time that from the protective stop mechanism enacted to the slider stopping when the laser shaded, in milliseconds. (2) the distance between the optic axis of the press brake and the hazard zone , in millimeters and that being corresponding to the time in the subparagraph 7(2). (3) the effective distance that the laser optical axis can effectively function, in millimeters. 8. The push-out safety device, in addition to the marks in subparagraph 1 through 4, shall separately mark the maximum amplitude of the push-out arm, in millimeters.
第 113 條	剪斷機械之安全裝置，應標示下列事項： 一、製造號碼。 二、製造者名稱。 三、製造年月。 四、適用之剪斷機械種類。 五、適用之剪斷機械之剪斷厚度，以毫米表示。 六、適用之剪斷機械之刀具長度，以毫米表示。 七、光電式安全裝置：有效距離，指投光器與受光器之機能可有效作用之距離限度，以毫米表示。
Article 113	The safety device for the shear machine shall be marked the followings: 1. Manufacture number. 2. Manufacturer. 3. Manufacture date. 4. Applicable shear machine type. 5. Shear thickness of the applicable shear machine, in millimeters. 6. Cutter length of the applicable shear machine, in millimeters.

	7. Photoelectric safety device: Effective distance that means the emitter and receiver can effectively function, in millimeters.
第 114 條	衝壓機械及剪斷機械，應於明顯易見處標示下列事項： 一、製造號碼。 二、製造者名稱。 三、製造年月。 四、機械規格： （一）衝壓機械：依附表三十五之規定。 （二）剪斷機械：適用之剪斷厚度及刀具長度，以毫米表示。
Article 114	The press machine shall be clearly and visibly marked with the following information: 1. Manufacture number. 2. Manufacturer. 3. Manufacture date. 4. Machine specifications: (1) press specifications shall be based on attachment table 35. (2) applicable shear thickness and cutter length of the shear machine, in millimeters.
第 115 條	手推刨床應於明顯易見處標示下列事項： 一、製造者名稱。 二、製造年月。 三、額定功率或額定電流。 四、額定電壓。 五、無負荷回轉速率。 六、有效刨削寬度。 七、刃部接觸預防裝置，標示適用之手推刨床之有效刨削寬度。
Article 115	The hand-fed planer shall be clearly and visibly marked the followings : 1. Manufacturer. 2. Manufacture date. 3. Rated power or rated current. 4. Rated voltage. 5. No-load speed. 6. Effective planing width. 7. Cutter contact- preventive devices for the applicable effective planning width.
第 116 條	圓盤鋸，應於明顯易見處標示下列事項： 一、製造者名稱。 二、製造年月。 三、額定功率或額定電流。 四、額定電壓。

	五、無負荷回轉速率；具有變速機構之圓盤鋸者，為其變速階段之無負荷回轉速率 。 六、適用之圓鋸片之直徑範圍及圓鋸軸之旋轉方向；具有變速機構之圓盤鋸者，為其變速階段可使用之圓鋸片直徑範圍、種類及圓鋸軸旋轉方向。 七、撐縫片適用之圓鋸片之直徑、厚度範圍及標準鋸台位置。 八、鋸齒接觸預防裝置，其適用之圓鋸片之直徑範圍及用途。
Article 116	The circular saw shall be clearly and visibly marked with the following items : 1. Manufacturer. 2. Manufacture date. 3. Rated power or rated current. 4. Rated voltage. 5. No-load speed: for the circular saw with a speed change mechanism the no-load speed in the speed changing state. 6. Applicable diameter and type of the circular saw blade, and rotation direction of circular saw shaft; for the circular saw with a speed change mechanism the diameter, type and rotation direction in the speed changing state. 7. Applicable diameter of the circular saw blade, thickness range and the standard table position for the riving knife. 8. Applicable diameter range and the purpose for the teeth contact-preventive device.
第 117 條	堆高機應於明顯易見處標示下列事項： 一、製造者名稱。 二、製造年份。 三、製造號碼。 四、最大荷重。 五、容許荷重：指依堆高機之構造、材質及貨叉等裝載貨物之重心位置，決定其足以承受之最大荷重。
Article 117	The lift-truck shall be clearly and visibly marked the followings : 1. Manufacturer. 2. Manufacture date. 3. Manufacture number. 4. Maximum load. 5. Allowable load: refers to the construct of the lift-truck, material and the loading gravity center position of the fork to determine the maximum load it can withstand.
第 118 條	研磨機應於明顯易見處標示下列事項： 一、製造者名稱。 二、製造年月。 三、額定電壓。

	四、無負荷回轉速率。 五、適用之研磨輪之直徑、厚度及孔徑。 六、研磨輪之回轉方向。 七、護罩標示適用之研磨輪之最高使用周速度、厚度、直徑。
Article 118	The grinder shall be clearly and visibly marked the followings : 1. Manufacturer. 2. Manufacture date. 3. Rated voltage. 4. No-load speed. 5. Applicable diameter, thickness and inner diameter of the grinding wheel. 6. Direction of rotation. 7. Guard marking the applicable using highest peripheral velocity, thickness and diameter of the grinding wheel.
第 119 條	研磨輪，應標示下列事項： 一、製造者名稱。 二、結合劑之種類。 三、最高使用周速度，並得加註旋轉速率。 四、製造號碼或製造批號。 前項標示，於直徑未滿七十五毫米之研磨輪，得在最小包裝單位上加以標示。
Article 119	The grinding wheel shall be clearly and visibly marked with the following information: 1. Manufacturer. 2. Bonder type. 3. Highest usable peripheral velocity, and should add revolution speed. 4. Manufacturing Number or Manufacturing Lot Number. For the diameter of grinding wheel under 75 millimeters, the preceding markings can be indicated on the smallest package unit.
第 九 章 附則	
Chapter IX Supplementary Provisions	
第 120 條	特殊構造之機械、設備或器具，適用本標準規定有困難時，製造者或進口者應檢附產品安全評估報告及構造圖說等相關技術文件，報請中央主管機關認定具有同等以上之安全性能者，得不適用本標準之部分規定；其安全性能，應依風險控制及安全設計學理，具有符合國際標準、區域標準、國家標準、團體標準或技術規範等之同等以上安全性能。 前項認定事項，中央主管機關得委託學術機構或相關專業團體辦理之。
Article 120	When the specially constructed machinery or equipment that is difficulty in the application of this standard, the manufacture or importer shall submit product safety evaluation report and other related technology structural drawing submit to the central

	authorities for their approve. The specially constructed machinery or equipment can be exampled to apply a part of this standard if they recognize that has the equivalent or over the safety performances. Their safety performance shall base on the risk control and the safety design theory and be in accordance with the international standards, regional standards, national standards, group standards, technical specifications or others having the equivalents or over. The central authorities may delegate academic institution or relevant professional bodies to handle that.
第 120-1 條	本法第七條及第八條所定之機械、設備或器具，其構造、性能或安全防護事項，於本標準未規定者，中央主管機關得公告依其他技術法規或指定適用國際標準、區域標準、國家標準、團體標準或技術規範之一部或全部內容辦理。
Article 120-1	For those the other relating to the structures, performances, or security matters of the machinery or equipment set by the Act are not been prescribed in the standard, the central authorities may announce that can be handled according to other technical regulations or specify the applicable international standards, regional standards, national standards, group standards or a part or all of the technical specifications to handle them.
第 121 條	本標準除第一百十條、第一百十一條自中華民國一百年七月一日施行外，自發布日施行。 本標準修正條文，除自中華民國一百零三年六月二十六日修正發布之條文，自一百零三年七月三日施行；一百零三年十二月二十二日修正發布之條文，自一百零四年一月一日施行；一百十一年五月十一日修正發布之第二十二條及第三十八條自發布後一年施行外，自發布日施行。
Article 121	This standard was implemented on the date of promulgation, except Articles 110 and 111, which were implemented on July 1, 2011. Amendments to this standard are implemented on the date of promulgation, except those promulgated on June 26, 2014 and December 22, 2014 and May 11, 2022, which were implemented on July 3, 2014 and January 1, 2015 and May 11, 2023 respectively.

附表一

機械衝床種類	壓力能力（單位：噸）	行程數（單位：每分鐘行程數）
附滑動銷離合器之衝床	20 以下	150
	超過 20 30 以下	120
	超過 30 50 以下	100
	超過 50	50
附滾動鍵離合器之衝床	20 以下	300
	超過 20 30 以下	220
	超過 30 50 以下	150
	超過 50	100

Attaching table 1

Type of mechanical press	Capacity (unit: tons)	Strokes per minute (unit: spm)
pin clutch mechanical press	below 20	150
	over 20 below 30	120
	over 30 below 50	100
	over 50	50
key clutch mechanical press	below 20	300
	over 20 below 30	220
	over 30 below 50	150
	over 50	100

附表二

機械衝床種類	離合器之構成部分	材　料
附滑動銷離合器之衝床	離合器滑動銷	符合國家標準 CNS 三二三 0「機械構造用鎳鉻鋼鋼料」之鋼材
	離合器動作用凸輪	符合國家標準 CNS 二九六四「碳工具鋼鋼料」所定之四號或五號規格之鋼材，或符合國家標準 CNS 三二二九「機械構造用鉻鉬鋼鋼料」之鋼材
	離合器滑動銷擋塊	符合國家標準 CNS 二九六五「合金工具鋼鋼料」所定之 SKS 44 規格之鋼材，或符合國家標準 CNS 三二二九「機械構造用鉻鉬鋼鋼料」之鋼材
附滾動鍵離合器之衝床	內側離合器環	符合國家標準 CNS 三二三 0「機械構造用鎳鉻鋼鋼料」之鋼材，或符合國家標準 CNS 三八二八「機械構造用碳鋼鋼料」所定之 S40C、S43C 或 S45C 規格之鋼材
	中央離合器環	符合國家標準 CNS 三二三 0「機械構造用鎳鉻鋼鋼料」之鋼材
	外側離合器環	符合國家標準 CNS 三八二八「機械構造用碳鋼鋼料」所定之 S40C、S43 C 或 S45C 規格之鋼材
	滾動鍵、離合器動作用凸輪及離合器嚙合分離用金屬配件	符合國家標準 CNS 二九六五「合金工具鋼鋼料」所定之 SKS44 規格之鋼材

Attaching table 2

Type of mechanical press	Components of the clutch	Materials
pin clutch mechanical press	clutch slide- pin	compling with the national standard CNS 3230 ”mechanical-structure-usage nickel chromium steel material"
	clutch driving cam	compling with No.4 or No.5 set in the national standard CNS 2964 ”carbon tool steel material" or compling with the national standard CNS 3229 ” mechanical-structure-usage chromium molybdenum steel material"
	stopper of clutch slide-pin	compling with SKS 44 specifications set in the national standard CNS 2965 ”alloy tool steel material" or compling with the national standard CNS 3229 ” mechanical-structure-usage chromium molybdenum steel material"
key clutch mechanical press	clutch ring in inner	compling with the national standard CNS 3230 ”mechanical-structure-usage nickel chromium steel material" or comply with S40C, S43C or S45C set in the national

		standard CNS 3828 ”mechanical-structure-usage carbon-steel material"
	clutch ring in middle	compling with the national standard CNS 3230 ”mechanical-structure-usage nickel chromium steel material"
	clutch ring in outside	compling with the national standard CNS 3828 ”mechanical-structure-usage carbon steel material" S40C，S43C or S45C.
	rolling- key，clutch driving cam or metal fittings for clutch engaging or separating	compling with SKS 44 specifications set in the national standard CNS 2965 ”alloy tool steel material"

附表三

機械衝床種類	離合器構成部分	熱處理	表面硬度值（洛氏 C 硬度值）
附滑動銷離合器之衝床	離合器滑動銷	淬火、回火	52 以上 56 以下
	離合器作動用凸輪	碳工具鋼在接觸部進行淬火、回火； 鉻鉬鋼，滲碳後再進行淬火、回火	52 以上 56 以下
	離合器滑動銷擋塊	合金工具鋼，淬火、回火；鉻鉬鋼， 滲碳後再進行淬火、回火	54 以上 58 以下
附滾動鍵離合器之衝床	內側離合器環	淬火、回火	22 以上 25 以下
	中央離合器環	滲碳後再進行淬火、回火	52 以上 56 以下
	外側離合器環	淬火、回火	22 以上 25 以下
	滾動鍵	淬火、回火	54 以上 58 以下
	離合器作動用凸輪	淬火、回火	42 以上 45 以下
	離合器嚙合分離用金屬配件中， 接觸離合器作動用凸輪之部分	淬火、回火	42 以上 45 以下

Attaching table 3

Type of mechanical press	Components of the clutch	Heat treatment	Surface hardness(Rockwell C scale)
pin clutch mechanical press	clutch slide- pin	quenching，tempering	over 52 below 56
	clutch driving cam	quenching and tempering being applied to the contact portion for carbon tool steel; quenching and tempering after carburization for chromium molybdenum steel	over 52 below 56

	stopper of clutch slide- pin	quenching and tempering for alloy tool steel; quenching and tempering after carburization for chromium molybdenum steel	over 54 below 58
key clutch mechanical press	clutch ring in inner	quenching and tempering	over 22 below 25
	clutch ring in middle	quenching and tempering after carburization	over 52 below 56
	clutch ring in outside	quenching and tempering	over 22 below 25
	rolling- key	quenching and tempering	over 54 below 58
	clutch driving cam	quenching and tempering	over 42 below 45
	portion in the metal fittings for clutch engaging or separating that contacting with the clutch driving cam	quenching and tempering	over 42 below 45

附表四

液壓衝床種類	壓力能力（單位：噸）	慣性下降值（單位：毫米）
液壓式摺床以外之液壓衝床	50 以下	50
	超過 50 300 以下	100
	超過 300	150
液壓式摺床	100 以下	20
	超過 100 500 以下	50
	超過 500	150

Attaching table 4

Type of hydraulic press	Capacity (unit: tons)	Inertial descending value (unit: millimeters)
Hydraulic press except the hydraulic press brake	below 50	50
	over 50 below 300	100
	over 300	150
Hydraulic press brake	below 100	20
	over 100 below 500	50
	over 500	150

附表五

圓鋸片種類	圓鋸片構成部分	材料
超硬圓鋸片	鋸齒	超硬鋸齒規格之鋼料
	本體	符合國家標準 CNS 2964「碳工具鋼鋼料」所定 SK5 或 SK6 之鋼料
超硬圓鋸片以外之圓鋸片		符合國家標準 CNS 2964「碳工具鋼鋼料」所定 SK5 或 SK6 之鋼料

Attaching table 5

Type of the circular saw	The circular saw components	Materials
blade of the super- hard circular saw	saw teeth	steel of the super-hard saw teeth specifications
	the body	compling with SK5 or SK6 set in the national standard CNS 2964 ”carbon tool steel material"
except the blade of the super-hard circular saw		compling with SK5 or SK6 set in the national standard CNS 2964 ”carbon tool steel material"

附表六

圓鋸片直徑(單位: 毫米)	值(單位: 毫米)
152 以下	30
203	35
255	45
305	50
355	55
405	60
455	70
510	75
560	80
610	85
備註:圓鋸片直徑介於列表值中間時，以比例法求出。	

Attaching table 6

diameter of the blade (unit: millimeters)	Value (unit: millimeters)
below 152	30
203	35
255	45
305	50
355	55
405	60
455	70
510	75
560	80
610	85
Remark: The diameter of a blade is get by interpolation if it is in the intermediate of a two-values in the list.	

