



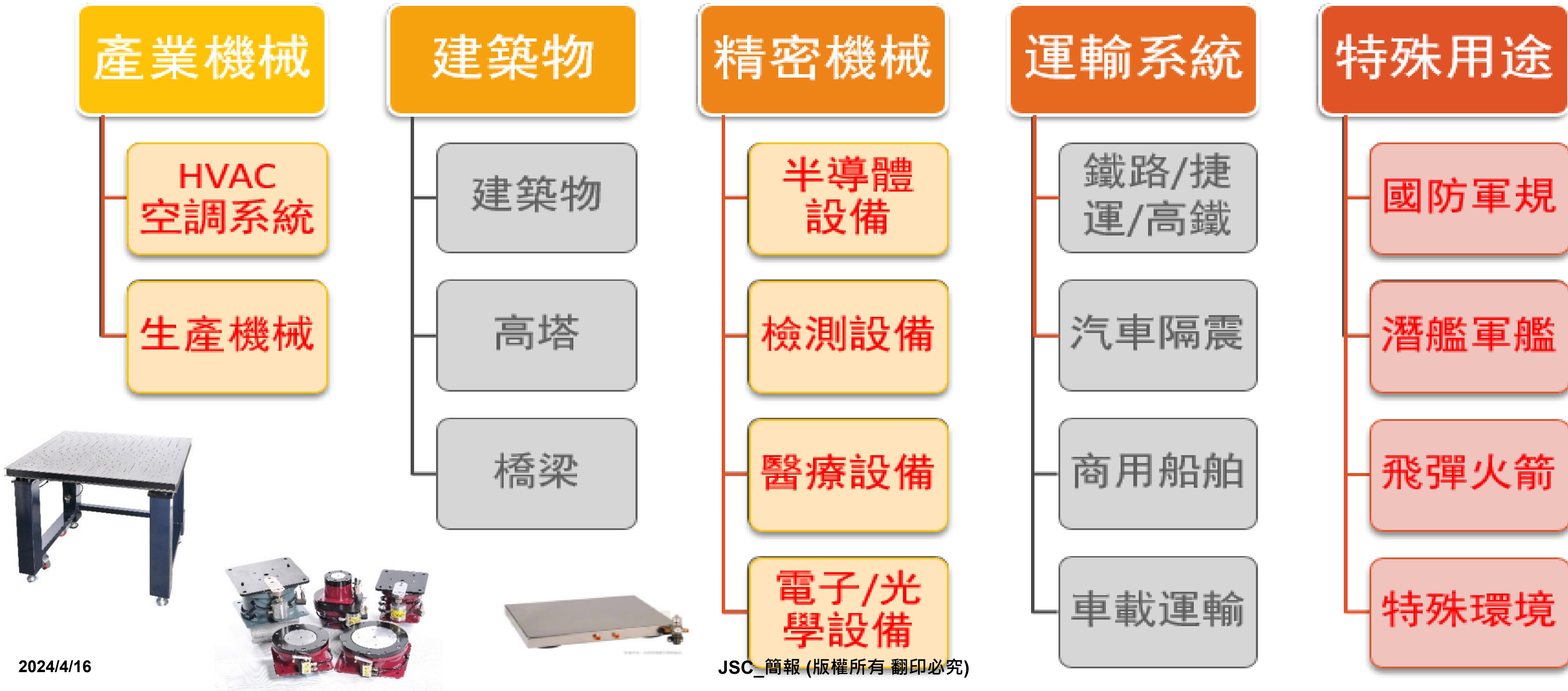
**JSC** 兆山辰 精密科技股份有限公司  
JSC Scientific Controls Co., Ltd.

# 公司簡介

# 公司沿革

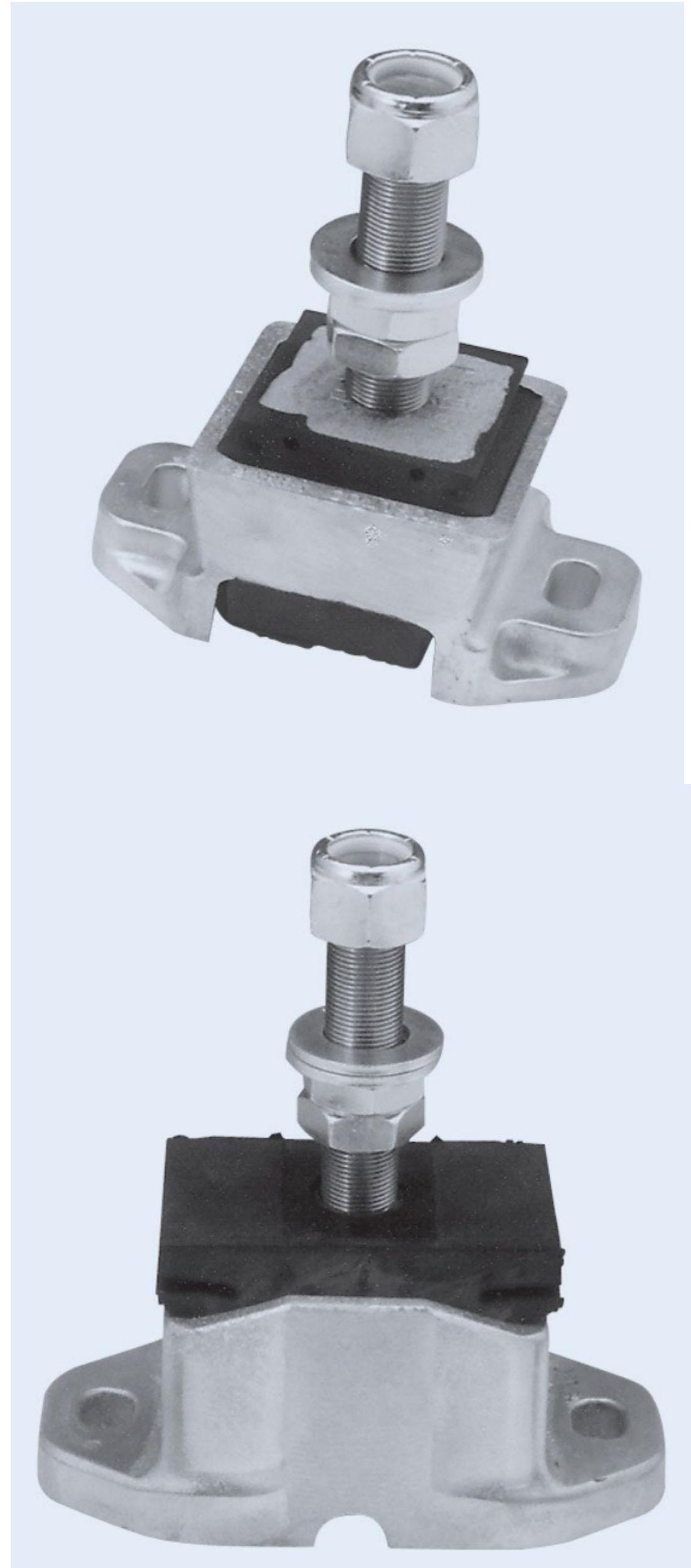


# 避震器的用途