附表七

圓鋸片直徑(單位: 毫米)	值(單位: 毫米)
810 以下	40
超過 810，965 以下	50
超過 965，1120 以下	60
超過 1120	70

Attaching table 7

diameter of the blade (unit: millimeters)	Value (unit: millimeters)
below 810	40
over 810，below 965	50
over 965，below 1120	60
over 1120	70

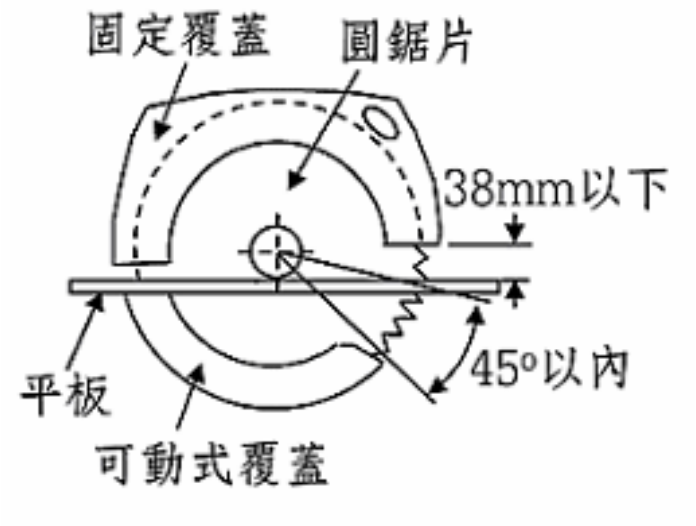
附表八

撐縫片種類	圓鋸片直徑(單位: 毫米)	螺栓直徑(單位: 毫米)
鐮刀式撐縫片	203 以下	5
	超過 203，355 以下	6
	超過 355，560 以下	8
	超過 560，610 以下	10
懸垂式撐縫片	915 以下	6
	超過 915	8

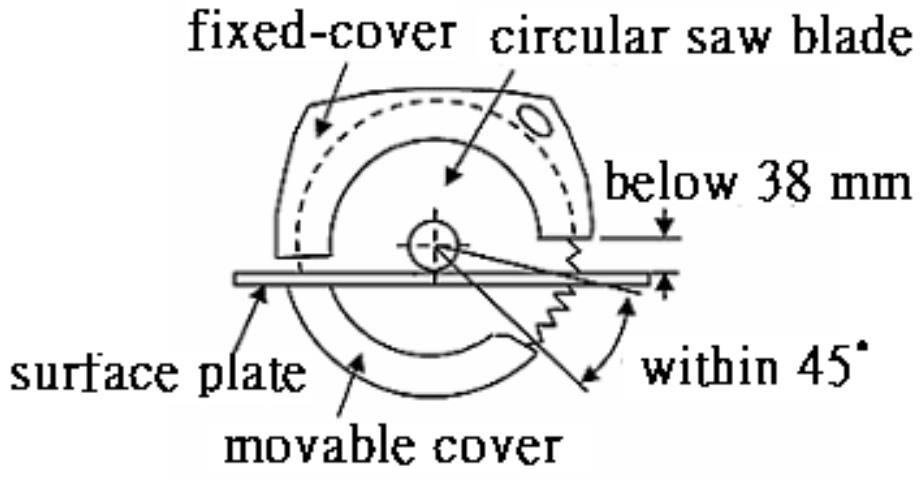
Attaching table 8

Type of the riving knife	diameter of the blade (unit: millimeters)	diameter of the bolt (unit: millimeters)
sickle-type riving knife	below 203	5
	over 203，below 355	6
	over 355，below 560	8
	over 560，below 610	10
drape-type riving knife	below 915	6
	over 915	8

附圖一

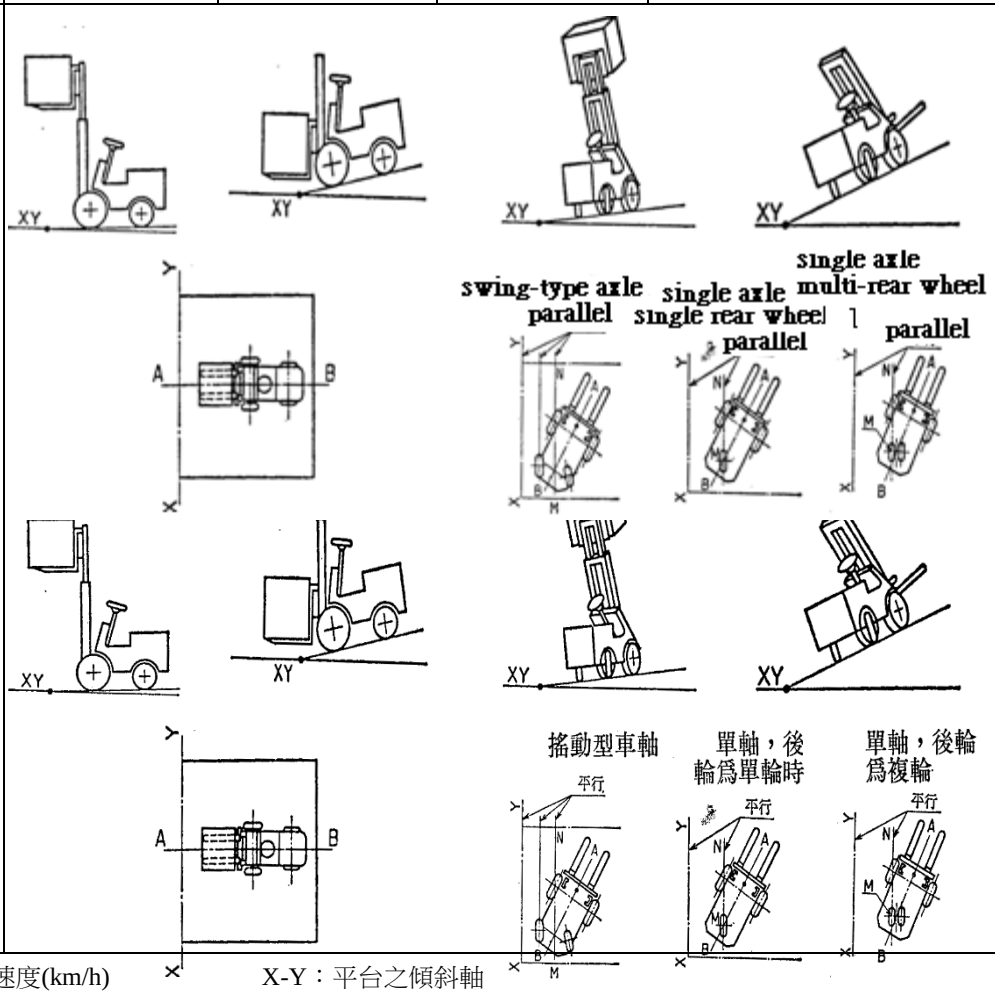


Attaching figure 1



附表九

配衡型堆高機

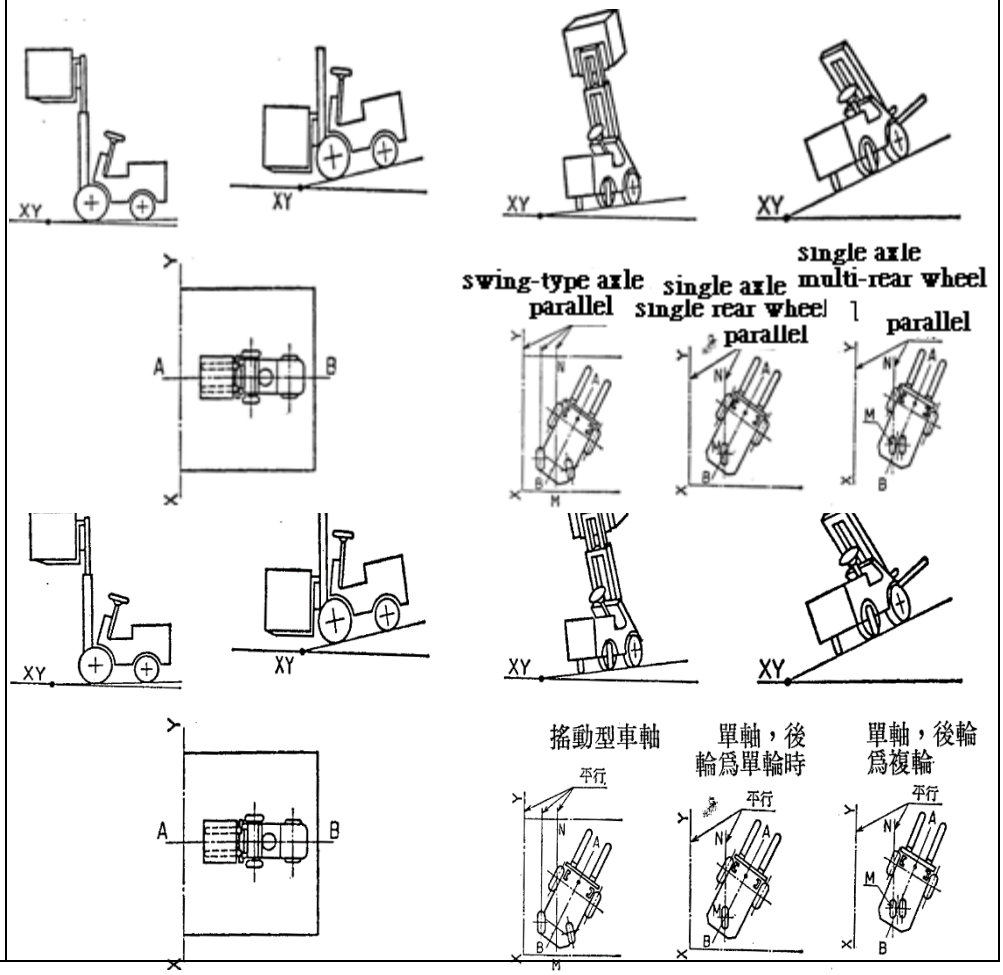
試驗項目		1	2	3	4
安定度區分		前後安定度		左右安定度	
安定測試狀態		靜止	運行	靜止	運行
負載		負載	負載	負載	無負載
叉之升程		最高	300mm	最高	300mm
桅桿或叉之傾斜度		垂直	後傾		
平台之傾斜度	未滿5噸	4%	18%	6%	(15+1.1v)%(最大 50%)
	5噸以上10噸以下	3.5%	18%	6%	(15+1.1v)% (最大 40%)
堆高機在平台上之位置					

V：最高速度(km/h)　　X-Y：平台之傾斜軸

M-N：堆高機之左右安定度軸　　A-B：堆高機之縱向中心線

Attaching table 9

The counterbalancer lift- truck

Test items		1	2	3	4
stability divisions		front- rear stability		left- right stability	
state of stability test		stillness	running	stillness	running
load		load	load	load	no-load
fork lift		highest	300mm	highest	300mm
tilt of mast or fork		verticle	backward tilt		
tilt of platform	below 5 tons	4%	18%	6%	(15+1.1v)%(max. 50%)
	over 5 tons below 10 tons	3.5%	18%	6%	(15+1.1v)% (max. 40%)
lift- truck posision on the platform					

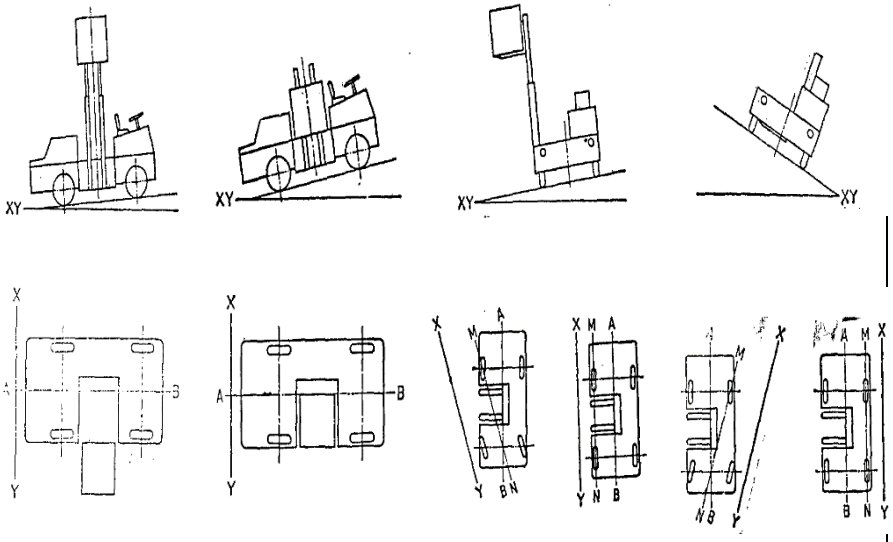
X-Y： tilt axis of the platform V： max. speed(km/h)