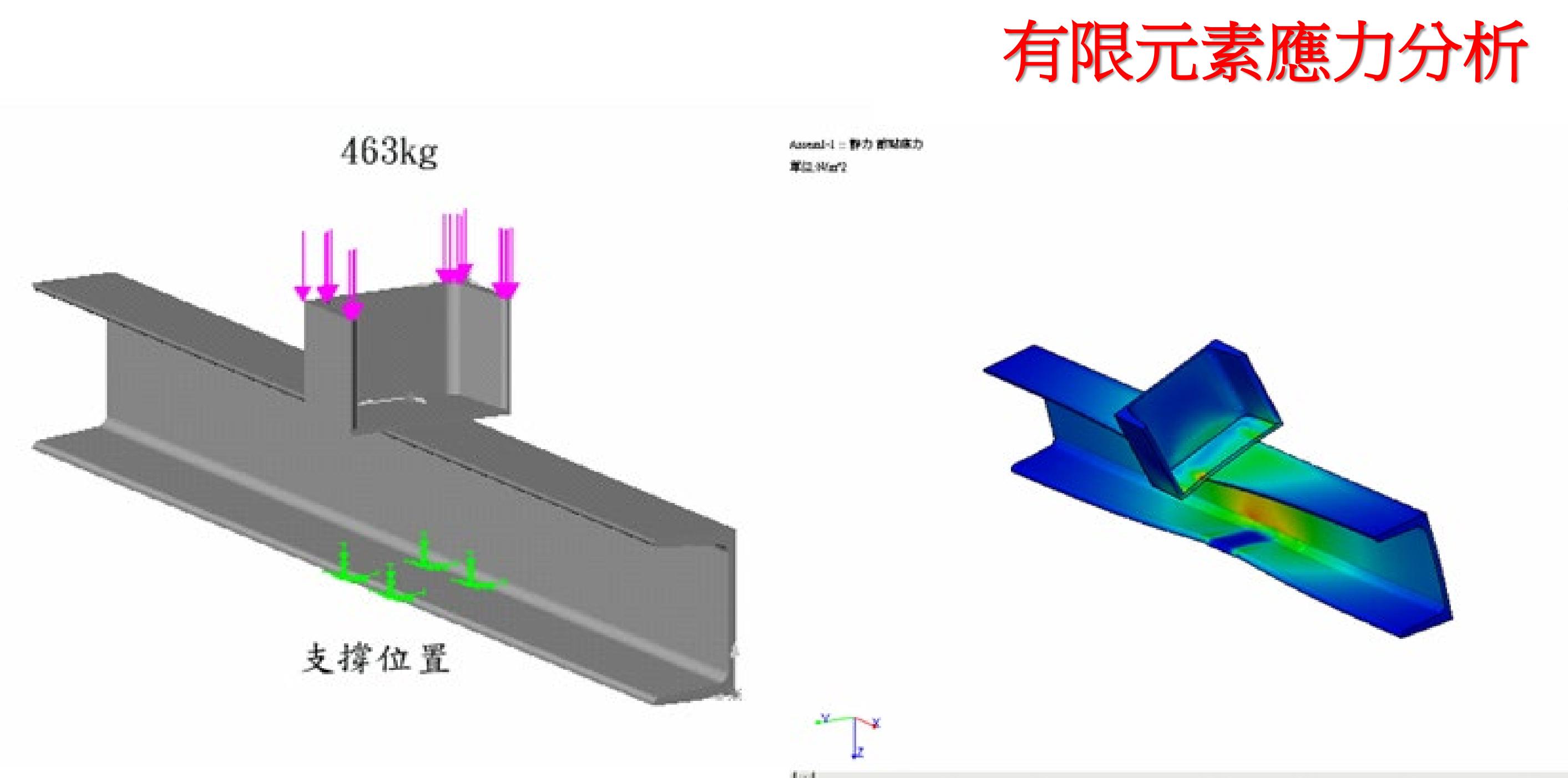
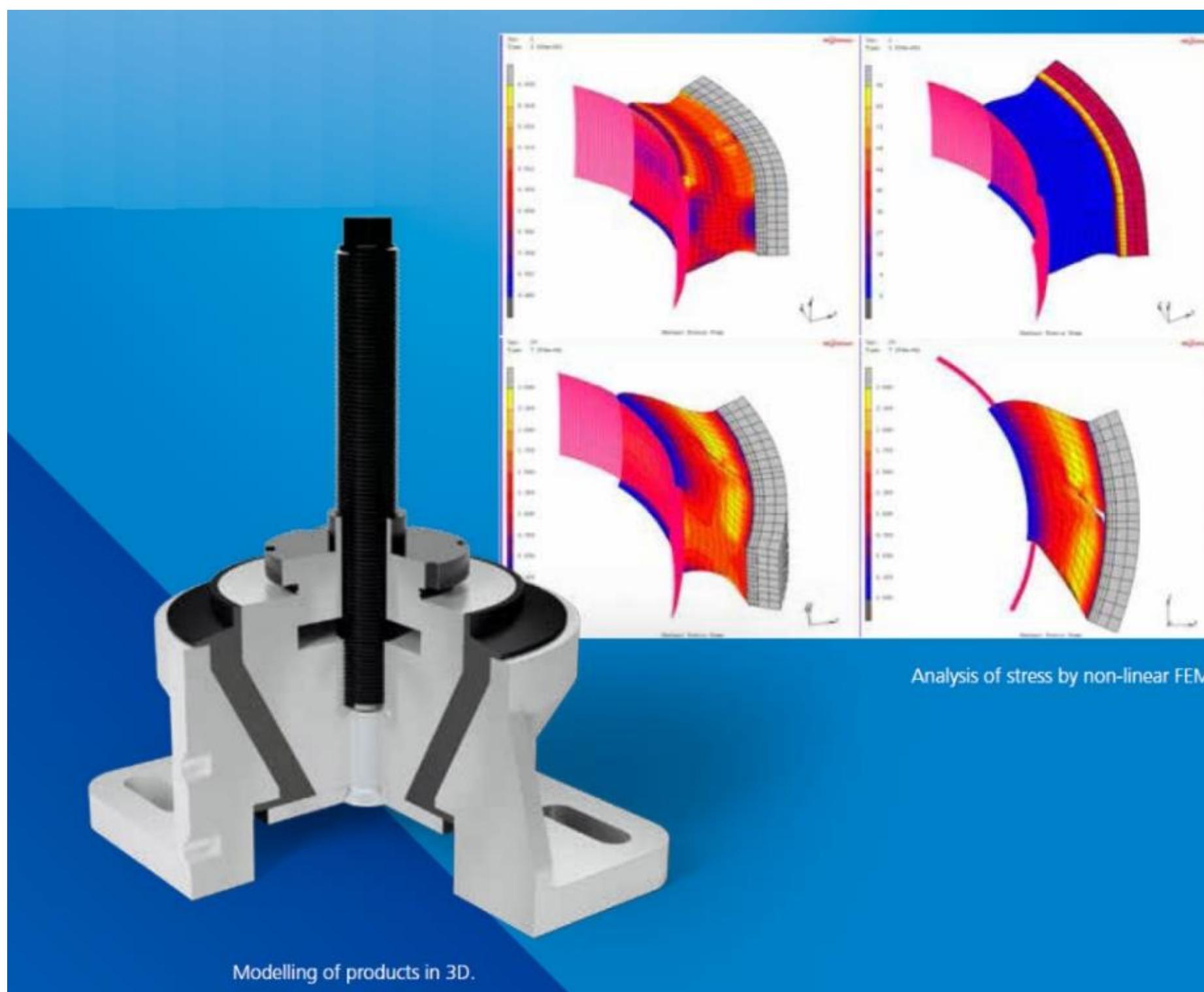
# 艦載、車載 隔振