M-N： left- right stability axis of the lift- truck

A-B：longitudinal centerline of a lift- truck

附表十

側舉型堆高機

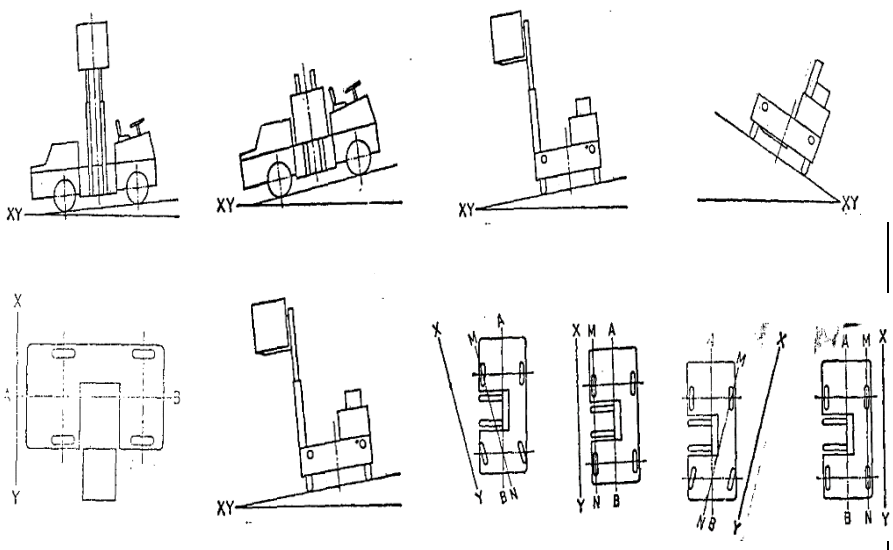
試驗項目		1	2	3	4
安定度區分		前後安定度		左右安定度	
安定測試狀態		靜止	運行	靜止	運行
負載		負載	負載	負載	無負載
叉之升程		最高	車台之高度	最高	300 ㎜
伸縮度		伸長	收縮	伸長	收縮
桅桿或叉之傾斜度		垂直			
安定器		伸長	收縮	伸長	收縮
平台之傾斜度	未滿 5 噸	6%	18%	4%	(15+1.1v)%(最大 40%)
	5 噸以上 10 噸以下	6%	18%	3.5%	(15+1.1v)% (最大 50%)
堆高機在平台上之位置					

V：最高速度(km/h)　　X-Y：平台之傾斜軸

M-N：堆高機之左右安定度軸　　A-B：堆高機之縱向中心線

Attaching table 10

The side loading lift- truck

Test items		1	2	3	4
stability divisions		front- rear stability		left- right stability	
state of stability test		stillness	running	stillness	running
load		load	load	load	no-load
fork lift		highest	height of truck-platform	highest	300 ㎜
extension- retract degree		extension	retract	extension	retract
tilt of mast or fork		verticle			
ballast		extension	retract	extension	retract
tilt of platform	below 5 tons	6%	18%	4%	(15+1.1v)% (max. 40%)
	over 5 tons below 10 tons	6%	18%	3.5%	(15+1.1v)%(max. 50%)
堆高機在平台上之位置 lift- truck posision on the platform					

V： max. speed(km/h) X-Y： tilt axis of the platform

M-N：left- right stability axis of the lift- truck A-B： longitudinal centerline of a lift- truck

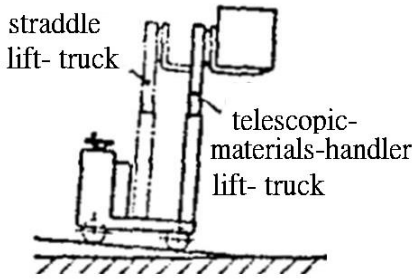
附表十一

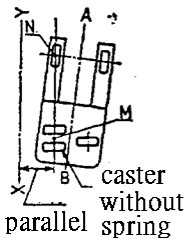
伸縮型及跨提型堆高機

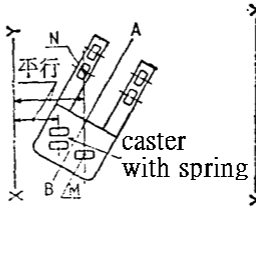
試驗項目	1	2	3	4	5	6	7	8
安定度區分	前安定度		左右安定度			後安定度		
安定測試狀態	靜止	運行	靜止		運行	靜止		運行
負載	負載	負載	負載	無負載	無負載	負載	無負載	無負載
叉之升程	最高	圖 2、圖 3	最高	最高	圖 2、圖 3	最高	最高	圖 2、圖 3
伸縮度(伸縮型堆高機)	伸長	收縮	收縮	收縮	收縮	收縮	收縮	收縮
桅桿或叉之傾斜度	垂直	最大後傾	安定性最差之狀態					
平台之傾斜度	4%	18%	6%	8%	圖 4	14%	單後輪制動 14% 複後輪制動 18%	圖 5
堆高機在平台上之位置	圖 2 圖 3							

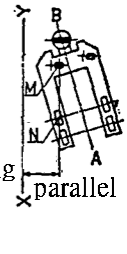
V：最高速度(km/h)， X-Y：平台之傾斜軸， M-N：堆高機之左右安定度軸，

A-B：堆高機之縱向中心線









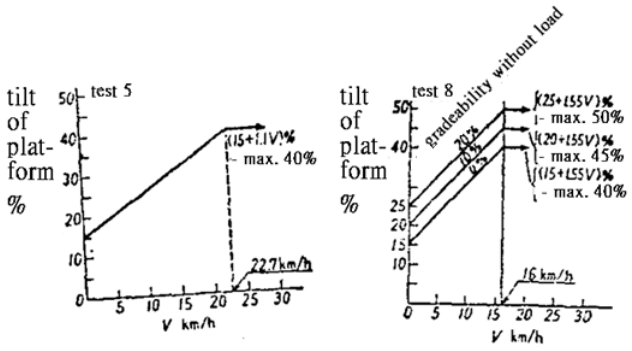
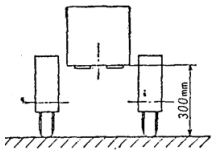

tilt of plat-form %
test 5
(15+1.1V)%
- max. 40%
22.7km/h
V km/h
test 8
gradeability without load
(25+1.55V)%
- max. 50%
(20+1.55V)%
- max. 45%
(15+1.55V)%
- max. 40%
16 km/h
V km/h

fig. 2


300mm

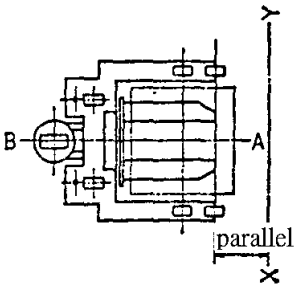
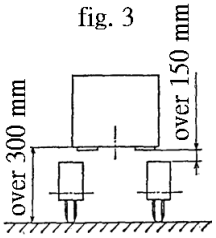
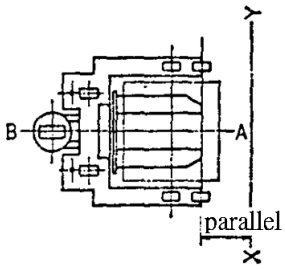
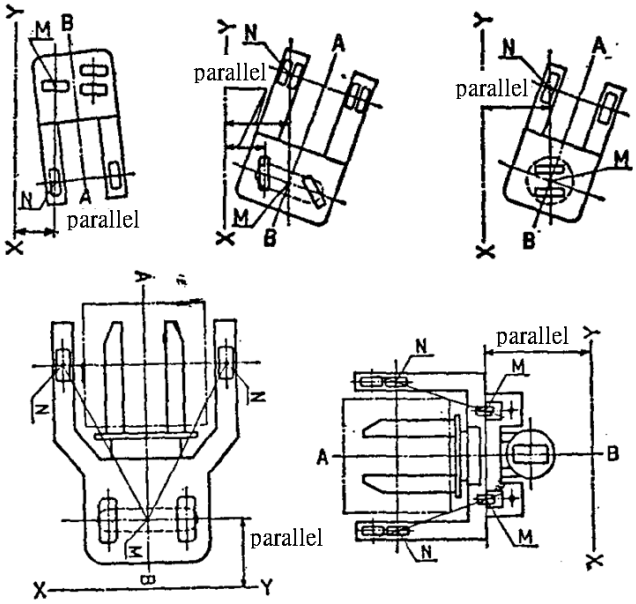

Y
B
A
parallel
X

fig. 3

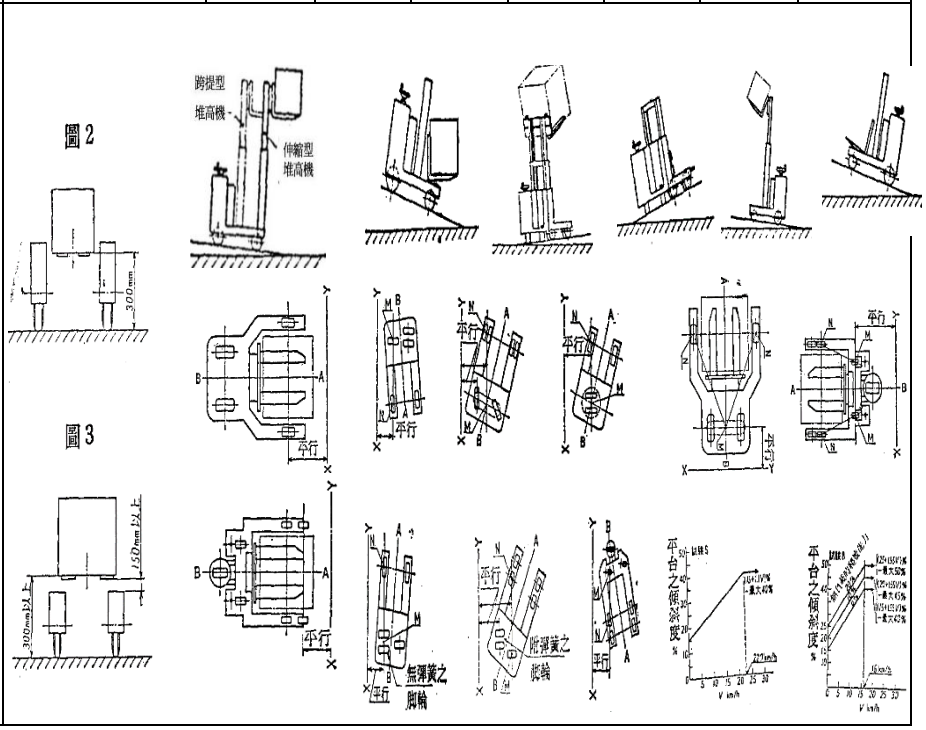

over 300 mm
over 150 mm


Y
B
A
parallel
X


Y
M
B
N
A
parallel
X
N
A
parallel
M
B
N
A
parallel
M
B
A
N
N
parallel
X
Y
N
parallel Y
M
A
B
N
M
X

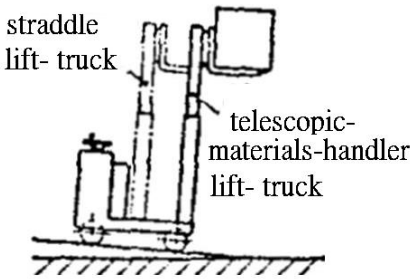
Attaching table 11

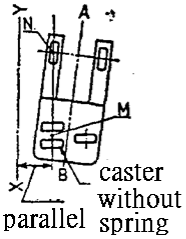
the telescopic-materials-handler lift- truck or the straddle lift- truck

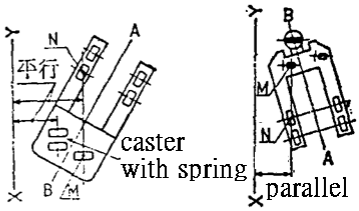
Test items	1	2	3	4	5	6	7	8
stability divisions	front stability		left- right stability			rear stability		
state of stability test	stillness	running	stillness		running	stillness		running
load	load	load	load	no-load	no-load	load	no-load	no-load
fork lift	highest	fig.2 fig 3	highest	highest	fig.2 fig 3	highest	highest	fig.2 fig 3
extension- retract degree (telescopic-materials-handler lift- truck)	extension	retract	retract	retract	retract	retract	retract	retract
tilt of mast or fork	verticle	max. backward tilt	worst state of stability					
tilt of platform	4%	18%	6%	8%	fig. 4	14%	single rear wheel 14% braking multi-rear wheel braking 18%	fig.5
lift- truck posision on the platform								

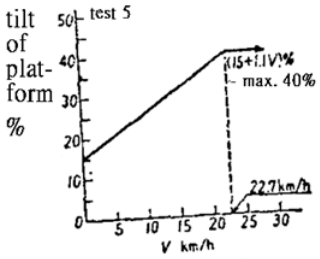
V：max. speed(km/h)， X-Y：tilt axis of the platform M-N：left- right stability axis of the lift- truck