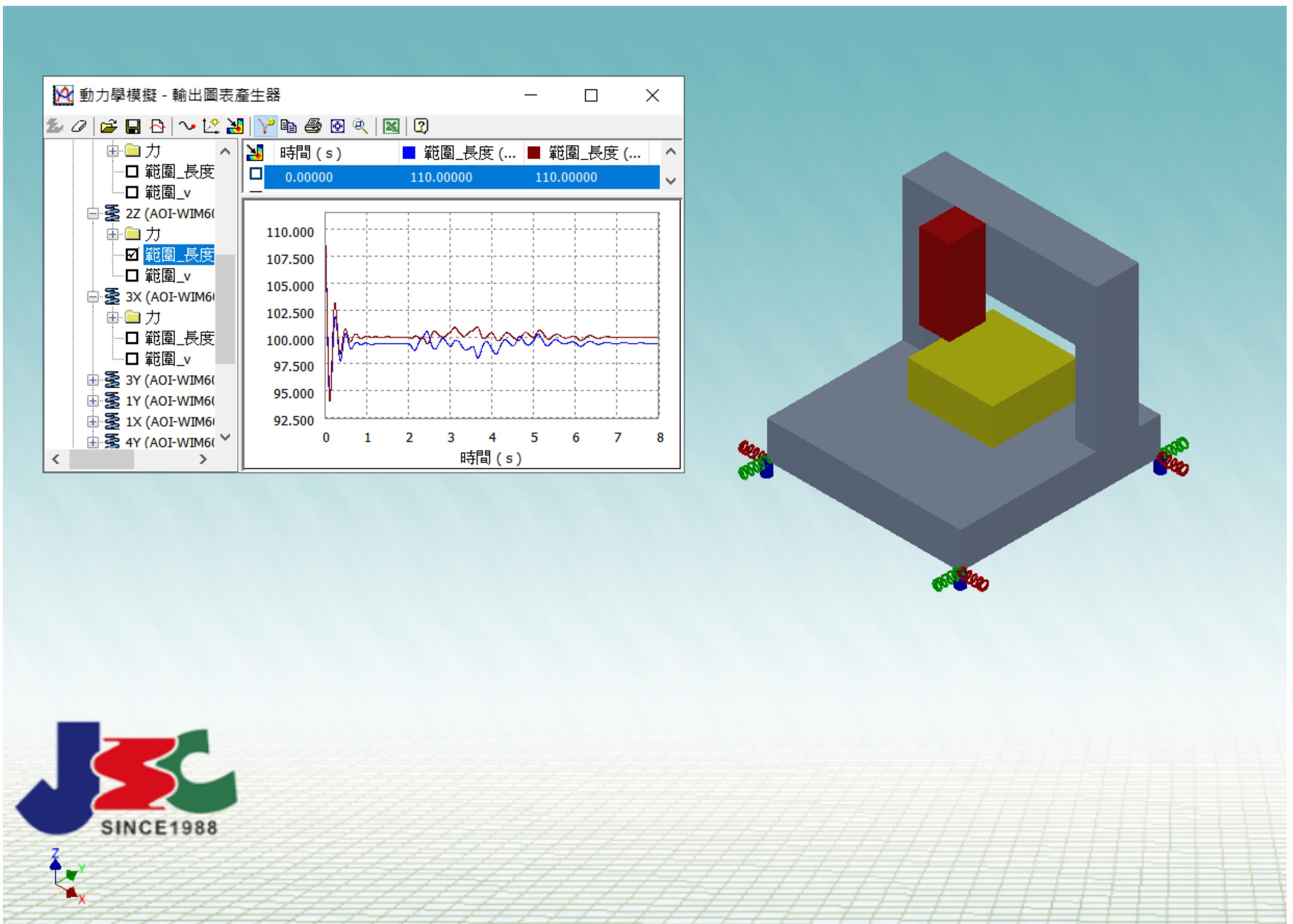


艦載、車載專用

# 設計-有限元素分析



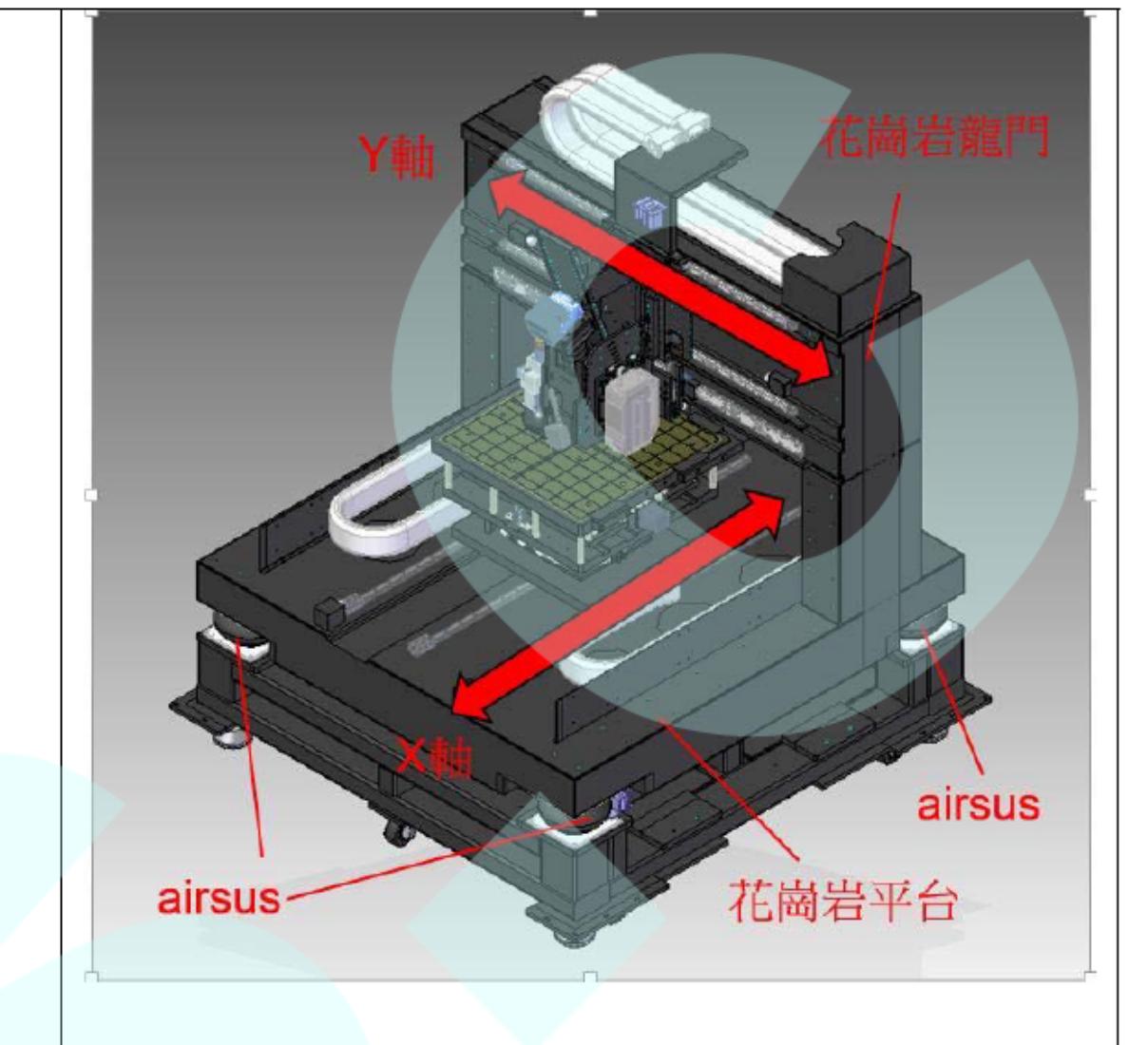
# 設計-動力學分析



1:設備名稱: AOI 檢測設備

設備尺寸資訊如下

- X 軸：
  - 最大速度 = 0.5 m/sec
  - 最大加速時間 = 5m/sec<sup>2</sup>
  - 行程 = 950 mm
- Y 軸：
  - 最大速度 = 0.5 m/sec
  - 最大加速時間 = 5m/sec<sup>2</sup>
  - 行程 = 900 mm
- 花崗岩平台重量 = 1370kg
- 花崗岩龍門重量 = 1030kg
- X 軸移動機構重量 = 120 kg
- Y 軸移動機構重量 = 50kg

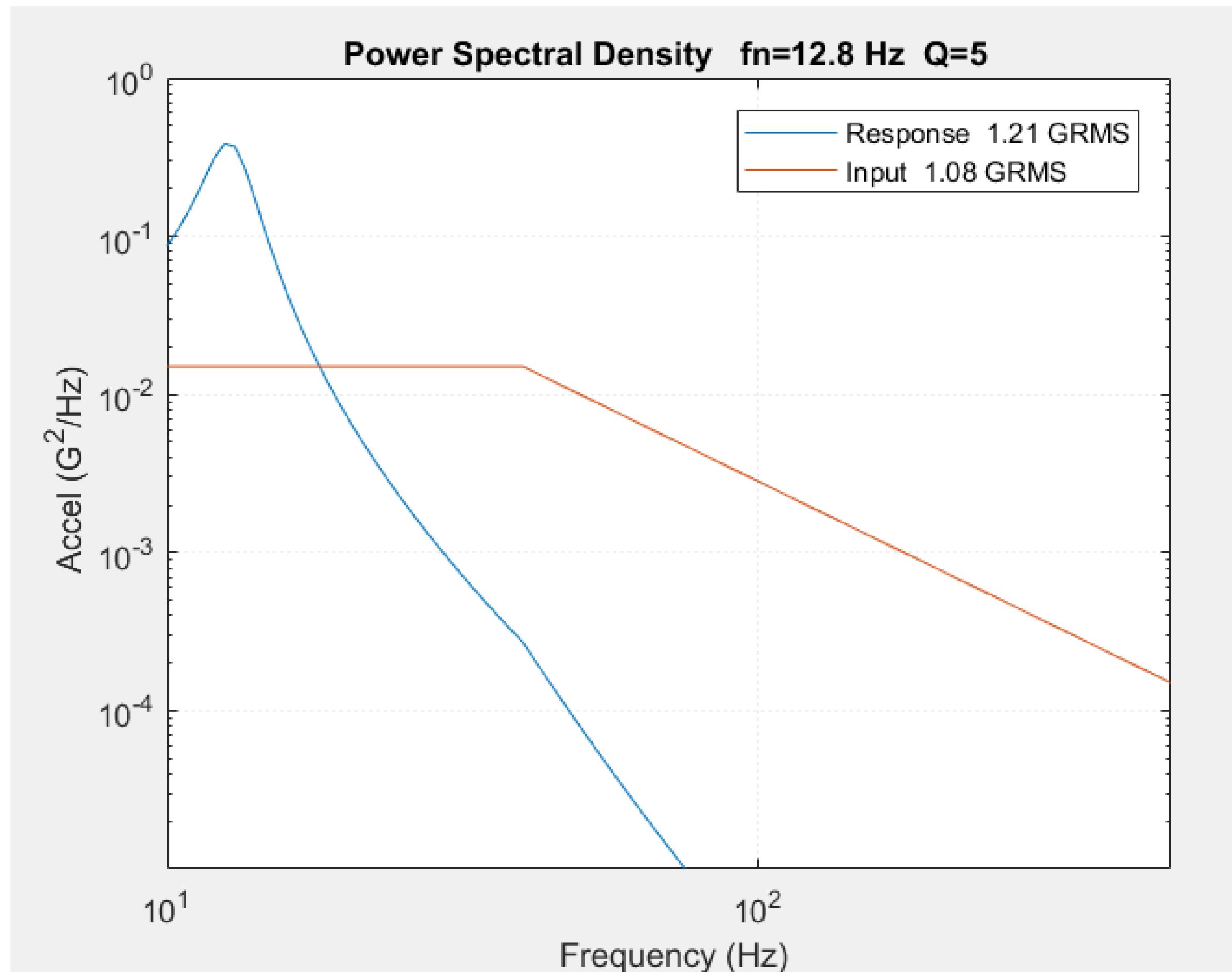


# 設計-衝擊分析

The advertisement features the Electromet logo at the top left, followed by a 3D rendering of a server rack with various components and yellow vibration isolators. To the right of the rack are two black rectangular icons: one for 'Vibration' showing a calculator and a wave, and one for 'Shock' showing a calculator and a lightning bolt. Below these icons is a dark green banner containing the text 'Random Vibration and Shock Analysis Software'.

Random Vibration and Shock Analysis Software

# 設計-衝擊分析 (隨機振動)



## SDOF Acceleration Response

- = 1.21 GRMS
- = 3.64 G 3-sigma
- = 4.39 G 3.62-sigma (maximum expected)