A-B： longitudinal centerline of a lift- truck


straddle
lift- truck
telescopic-
materials-handler
lift- truck


caster
without
spring
parallel


caster
with spring
parallel


test 5
tilt of plat- form %
(15+1.1V)%
- max. 40%
22.7km/h
V km/h

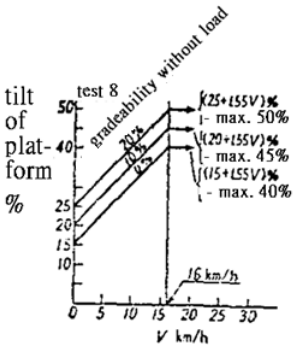
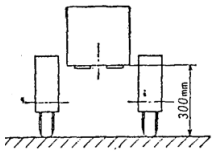

test 8
gradeability without load
tilt of plat- form %
(25+1.55V)%
- max. 50%
(20+1.55V)%
- max. 45%
(15+1.55V)%
- max. 40%
16 km/h
V km/h

fig. 2


300mm

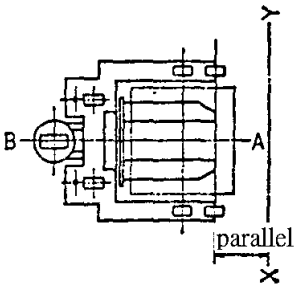
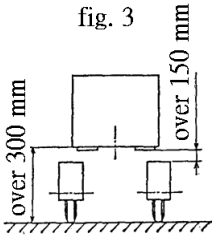
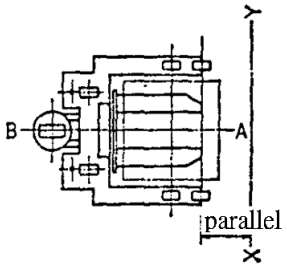
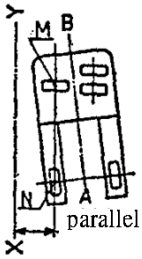

parallel

fig. 3


over 300 mm
over 150 mm


parallel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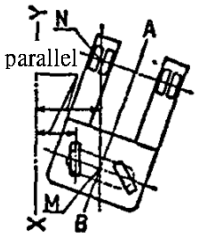
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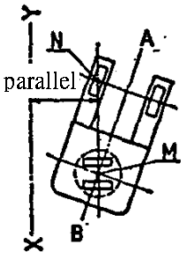
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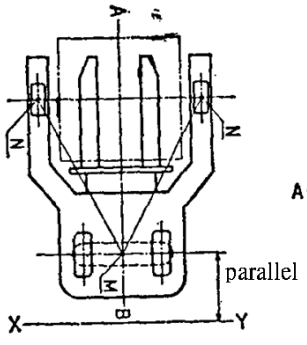
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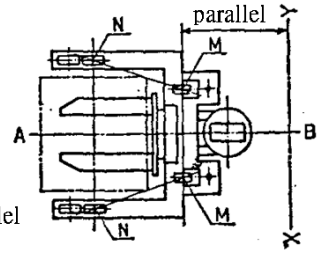

parallel

附表十二

窄道式堆高機

試驗項目		1	2	3		4
安定度區分		前後安定度		左右安定度		
安定測試狀態		靜止	運行	靜止		運行
負載		負載	負載	負載	無負載	無負載
叉之升程		最高	300mm	最高		300mm
桅桿或叉之傾斜度		垂直	後傾	後傾		後傾
堆高機在平台上之位置		圖 B2 與 B6	圖 B3 與 B7	圖 B4 與 B8		圖 B5 與 B8
平台之傾斜度	未滿 5 噸	4%	18%	6%	8%	(15+1.4v)%(1)(最大 50%)
	5 噸以上 10 噸以下	3.5%	18%	6%		(15+1.4v)%(1)(最大 40%)

圖 B2

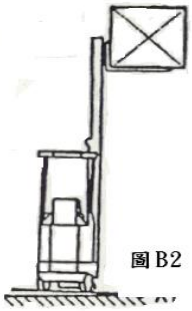


圖 B3

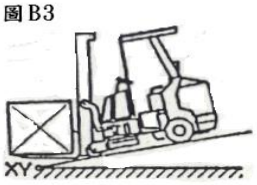


圖 B4

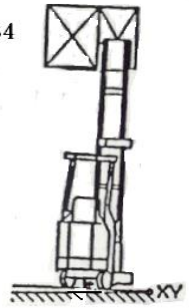
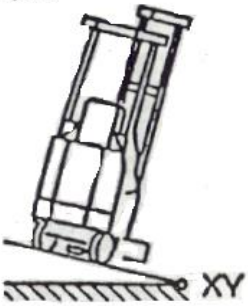


圖 B5



V：最高速度(km/h)

X-Y：平台之傾斜軸

M-N：堆高機之左右安定度軸

A-B：堆高機之縱向中心線

(1) v=最大速度km/hr,無負載於平滑與平坦的地面

AB=堆高機縱向中心平面

xy=測試平台旋轉軸

圖 B6

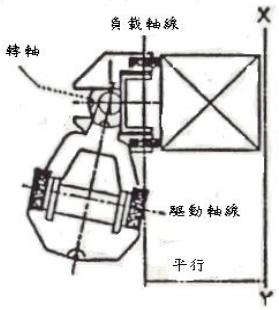


圖 B7

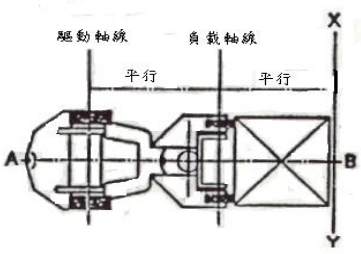
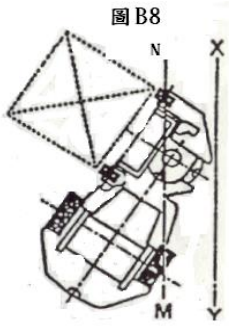


圖 B8



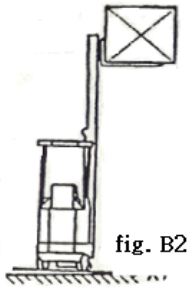


fig. B2

fig. B3

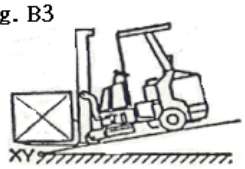


fig. B4

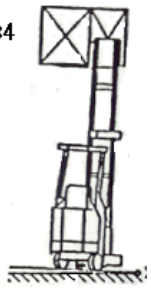
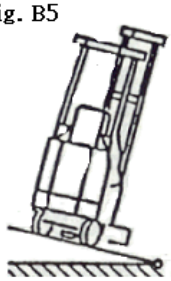


fig. B5



V：max. speed(km/h)
X-Y：tilt axis of the platform
M-N：left- right stability axis of the lift- truck
A-B： longitudinal centerline of a lift- truck

(1) V= max. speed km/hr, n0-load on the smooth and flat on the ground

AB= longitudinal center plane of lift-truck

XY= rotation axis of testing platform

fig. B6 fig.

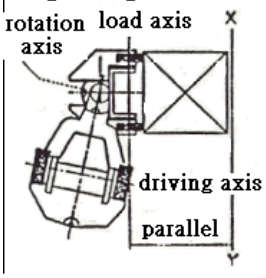


fig. B7

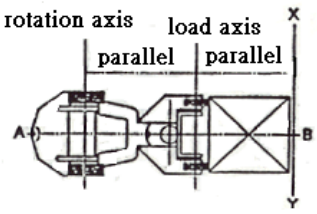
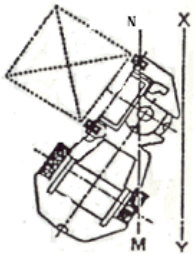


fig. B8



Attaching table 12

the narrow lift- truck

Test items		1	2	3		4
stability divisions		front- rear stability		left- right stability		
state of stability test		stillness	running	stillness		running
load		load	load	load	no-load	no-load
fork lift		highest	300mm	highest		300mm
tilt of mast or fork		vertical	backward tilt	backward tilt		backward tilt
lift- truck posision on the platform		Fig. B2 & B6	Fig. B3 & B7	Fig. B4 & B8		Fig. B5 & B8
tilt of platform	below 5 tons	4%	18%	6%	8%	(15+1.4v)%(1)(max. 50%)
	over 5 tons below 10 tons	3.5%	18%	6%		(15+1.4v)%(1)(max. 40%)

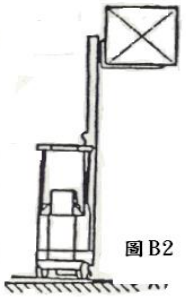


圖 B2

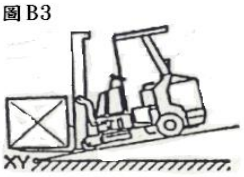


圖 B3

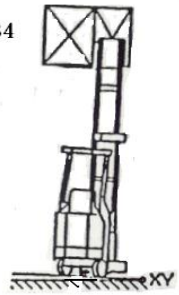


圖 B4

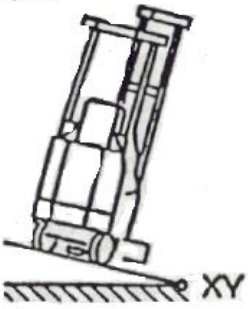


圖 B5

V：最高速度(km/h)
X-Y：平台之傾斜軸
M-N：堆高機之左右安定度軸
A-B：堆高機之縱向中心線

(1) V=最大速度k
坦的地面
AB=堆高機縱向中心平面
XY=測試平台旋轉軸

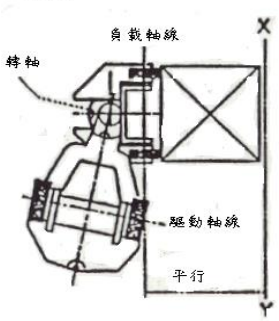


圖 B6

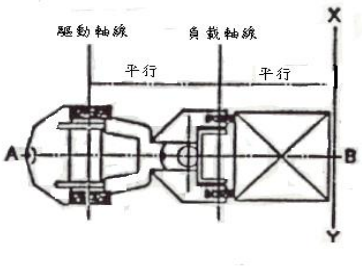


圖 B7

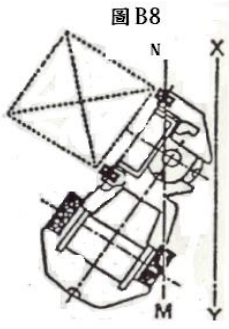


圖 B8

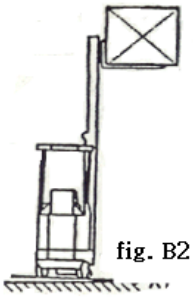


fig. B2

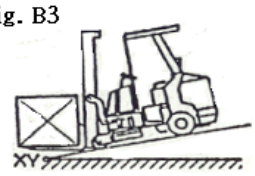


fig. B3

fig. B4

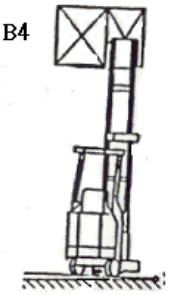
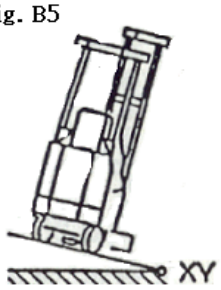


fig. B5



V：max. speed(km/h)
X-Y：tilt axis of the platform
M-N：left- right stability axis of the lift- truck
A-B： longitudinal centerline of a lift- truck

(1) V= max. speed km/hr, n0-load on the smooth and flat on the ground

AB= longitudinal center plane of lift-truck

XY= rotation axis of testing platform

fig. B6 fig.

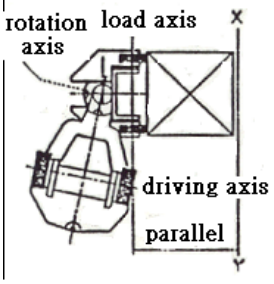


fig. B7

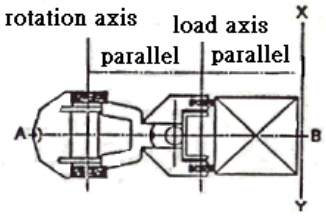
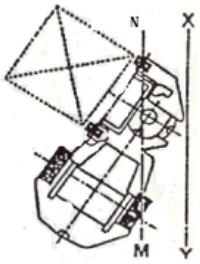


fig. B8



附表 十三

堆高機狀態	制動初速度（單位：公里\小時）	停止距離（單位：公尺）
走行時之基準無負荷狀態	20（最高速度未達每小時 20 公里之堆高機者，為其最高速度）。	5
走行時之基準負荷狀態	10（最高速度未達每小時 10 公里之堆高機者，為其最高速度）。	2.5
備註： 一、本表所稱「走行時之基準無負荷狀態」，指伸臂完全縮回，使桅桿垂直，貨叉呈水平，貨叉上端距離地面 30 公分狀態。 二、本表所稱「走行時之基準負荷狀態」，指在基準負荷狀態下，桅桿及貨叉呈最大後傾狀態。		

Attaching table 13

Lift-truck states	Initial braking speed (unit: km/hr)	Stopping distance (unit: meters)
basic no-load state in running	20 (the value being concerned when the max. speed less than 20 km/hr)	5
basic load state in running	10 (the value being concerned when the max. speed less than 10 km/hr)	2.5
Remark: 1. The “basic no-load state in running” referred in the table means the state that the telescopic arm is fully retracted to make the mast being vertical, the fork being level and the top of the lift being 30 centimeters above the ground. 2. The “basic load state in running” referred in the table means the state that the mast and the fork are in the maximum backward tilt.		

附表十四

堆　高　機　狀　態	坡　度（單位：%）
走行時之基準無負荷狀態。	20
走行時之基準負荷狀態。	15
備註： 一、本表所稱「走行時之基準無負荷狀態」，指伸臂完全縮回，使桅桿垂直，貨叉呈水平，貨叉上端距離地面 30 公分狀態。 二、本表所稱「走行時之基準負荷狀態」，指在基準負荷狀態下，桅桿及貨叉呈最大後傾狀態。	

Attaching table 14

Lift-truck states	The slope (unit : %)
basic no-load state in running	20
basic load state in running	15
Remark: 1. The “basic no-load state in running” referred in the table means the state that the telescopic arm is fully retracted to make the mast being vertical, the fork being level and the top of the lift being 30 centimeters above the ground. 2. The “basic load state in running” referred in the table means the state that the mast and the fork are in the maximum backward tilt.	