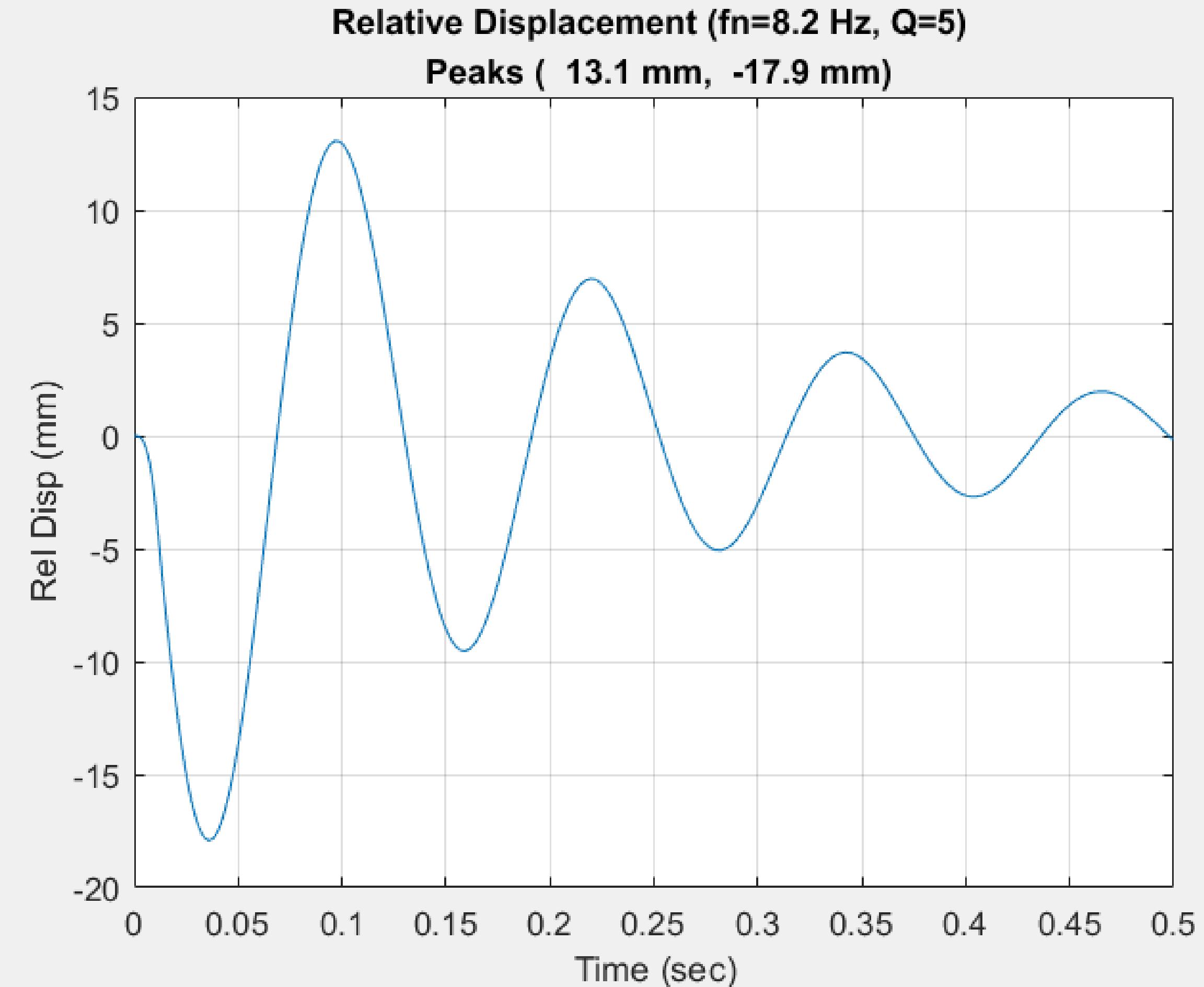
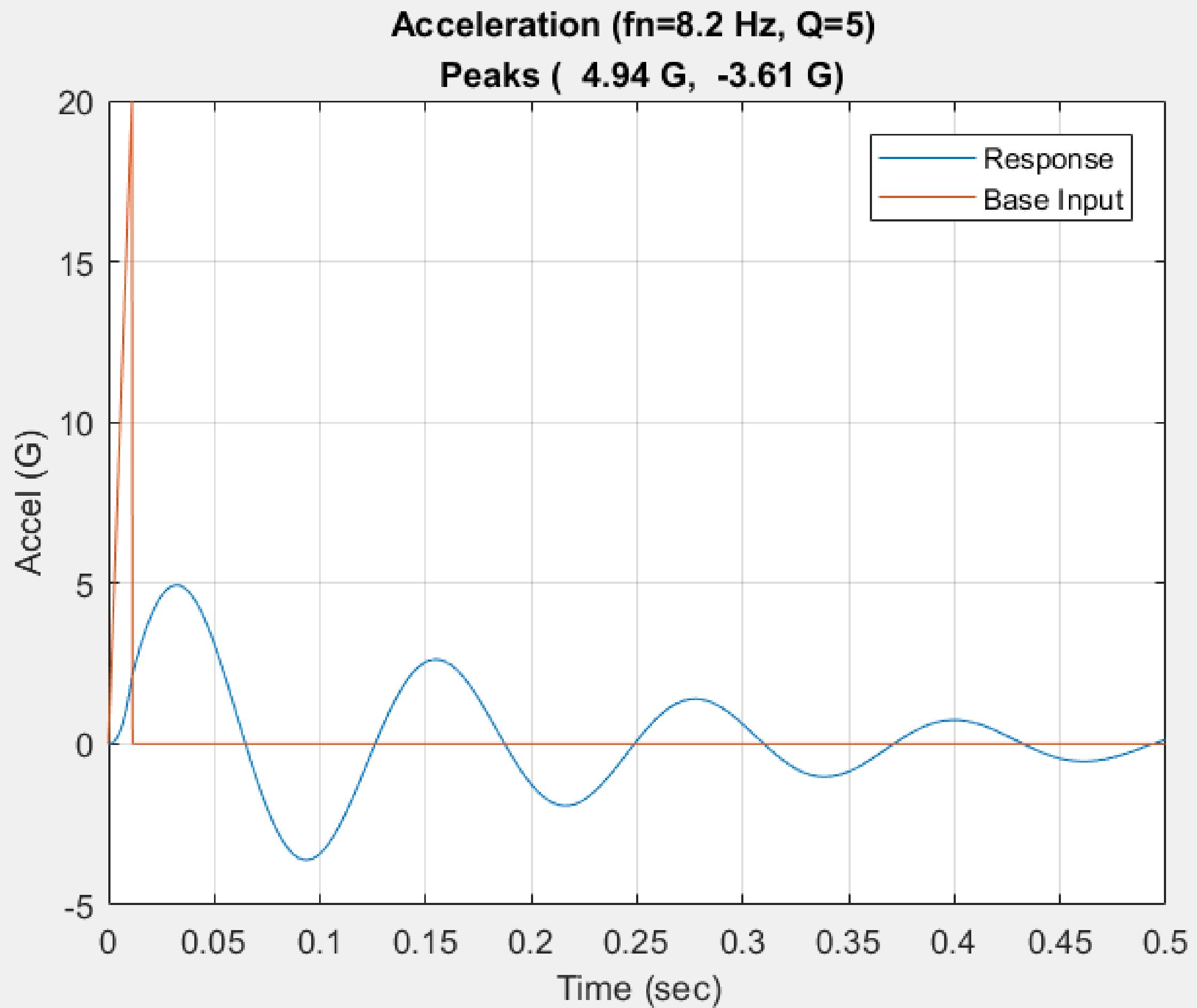
## SDOF Pseudo Velocity Response