附表十五

研磨輪種類	尺寸（單位：毫米）		
	直　徑	厚　度	孔　徑
平直形研磨輪	205 以上 305 以下	19 以上 25 以下	直徑之 1/2
盤形研磨輪	180	6	22

Attaching table 15

Grinding wheel types	Sizes (unit: millimeters)		
	diameter	thickness	hole diameter
Straight grinding wheel	over 205 below 305	over 19 below 25	one half of the diameter
Dish grinding wheel	180	6	22

附表十六

研磨輪種類			研磨輪之普通使用周速度限度(單位：公尺/秒)	
			結合劑為無機物時	結合劑為有機物時
平直形研磨輪	未補強者	一般用者	33	50
		超重研磨用者	-	63
		螺絲研磨用及溝槽之研磨用者	63	63
		曲柄軸及凸輪軸之研磨用者	45	50
	經補強者	直徑 100 毫米以下，厚度 25 毫米以下者	-	80
		直徑超過 100 毫米，205 毫米以下；厚度 13 毫米以下者	-	72
		其他尺寸者	-	50
單斜形研磨輪、雙斜形研磨輪、單凹形研磨輪、雙凹形研磨輪、安全形研磨輪、皿形研磨輪及鋸用研磨輪			33	50
楔形研磨輪		一般用者	33	50
		螺絲研磨用及溝槽之研磨用者	63	63
留空形研磨輪		一般用者	33	50
		曲柄軸及凸輪軸之研磨用者	45	50
環形研磨輪及環形之環片式研磨輪			30	35
直杯形研磨輪及斜杯形研磨輪			30	40
鋸齒形研磨輪及鋸齒形之環片式研磨輪			33	45
盤形研磨輪（直徑 230 毫米以下，厚度 10 毫米以下者）		未補強	-	57
		經補強	-	72
切割研磨輪		未補強	-	63
		經補強	-	80
備註：自國外輸入之研磨輪最高使用周速度依下表換算。				

輸入研磨輪之最高使用周速度（英尺\分）	換算（公尺\秒）
6500	33
8500	45
9500	50
12000	60
16000	80
20000	100

Attaching table 16

Grinding wheel types			limitation of general using peripheral velocity for ginding wheel(unit: meters/second)	
			Bonder being *inorganic substance*	Bonder being *orgnic substance*
straightgrinding wheel	no reinforced	general grinding use	33	50
		overweight grinding	-	63
		screw grinding or slot grinding	63	63
		crankshaft or cam shaft grinding	45	50
	reinforced	diameter below 100 milimiters, thickness below 25milimeters	-	80
		diameter over 100 milimeters and below205 milimiters, thickness below 13milimeters	-	72
		other sizes	-	50
tapered one-side，tapered two-side，one-concaved，two-concaved，safety，saucer-shaped or sawing-use grinding wheel			33	50
wedge grinding wheel		general grinding use	33	50
		screw grinding or slot grinding	63	63
gap-type grinding wheel		general grinding use	33	50
		crankshaft or cam shaft grinding	45	50
ring or ring- piece grinding wheel			30	35
straight-cup or taper-cup grinding wheel			30	40
sawtooth-shaped grinding wheel or sawtooth-shaped-ring-piece grinding wheel			33	45
dish grinding wheel(diameter below 230 milimeters, thickness below 10 milimeters		noreinforced	-	57
		reinforced	-	72
cutting grinding wheel		noreinforced	-	63
		reinforced	-	80
Remark: The heightest using peripheral velocity for the foreign inputs in accordance with the following table to do conversion.				
Highest using peripheral velocity(ins/minute)			Conversion(meters/second)	
6500 8500 9500 12000 16000 20000			33 45 50 60 80 100	

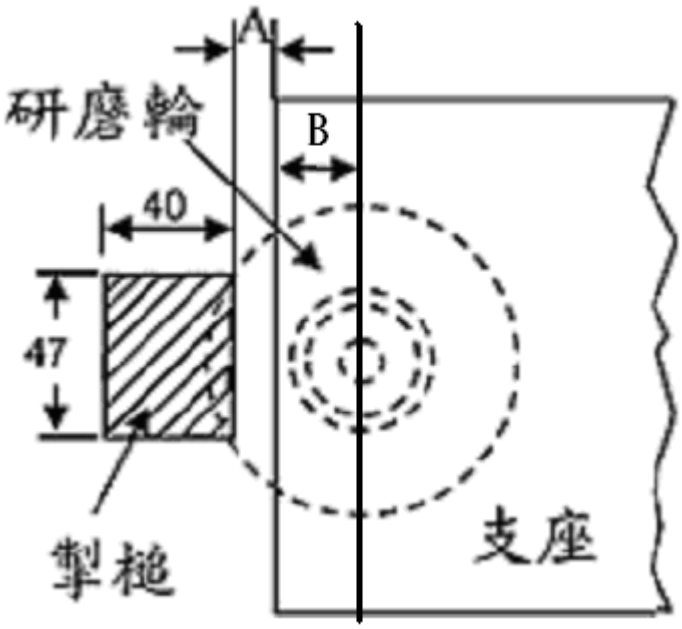
附表十七

研　磨　輪　種　類	結合劑種類	數值
單斜形研磨輪、雙斜形研磨輪、單凹形研磨輪、雙凹形研磨輪、安全形研磨輪、楔形研磨輪、皿形研磨機、鋸用研磨輪、留空式研磨輪	無機物 有機物	1.0
環形研磨輪	無機物	0.9
	有機物	0.7
直杯形研磨輪、斜杯形研磨輪	無機物	0.9
	有機物	0.8
鋸齒形研磨輪	無機物	1.0
	有機物	0.87

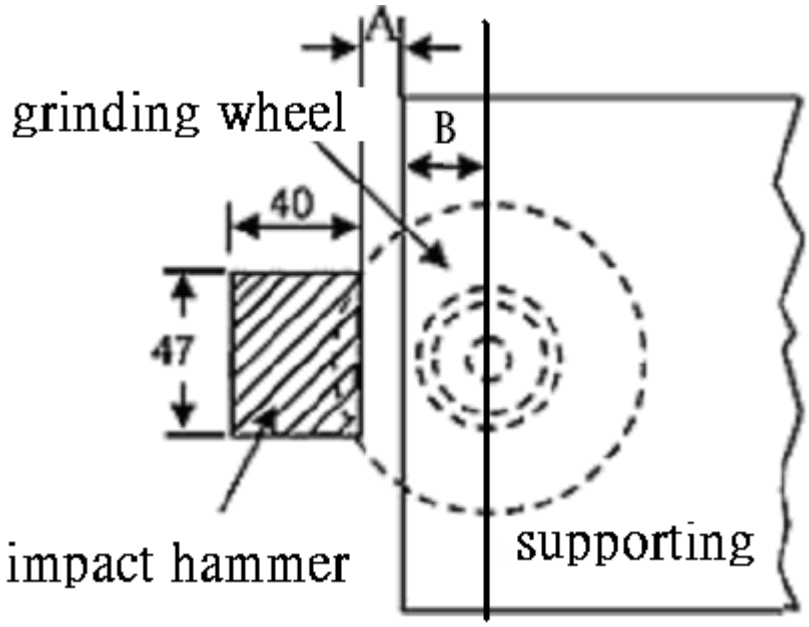
Attaching table 17

Grinding wheel types	Bonder types	Values
tapered one-side，tapered two-side，one-concaved，two-concaved，safety，wedge-shape，saucer-shape， sawing-use grinding wheel or gap-type grinding wheel	*orgnic substance* *inorganic substance*	1.0
ring ginding wheel	*inorganic substance*	0.9
	orgnic substan	0.7
straight-cup or tapered cup grinding wheel	*inorganic substance*	0.9
	orgnic substance	0.8
sawtooth-shaped grinding wheel	*inorganic substance*	1.0
	orgnic substance	0.87

附圖二



Attaching figure 2



附表十八

研磨輪之直徑（單位：毫米）	70	超過 70，90 以下	超過 90，110 以下	超過 110，120 以下	超過 120，140 以下	超過 140，160 以下	超過 160，180 以下	超過 180，220 以下	超過 220
A（單位：毫米）	8	13	13	13	18	30	38	42	42
B（單位：毫米）	19	19	27	36	36	36	36	36	52.5

Attaching table 18

Diameter of grinding wheel (unit: millimeters)	70	Over 70 Below 90	over 90 below 110	over 110 below 120	over 120 below 140	over 140 below 160	over 160 below 180	over 180 below 220	over 220
A (unit: millimeters)	8	13	13	13	18	30	38	42	42
B (unit: millimeters)	19	19	27	36	36	36	36	36	52.5

附表十九

衝擊值(單位：焦耳/毫米 2)＝$\frac{E}{LT}$

式中，E、L 及 T 值如下：

E：衝擊試驗中所得之吸收能量(單位：焦耳)

L：依下列公式計算所得之剖面之弦長(單位：毫米)

$$L = 2\sqrt{R^2 - B^2}$$

R：研磨輪半徑(單位：毫米)

B：附表十八所定之 B 值(單位：毫米)

T：供試驗研磨輪之厚度(單位：毫米)

Attaching table 19

Impact value (J/millimeter2)＝$\frac{E}{LT}$

Where,

E：absorbed energy during impact testing (unit: J)

L：chord length of the profile as calculated by the following formulas (unit: millimeter)

$$L = 2\sqrt{R^2 - B^2}$$

R：radius of the grinding wheel (unit: millimeter)

B：the value of B specified in Attaching table 18 (unit: millimeter)

T：thickness of grinding wheels for testing (unit: millimeter)

附表二十

<table>
<tr><td colspan="2" rowspan="2">研磨輪之最高使用周速度區分（單位：公尺／秒）</td><td rowspan="2">研磨輪種類</td><td colspan="7">尺寸（單位：毫米）</td></tr>
<tr><td>直徑(D)</td><td>厚度(T)</td><td>孔徑(H)</td><td>凹徑(P)</td><td>裝設部之厚度(E)</td><td>裝設部之平行部分之徑(J 或 K)</td><td>邊緣厚(W)</td></tr>
<tr><td colspan="2">普通速度</td><td>全部</td><td>切割研磨輪為 1500 以下</td><td></td><td>0.7D 以下</td><td>1.02Df+4 以上</td><td>直杯形及斜杯形為 T/4 以上，單凹形、雙凹形、皿形及鋸用皿形為 T/2 以上</td><td>Df+2R 以上</td><td>E 以下</td></tr>
<tr><td rowspan="4">普通速度以外之速度</td><td>45 以下</td><td>平面形、單斜形、雙斜形、單凹形、雙凹形、安全形、楔形及留空形</td><td>1065 以下</td><td>D/75 以上 D(D≦610) 以下</td><td>0.6D 以下</td><td>1.02Df+4 以上</td><td>(2/3)T 以上</td><td>Df+2R 以上</td><td></td></tr>
<tr><td>超過 45，60 以下</td><td>平面形、單斜形、雙斜形、單凹形、雙凹形、安全形、楔形及留空形及凸起式</td><td>1065 以下 below 1065</td><td>D/50 以上 305 以下</td><td>0.5D 以下</td><td>1.02Df+4 以上</td><td>(2/3)T 以上</td><td>Df+2R 以上</td><td></td></tr>
<tr><td>超過 60，80 以下</td><td>平直形、楔形、安全形及切割</td><td>切割研磨輪為 1500 以下，其他為 760 以下</td><td>D/50 以上 152 以下</td><td>0.33D 以下</td><td></td><td></td><td>Df+2R 以上</td><td></td></tr>
<tr><td>超過 80，100 以下</td><td>平直形、楔形、安全形及切割</td><td>切割研磨輪為 1500 以下，其他為 760 以下</td><td>D/50 以上 80 以下</td><td>0.2D 以下 below 0.2D</td><td></td><td></td><td>Df+2R 以上</td><td></td></tr>
<tr><td colspan="10">備註
一、表中，Df 為固定緣盤之直徑，R 為凹槽圓角之內半徑。
二、表中未訂定之值為任意值。</td></tr>
</table>

Attaching table 20

Highest using peripheral velocity (unit: meters/second)		Grinding wheel types	(unit : millimeters) Diameter (D)	Thickness (T)	Hole diameter	concave diameter (P)	thickness of mounting portion (E)	diameter of the parallel portion of the mounting portion(J or K)	edge thickness (W)
Normal velocity		all	below 1500 for cutting grinding wheel		below 0.7D	over 1.02Df+4	over T/4 for straight-cup shape，over T/2 for one-concaved，two-concaved，saucer or sawing-use-saucer shape	over Df+2R	below E
Velocity except the normal velocity	below 45	Surface， tapered one-side，tapered two-side，one-concaved，two-concaved，safety，wedge-shaped , gap-shaped or protruding- type grinding wheel	below 1065	Over D/75, below D(D≦610)	below 0.6D	Over 1.02Df+4	Over (2/3)T	over Df+2R	
	Over 45 below 60	Surface， tapered one-side，tapered two-side，one-concaved，two-concaved，safety，wedge-shaped , gap-shaped or protruding- type grinding wheel	below 1065	over D/50 below 305	below 0.5D	over 1.02Df	over (2/3)T	over Df+2R	
	Over 60 below 80	straight，wedge-shape，safety or cutting	below 1500 for cutting grinding wheel，below 760 for others	over D/50 below 152	below 0.33			over Df+2R	
	Over 80 below 100	straight，wedge-shape，safety or cutting	below 1500 for cutting grinding wheel，below 760 for others	over D/50 below 80	below 0.2D			over Df+2R	

Remark:
1. Df is the diameter of fixed-flange and R is the fillet radius of the concave in the table.
2. it is any value if it not been set in the table.

附表二十 一

研　磨　輪　種　類	安　裝　器　具
環形研磨輪及碟形研磨輪有螺帽杯形研磨輪、有螺帽砲彈形研磨輪等有螺帽之研磨輪	底座 有螺帽之安裝器具
環片式研磨輪	環片安裝器具
帶柄研磨輪	軸固定器具
安裝於精密內圓研磨機之內圓研磨軸上之平直形研磨輪	螺栓等安裝器具

Attaching table 21

Type of gringing wheels	installation equipment
ring or saucer-shape with nut grinding wheel， shell-shape with nut grinding wheel and others having nut grinding wheels	base installation equipment with nut
ring-piece grinding wheel	installation equipment for ring-piece
shank grinding wheel	fix installation for the shaft
straight grinding wheel mounted on the inner grinding shaft of the precision inner grinding machine	installation equipment bolts and others

附表二十二

研磨輪直徑（單位：毫米）	接觸寬度值（單位：毫米）
65 以下	超過 0.1Df，未滿 0.26Df
超過 65，355 以下	超過 0.08Df，未滿 0.18Df
超過 355	超過 0.06Df，未滿 0.18Df
備註：表中之 Df 為固定緣盤之直徑。	

Attaching table 22

Diameter of grinding wheel (unit: millimeters)	Contact width (unit: millimeters)
below 65	over 0.1Df，less than 0.26Df
over 65，below 355	over 0.08Df，less than 0.18Df
over 355	over 0.06Df，less than 0.18Df
Remark: Df in the table is the diameter of fixed-flange.	

附表二十三

研磨輪直徑（單位：毫米）	K	
	普通速度使用之研磨輪	普通速度以外之速度使用之研磨輪
未滿 610	0.13	0.15
610 以上，未滿 760	0.11	0.13
760 以上，未滿 1065	0.10	0.12
1065 以上	0.08	0.10

Attaching table 23

Diameter of grinding wheel (unit: millimeters)	K	
	Grinding wheel used in a normal velocity	Grinding wheel except used in a normal velocity
less than 610	0.13	0.15
610 or more and less than 760	0.11	0.13
760 or more and less than 1065	0.10	0.12
1065 or more	0.08	0.10

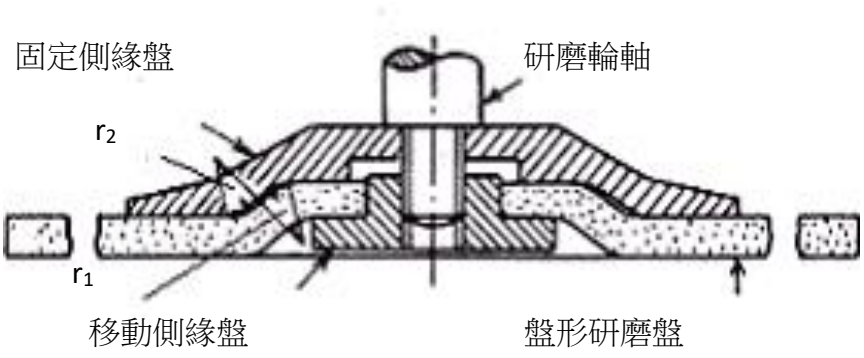
附表二十四

研磨輪直徑（單位：毫米）	接觸寬度值（單位：毫米）		
	套式固定緣盤		接頭式固定緣盤
	普通速度使用之研磨輪	普通速度以外之速度使用之研磨輪	普通速度使用之研磨輪
100 以下	4	5	8
超過 100，125 以下	6	7	12
超過 125，205 以下	7	8	15
超過 205，305 以下	10	12	22
超過 305，405 以下	13	16	22
超過 405，610 以下	13	20	22
超過 610，1065 以下	16	25	32
超過 1065 以上	32	32	-

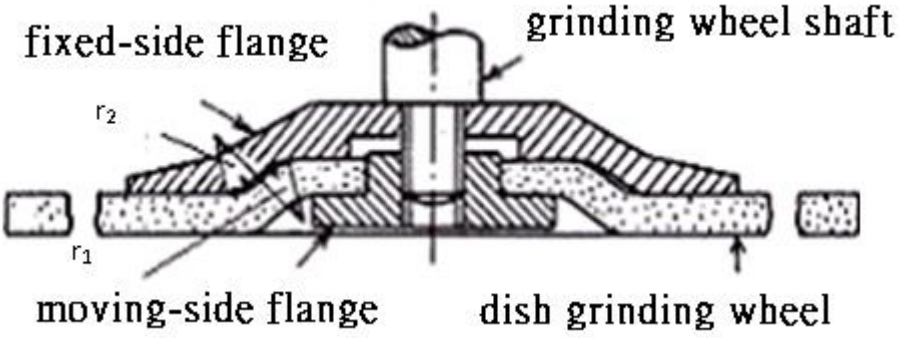
Attaching table 24

Diameter of grinding wheel (unit: millimeters)	Contact width (unit: millimeters)		
	the sleeve flange		The adaptive flange
	Grinding wheel used in a normal velocity	Grinding wheel except used in a normal velocity	Grinding wheel used in a normal velocity
below 100	4	5	8
over 100，below 125	6	7	12
over 125，below 205	7	8	15
over 205，below 305	10	12	22
over 305，below 405	13	16	22
over 405，below 610	13	20	22
over 610，below 1065	16	25	32
over 1065	32	32	-

附圖三



Attaching figure 3



附表二十五

盤形研磨輪直徑（單位：毫米）	值（單位：毫米）					
	固定側緣盤之直徑	移動側緣盤之直徑	固定側緣盤之深度	導孔之直徑	附圖三所示之 r1	附圖三所示之 r2
100 以下	50	18	4.0	9.53	3.2	4.9
超過 100	100	40	4.8	22.23	10.0	10.0
備註：對於直徑 100 毫米之盤形研磨輪，其固定側緣盤直徑得為 80 毫米，移動側緣盤直徑得為 30 毫米，導孔之直徑得為 16 毫米。						

Attaching table 25

Diameter of the straight grinding wheel (unit: millimeters)	Values (unit: millimeters)					
	Diameter of the fixed-side flange	Diameter of the moving-side flange	Depth of the fixed-side flange	Diameter of the pilot hole	r1 as shown in Attaching figure 3	r2 as shown in Attaching figure 3
below 100	50	18	4.0	9.53	3.2	4.9
over 100	100	40	4.8	22.23	10.0	10.0
Note: For straight grinding wheel with diameter of 100 millimeters, the diameter of fixed-side flange may be 80 millimeters, that of moving-side flange may be 30 millimeters, and that of pilot hole may be 16 millimeters.						

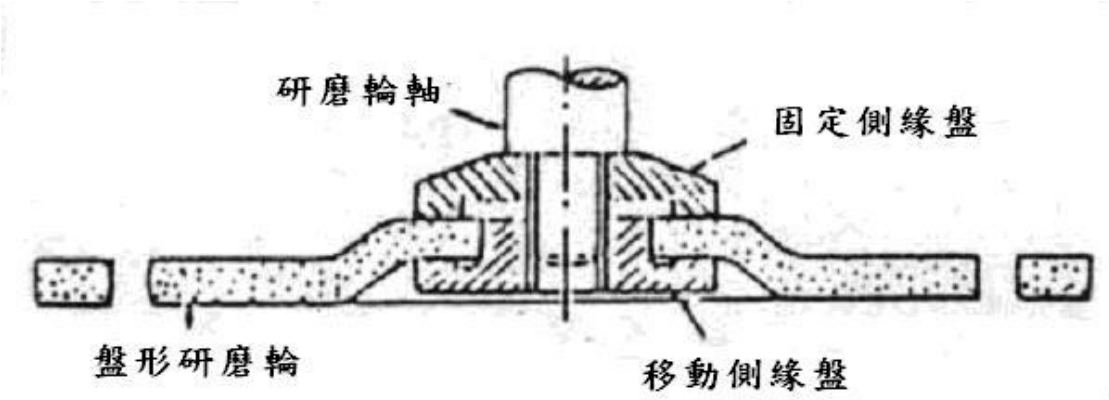
附表二十五之一

盤形研磨輪直徑（單位：毫米）	導孔之直徑（單位：毫米）	緣盤規格值(單位：毫米)			
		緣盤直徑	接觸寬度	間隙深度	間隙寬度
未滿 80	--	20 ± 1	3 以上	0.5 以上	1 以上
80 以上，105 以下	10	20 ± 1	3 以上	0.5 以上	1 以上
	16	29 ± 1	3 以上	0.5 以上	1 以上
超過 105，230 以下	--	41 ± 1	3 以上	0.5 以上	1 以上

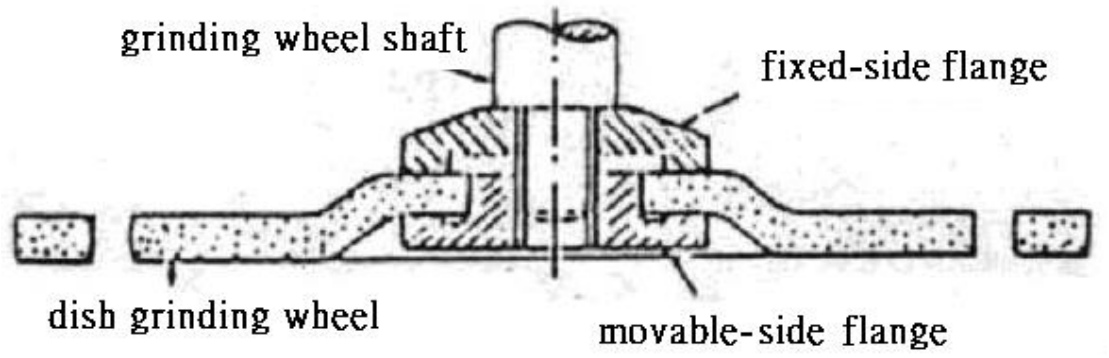
Attaching table 25-1

Diameter of the straight grinding wheel (unit: millimeters)	Diameter of the pilot hole (unit: millimeters)	specification value of flange (unit: millimeters)			
		Diameter of flange	Contact width	clearance depth	clearance width
less than 80	--	20 ± 1	Over 3	Over 0.5	Over 1
Over 80, below 105	10	20 ± 1	Over 3	Over 0.5	Over 1
	16	29 ± 1	Over 3	Over 0.5	Over 1
Over 105, below 230	--	41 ± 1	Over 3	Over 0.5	Over 1

附圖四



Attaching figure 4



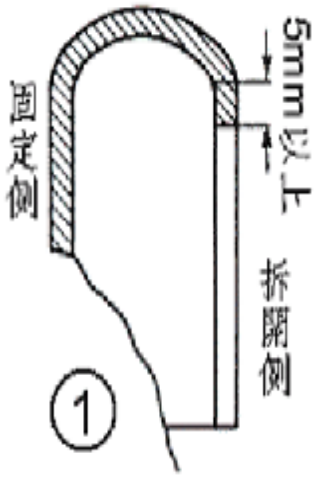
附表二十六

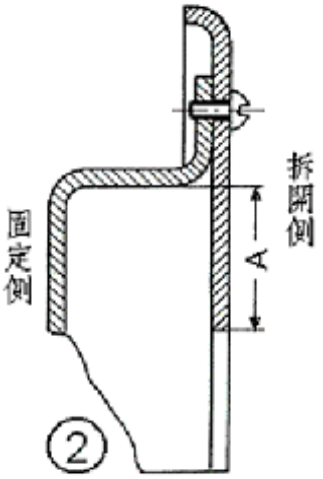
研磨輪最高使用周速度（單位：公尺/秒）	材料
33 以下	鑄鐵、可鍛鑄鐵或鑄鋼
超過 33，50 以下	可鍛鑄鐵或鑄鋼
超過 50	鑄鋼
備註：表中所列材料，應具有下列機械性質： 一、鑄鐵應具有符合國家標準 CNS 2472「灰口鐵鑄件」規定之 FC150 二種之規格之抗拉強度以上者。 二、可鍛鑄鐵抗拉強度值應在每平方毫米 32 公斤以上，延伸值在 8%以上。 三、鑄鋼抗拉強度值應在每平方毫米 37 公斤以上，延伸值在 15%以上，抗拉強度值（單位：公斤\平方毫米）之 0.6 倍加延伸值（單位：%百分比）所得之值應在 48 以上。	

Attaching table 26

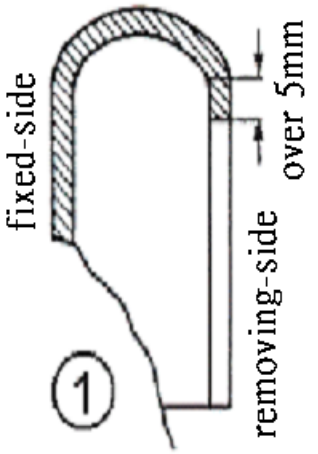
highest using peripheral velocity (unit: meters/second)	materials
below 33	cast iron， malleable cast iron or cast steel
over33, below 50	malleable cast iron or cast steel
over 50	cast steel
Remark: Materials in the table shall have the mechanical properties as followings: 1. The cast iron shall have a tensile strength over “gray iron castings”FC150 iron castings set in the national standards CNS 2472. 2. The tensile strength of the malleable cast iron shall be over 32 kgf per milimeters square and the elongation over 8%. 3. The tensile strength of the cast steel shall be over 37 kgf per milimeters square and the elongation over 15%. Moreover, the sum of the tensile strength multiplied by 0.6 and the elongation(unit: percent) shall be over 48.	

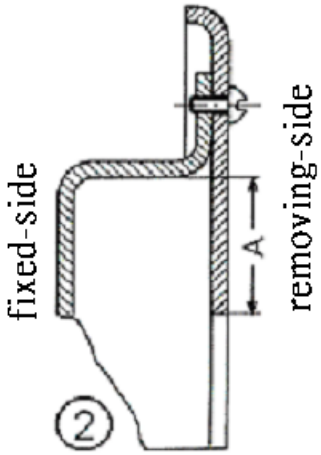
附圖五





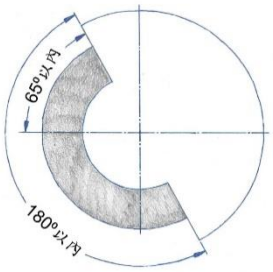
Attaching figure 5



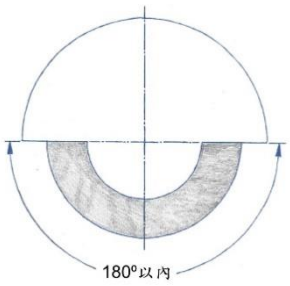


附圖六

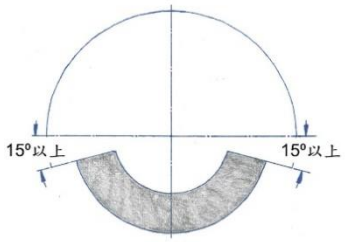
一、圓筒研磨機、無心研磨機、工具研磨機、萬能研磨機及其他類同之研磨機



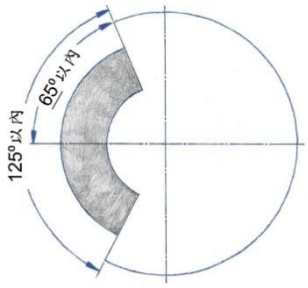
二、攜帶用研磨機、擺動式研磨機、鋼胚平板用研磨機及其他類同之研磨機



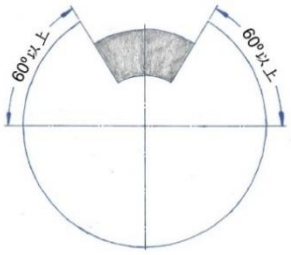
三、平面研磨機、切割用研磨機及其他類同之研磨機



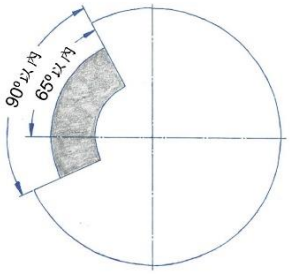
四、剷除鑄件毛邊等使用之桌上用研磨機或床式研磨機



五、使用研磨輪上端為目的之桌上用研磨機或床式研磨機

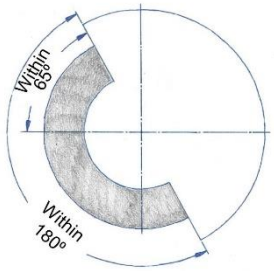


六、前二款以外之桌上用研磨機、床式研磨機及其他類同之研磨機

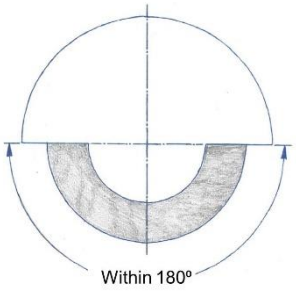


Attaching figure 6

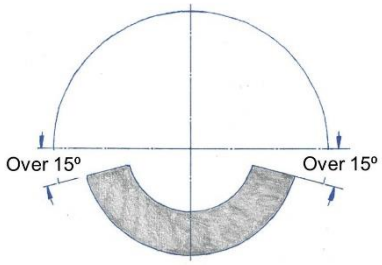
1. cylindrical grinding machine, tool grinding machine, universal grinding machine and the likes.



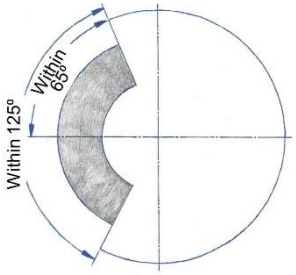
2. portable grinder, swing type grinder, billet flat grinding machine and the likes.



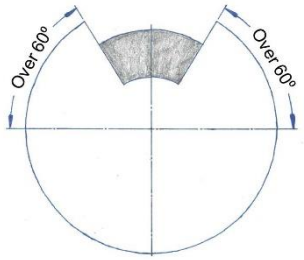
3. plan grinding machine, cutting grinder and the likes.



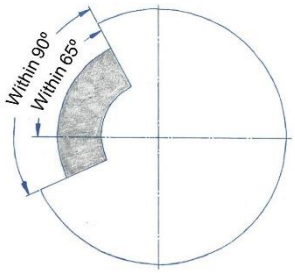
4. cast-deburring bench grinding machine or bed type grinding machine.



5. top-grinding bench grinding machine or top-grinding bed type grinding machine.



6. bench grinding machine, bed type grinding machine and the likes of that not included in the preceding two paragraphs.



附表二十七

研磨輪最高使用周速度(單位：公尺/秒)	研磨輪厚度（單位：毫米）	研磨輪直徑（單位：毫米）													
		150 以下		超過 150 305 以下		超過 305 405 以下		超過 405 510 以下		超過 510 610 以下		超過 610 760 以下		超過 760 1250 以下	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B
33 以下	50 以下	1.6	1.6	2.3	1.9	3.1	2.3	3.9	3.1	5.5	3.9	6.3	4.5	7.9	6.3
	超過 50 100 以下	1.9	1.6	2.3	1.9	3.1	2.3	4.5	3.9	6.3	3.9	7.0	4.5	8.7	6.3
	超過 100 150 以下	2.3	1.6	3.1	2.7	3.9	3.1	6.3	3.9	7.0	4.5	7.9	5.5	9.5	7.9
	超過 150 205 以下	—	—	3.9	3.5	5.5	4.5	6.3	4.5	7.0	4.5	7.9	5.5	9.5	7.9
	超過 205 305 以下	—	—	4.5	4.3	5.5	4.5	6.3	4.5	7.0	4.5	7.9	5.5	9.5	7.9
	超過 305 405 以下	—	—	—	—	7.0	6.3	7.9	6.3	8.0	6.3	9.0	6.7	11.0	8.7
	超過 405 510 以下	—	—	—	—	—	—	8.7	7.0	8.7	7.0	9.5	8.7	12.7	10.0
超過 33，50 以下	50 以下	2.2	1.6	4.2	3.4	4.5	3.8	5.5	4.4	6.6	4.9	7.7	6.0	10.0	7.7
	超過 50 100 以下	2.4	1.6	4.4	3.8	5.4	4.2	6.6	5.5	7.7	5.5	8.0	6.0	10.5	7.7
	超過 100 150 以下	3.2	1.6	5.8	4.9	6.3	5.4	8.3	6.0	8.8	6.6	9.0	7.0	12.0	9.7
	超過 150 205 以下	—	—	7.0	5.6	8.8	7.0	9.4	7.0	10.0	7.0	10.5	7.8	13.0	10.0
	超過 205 305 以下	—	—	8.0	6.9	9.3	7.7	9.9	7.7	10.5	7.7	11.0	8.3	14.5	11.0
	超過 305 405 以下	—	—	—	—	10.5	9.4	12.0	9.9	12.5	9.9	13.6	10.8	17.0	13.0
	超過 405 510 以下	—	—	—	—	—	—	13.0	11.0	13.0	11.0	14.5	12.7	19.0	16.0
超過 50，80 以下	50 以下	3.1	1.6	7.9	6.3	7.9	6.3	7.9	6.3	7.9	6.3	9.5	7.9	12.7	9.5
	超過 50 100 以下	3.1	1.6	9.5	7.9	9.5	7.9	9.5	7.9	9.5	7.9	9.5	7.9	12.7	9.5
	超過 100 150 以下	4.7	1.6	11.0	9.0	11.0	9.5	11.0	9.5	11.0	9.5	11.0	9.5	17.4	12.0
	超過 150 205 以下	—	—	12.7	9.5	14.0	11.0	14.0	11.0	14.0	11.0	14.0	11.0	19.0	12.7
	超過 205 305 以下	—	—	14.0	11.0	15.8	12.7	15.8	12.7	15.8	12.7	15.8	12.7	22.0	15.8
	超過 305 405 以下	—	—	—	—	15.8	14.0	19.0	15.8	19.0	15.8	20.0	17.4	26.9	20.0
	超過 405 510 以下	—	—	—	—	—	—	20.0	17.4	20.0	17.4	22.0	19.0	30.0	23.8
備註：表中，A 為護罩周邊板厚度，B 為護罩側板之厚度。															

Attaching table 27

highest peripheral velocity (unit: meters/second)	Thickness of grinding wheel (unit: millimeters)	Diameter of grinding wheel (unit: millimeters)													
		below 150		over 150 below 305		over 305 below 405		over 405 below 510		over 510 below 610		over 610 below 760		over 760 below 1250	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B
below 33	below 50	1.6	1.6	2.3	1.9	3.1	2.3	3.9	3.1	5.5	3.9	6.3	4.5	7.9	6.3
	over 50 below 100	1.9	1.6	2.3	1.9	3.1	2.3	4.5	3.9	6.3	3.9	7.0	4.5	8.7	6.3
	over 100 below 150	2.3	1.6	3.1	2.7	3.9	3.1	6.3	3.9	7.0	4.5	7.9	5.5	9.5	7.9
	over 150 below 205	—	—	3.9	3.5	5.5	4.5	6.3	4.5	7.0	4.5	7.9	5.5	9.5	7.9
	over 205 below 305	—	—	4.5	4.3	5.5	4.5	6.3	4.5	7.0	4.5	7.9	5.5	9.5	7.9
	over 305 below 405	—	—	—	—	7.0	6.3	7.9	6.3	8.0	6.3	9.0	6.7	11.0	8.7
	over 405 below 510	—	—	—	—	—	—	8.7	7.0	8.7	7.0	9.5	8.7	12.7	10.0
over 33 below 50	below 50	2.2	1.6	4.2	3.4	4.5	3.8	5.5	4.4	6.6	4.9	7.7	6.0	10.0	7.7
	over 50 below 100	2.4	1.6	4.4	3.8	5.4	4.2	6.6	5.5	7.7	5.5	8.0	6.0	10.5	7.7
	over 100 below 150	3.2	1.6	5.8	4.9	6.3	5.4	8.3	6.0	8.8	6.6	9.0	7.0	12.0	9.7
	over 150 below 205	—	—	7.0	5.6	8.8	7.0	9.4	7.0	10.0	7.0	10.5	7.8	13.0	10.0
	over 205 below 305	—	—	8.0	6.9	9.3	7.7	9.9	7.7	10.5	7.7	11.0	8.3	14.5	11.0
	over 305 below 405	—	—	—	—	10.5	9.4	12.0	9.9	12.5	9.9	13.6	10.8	17.0	13.0
	over 405 below 510	—	—	—	—	—	—	13.0	11.0	13.0	11.0	14.5	12.7	19.0	16.0
over 50 below 80	below 50	3.1	1.6	7.9	6.3	7.9	6.3	7.9	6.3	7.9	6.3	9.5	7.9	12.7	9.5
	over 50 below 100	3.1	1.6	9.5	7.9	9.5	7.9	9.5	7.9	9.5	7.9	9.5	7.9	12.7	9.5
	over 100 below 150	4.7	1.6	11.0	9.0	11.0	9.5	11.0	9.5	11.0	9.5	11.0	9.5	17.4	12.0
	over 150 below 205	—	—	12.7	9.5	14.0	11.0	14.0	11.0	14.0	11.0	14.0	11.0	19.0	12.7
	over 205 below 305	—	—	14.0	11.0	15.8	12.7	15.8	12.7	15.8	12.7	15.8	12.7	22.0	15.8
	over 305 below 405	—	—	—	—	15.8	14.0	19.0	15.8	19.0	15.8	20.0	17.4	26.9	20.0
	over 405 below 510	—	—	—	—	—	—	20.0	17.4	20.0	17.4	22.0	19.0	30.0	23.8
Remark: A is the peripheral plate thickness of the guard, B is the thickness of the guard side- plate in the table .															

附表二十八

材　料　種　類	係　　數
鑄　鐵	4.0
可　鍛　鑄　鐵	2.0
鑄　鋼	1.6

Attaching table 28

Material kind	coefficient
Cast iron	4.0
Malleable cast iron	2.0
Cast steel	1.6

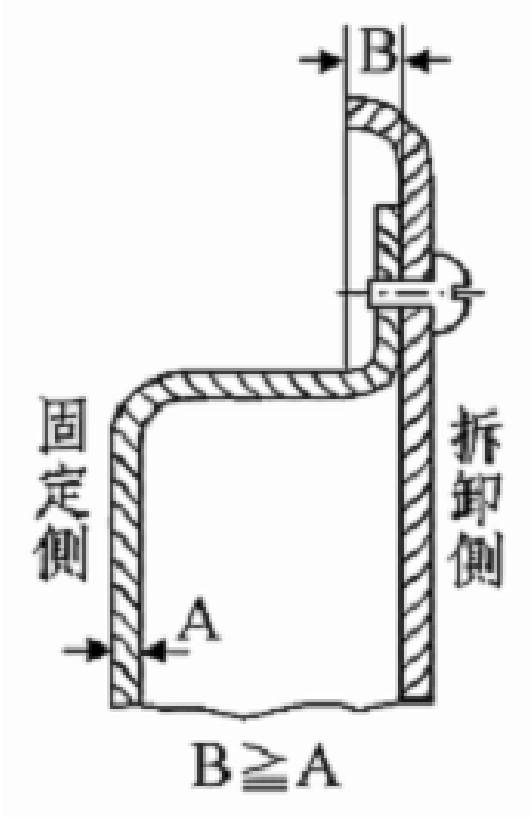
附表二十九

研磨輪之最高使用周速度（單位：公尺\秒）	研磨輪厚度（單位：毫米）	護罩板之區分	研磨輪直徑（單位：毫米）					
			125 以下	超過 125，150 以下	超過 150，205 以下	超過 205，255 以下	超過 255，305 以下	超過 305，355 以下
33 以下	32 以下	A	1.6	1.6	1.8	2.0	2.3	3.0
		B	1.2	1.2	1.4	1.6	1.8	2.3
	超過 32，50 以下	A	—	—	—	2.0	2.3	3.0
		B	—	—	—	1.6	1.8	2.3
超過 33，50 以下	32 以下	A	1.6	2.2	2.6	3.0	3.2	4.0
		B	1.6	1.6	1.6	2.0	2.3	2.8
	超過 32，50 以下	A	—	—	—	3.0	3.2	4.0
		B	—	—	—	2.0	2.3	2.8
備註：表中 A 表示護罩之周邊板及固定側之側板；B 表示護罩之拆卸側之側板。								

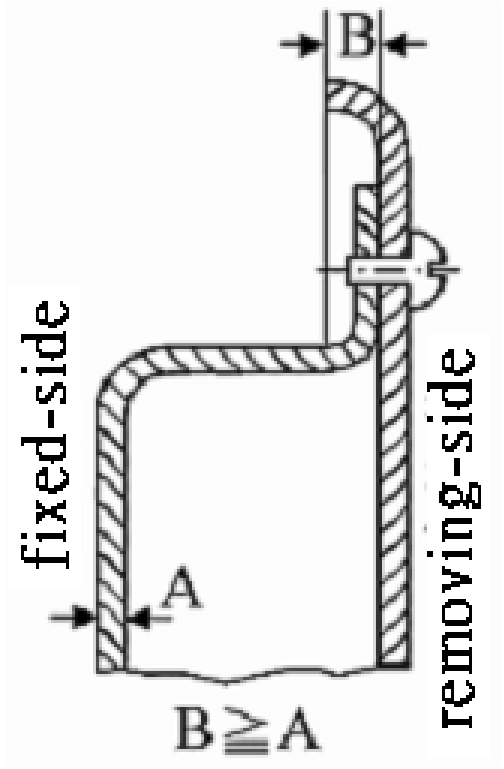
Attaching table 29

Highest using peripheral velocity (unit: meters/second)	Thickness of grinding wheel (unit: millimeters)	Guard plate type	Diameter of grinding wheel (unit: millimeters)					
			below 125	over 125 below 150	over 150 below 205	over 205 below 255	over 255 below 255	over 305 below 355
below 33	below 32	A	1.6	1.6	1.8	2.0	2.3	3.0
		B	1.2	1.2	1.4	1.6	1.8	2.3
	over 32 below 50	A	—	—	—	2.0	2.3	3.0
		B	—	—	—	1.6	1.8	2.3
over 33 below	over 32	A	1.6	2.2	2.6	3.0	3.2	4.0
		B	1.6	1.6	1.6	2.0	2.3	2.8
	over 32 below 32	A	—	—	—	3.0	3.2	4.0
		B	—	—	—	2.0	2.3	2.8
Remark: A indicates the plates of the peripheral and the fixed-side, B indicates the side plate of the guard-moving side in the table.								

附圖七



Attaching figure 7



附表三十

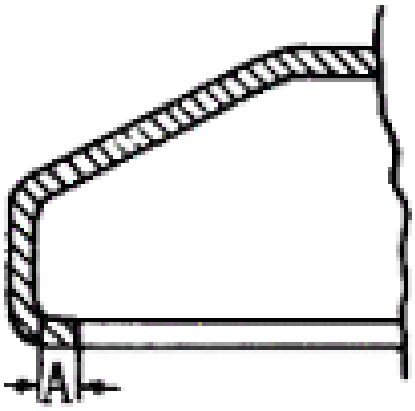
研磨輪厚度（單位：毫米）	數值（單位：毫米）
10 以下	1.6
超過 10	2.3

Attaching table 30

Thickness of the grinding wheel(unit: millimeters)	Values (unit: millimeters)
below 10	1.6
over 10	2.3

附圖八

Attaching figure 8



備註：A 值對應於研磨輪之直徑（D），應在下列值以上：

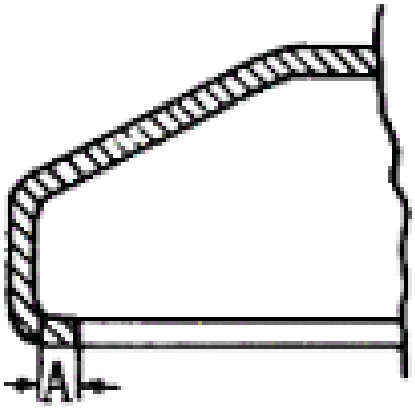
$D \leq 125$ 時為 3

$125 < D \leq 180$ 時為 4

$180 < D \leq 230$ 時為 5

（單位：毫米）

Attaching figure 8



Remark： According to the diameter of the grinding wheel(D), A shall be over the value as followings:

4 when $125 < D \leq 180$

5 when $180 < D \leq 230$

(unit: millimeters)

附表三十 一

研磨輪厚度（單位：毫米）	護罩板之區分	研 磨 輪 直 徑 （單位：毫米）				
		205 以下	超過 205，305 以下	超過 305，510 以下	超過 510，760 以下	超過 760，915 以下
6 以下	A	1.6	2.0	2.5	4.0	5.0
	B	1.2	1.6	2.0	2.8	4.0
超過 6，13 以下	A	2.0	2.3	3.2	5.0	6.3
	B	1.6	1.8	2.5	3.2	5.0
備註：表中 A 表示護罩之周邊板， B 為護罩之側板。						

Attaching table 31

Thickness of the grinding wheel (unit: millimeters)	Guard plate type	Diameter of grinding (unit: millimeters)				
		below 205	over 205 below 305	over 305 below 510	over 510 below 760	over 760 below 915
below 6	A	1.6	2.0	2.5	4.0	5.0
	B	1.2	1.6	2.0	2.8	4.0
over 6 below 13	A	2.0	2.3	3.2	5.0	6.3
	B	1.6	1.8	2.5	3.2	5.0
Remark: A indicates the peripheral plate of the guard, B is the side plate of the guard.						

附表三十二

鋁之抗拉強度值（單位：公斤\平方毫米）	係數
18 以上，未滿 23	3.0
23 以上，未滿 31	2.5
31 以上	2.0

Attaching table 32

Tensile strength of aluminum (unit: kgf/per square millimeters)	coefficient
over 18 and below 23	3.0
over 23 and below 31	2.5
over 31	2.0

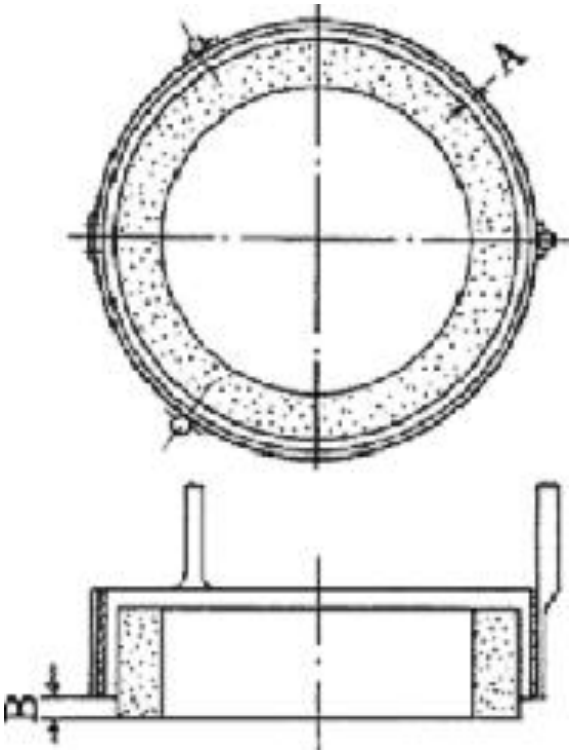
附表三十三

研磨輪直徑（單位：毫米）	護罩厚度值（單位：毫米）
205 以下	1.6
超過 205，610 以下	3.2
超過 610	6.3

Attaching table 33

Diameter of grinding wheel (unit: millimeters)	Thickness of the guard (unit: millimeters)
below 205	1.6
over 205 and below610	3.2
over 610	6.3

附圖九



備註：

1.對應於研磨輪直徑(D)

A 之最大值如下：

$D \leq 205$ 時為 5

$205 \prec D \leq 610$ 時為 7

$D \succ 610$ 時為 10

(單位：毫米)

2.對應於研磨輪厚度(T)

B 之最大值如下：

$T \leq 25$ 時為 0.5T

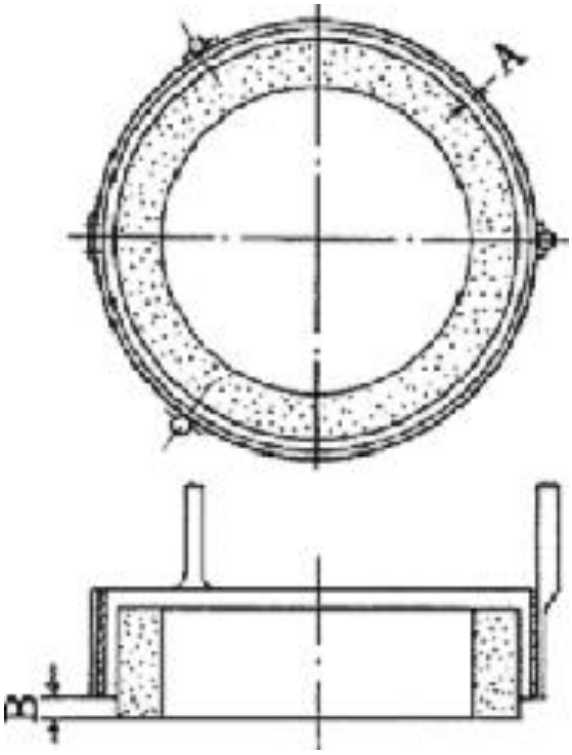
$25 \prec T \leq 50$ 時為 0.4T

$50 \prec T \leq 150$ 時為 0.33T

$T \succ 150$ 時為 50

(單位：毫米)

Attaching figure 9



Remark:

1. corresponding the diameter of the grinding wheel(D)

   Maximum of A is as followings:

   5 when $D \leq 205$

   7 when $205 \prec D \leq 610$

   10 when $D \succ 610$

   (unit: millimeters)

2. corresponding the thickness of the grinding wheel(T)

   Maximum of B is as followings:

   0.5T when $T \leq 25$

   0.4T when $25 \prec T \leq 50$

   0.33T when $50 \prec T \leq 150$

   50 when $T \succ 150$

   (unit: millimeters)

附表三十四

研磨輪厚度（單位：毫米）	直徑（單位：毫米）	個　數
150 以下	ｔ×1.6	2
超過 150	ｔ×2.0	2
	ｔ×1.4	4
備註： 一、表中ｔ為舌板厚度。 二、直徑欄所列數值未滿 5 毫米者，視為 5 毫米。		

Attaching table 34

Thickness of the grinding wheel (unit millimeters)	Diameter (unit: millimeters)	Numbers
below 150	ｔ×1.6	2
over 150	ｔ×2.0	2
	ｔ×1.4	4
Remark: 1. t is the thickness of the tonge plate. 2. the value in the column for diameter(unit: millimeters) is corncerned 5 milimeters if it is below 5 milimeters.		

附表三十五

衝壓機械種類	機械規格
機械式摺床以外之衝壓機械	一、壓力能力（單位：噸） 二、行程數（單位：每分鐘行程數） 三、行程長度（單位：毫米） 四、模高（單位：毫米） 五、滑塊等之調節量（單位：毫米） 六、最大停止時間（Tl+Ts 之合計時間或 Tm）（單位：毫秒 ） 七、超限運轉監視裝置之設定位置（曲軸偏心軸等上死點與設定停止點間之角度） 八、離合器嚙合處之數目(限確動式離合器)
機械式摺床	一、壓力能力（單位：噸） 二、行程數（單位：每分鐘行程數） 三、行程長度（單位：毫米） 四、工作台長度（單位：毫米） 五、間隙深度（單位：毫米） 六、最大停止時間（單位：毫秒 ） 七、超限運轉監視裝置之設定位置
液壓式摺床以外之液壓衝床	一、壓力能力（單位：噸） 二、行程長度（單位：毫米） 三、滑塊等之最大下降速度（單位：毫米／每秒） 四、慣性下降值（單位：毫米） 五、最大停止時間（單位：毫秒 ）
液壓式摺床	一、壓力能力（單位：噸） 二、行程長度（單位：毫米） 三、工作台長度（單位：毫米） 四、間隙深度（單位：毫米） 五、滑塊等之最大下降速度（單位：毫米／每秒） 六、慣性下降值（單位：毫米） 七、最大停止時間（單位：毫秒 ）

Attaching table 35

Types of press mechine	Machine specifications
The press machine except the mechanical press brake	1. capacity (unit : tons) 2. strokes (unit: stroke per minute) 3. stroke (unit: millimeters) 4. die height (unit: millimeters) 5. slider adjustment (unit: millimeters) 6. the maximum stop time (the sum of Tl+Ts or Tm) (unit: miliseconds) 7. setting position of the over running monitor (angle between crankat top dead center with the set stop point). 8. engagement numbers of clutch (only for positive clutch)
The mechanical press brake	1. capacity (unit :tons) 2. strokes (unit: stroke per minute) 3. stroke (unit: millimeters) 4. table length (unit: millimeters) 5. gap depth (unit: millimeters) 6. maximum stop time (unit: milliseconds) 7. setting position of the over running monitor
The hydrautic press except the hydrautic press brake	1. capacity (unit :tons) 2. stroke (unit: millimeters) 3. the slider maximum dropping speed (unit: millimeters) 4. inertial descending value (unit: milliseconds) 5. maximum stop time (unit: milliseconds)
The hydrautic press brake	1. capacity (unit :tons) 2. stroke (unit: millimeters) 3. table length (unit: millimeters) 4. gap depth (unit: millimeters) 5. the slider maximum dropping speed (unit: millimeters) 6. inertial descending value (unit: milliseconds) 7. maximum stop time (unit: milliseconds)