- = 145 mm/sec RMS
- = 435 mm/sec 3-sigma
- = 525 mm/sec 3.62-sigma (maximum expected)

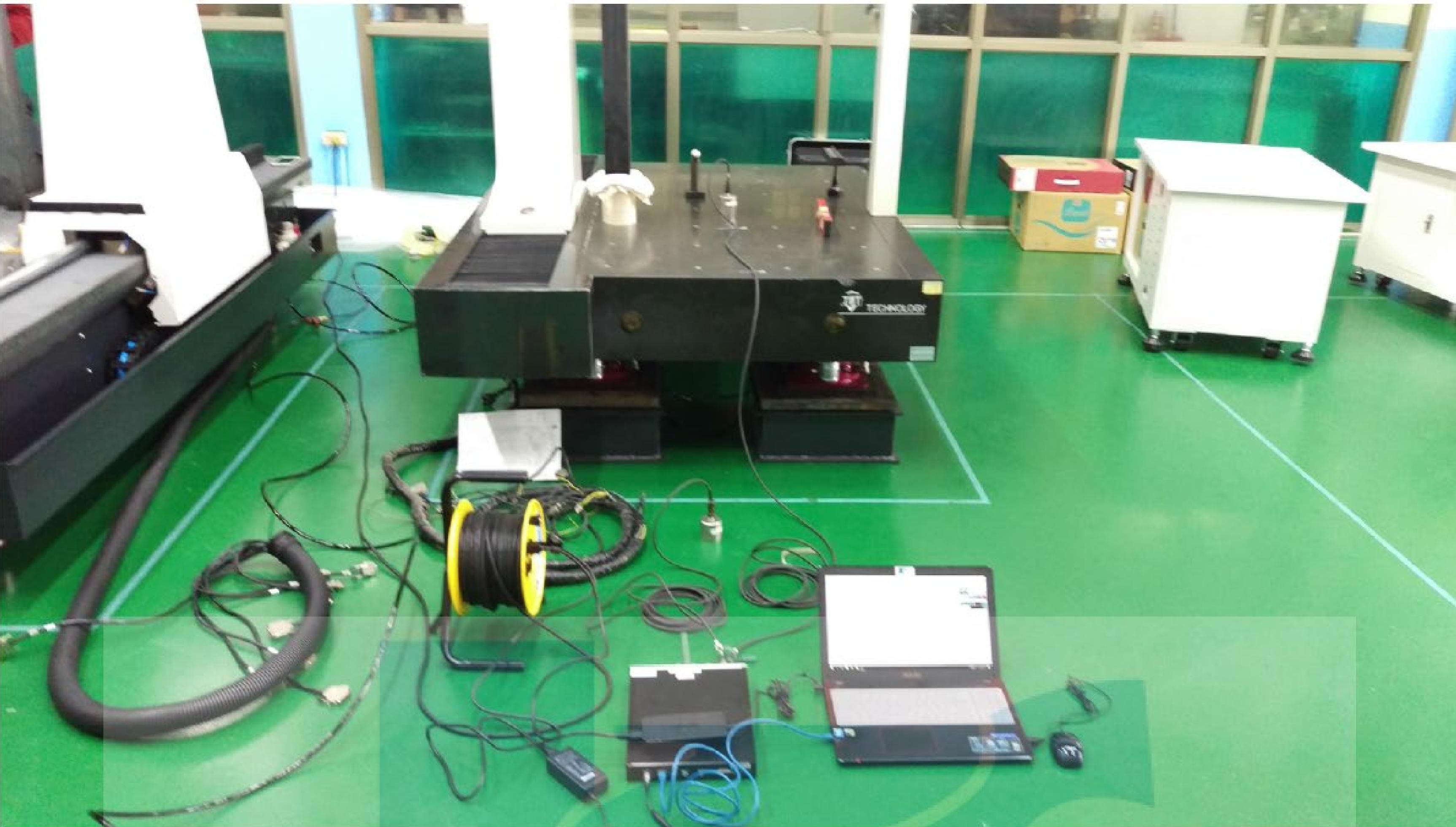
## SDOF Relative Displacement Response

- = 1.8 mm RMS
- = 5.41 mm 3-sigma
- = 6.52 mm 3.62-sigma (maximum expected)

# 設計-衝擊分析 (衝擊)



# 振動量測-頻譜分析儀



# 品質管制設備（一）



鹽霧試驗機



耐黃變試驗機



橡膠比重計



橡膠硫變試驗機



老化試驗機



恆溫油槽試驗機



破裂強度試驗



杜邦衝擊試驗機

# 品質管制設備（二）



頻譜分析儀



衝擊音產生器



洛氏硬度試驗機



彎曲試驗機

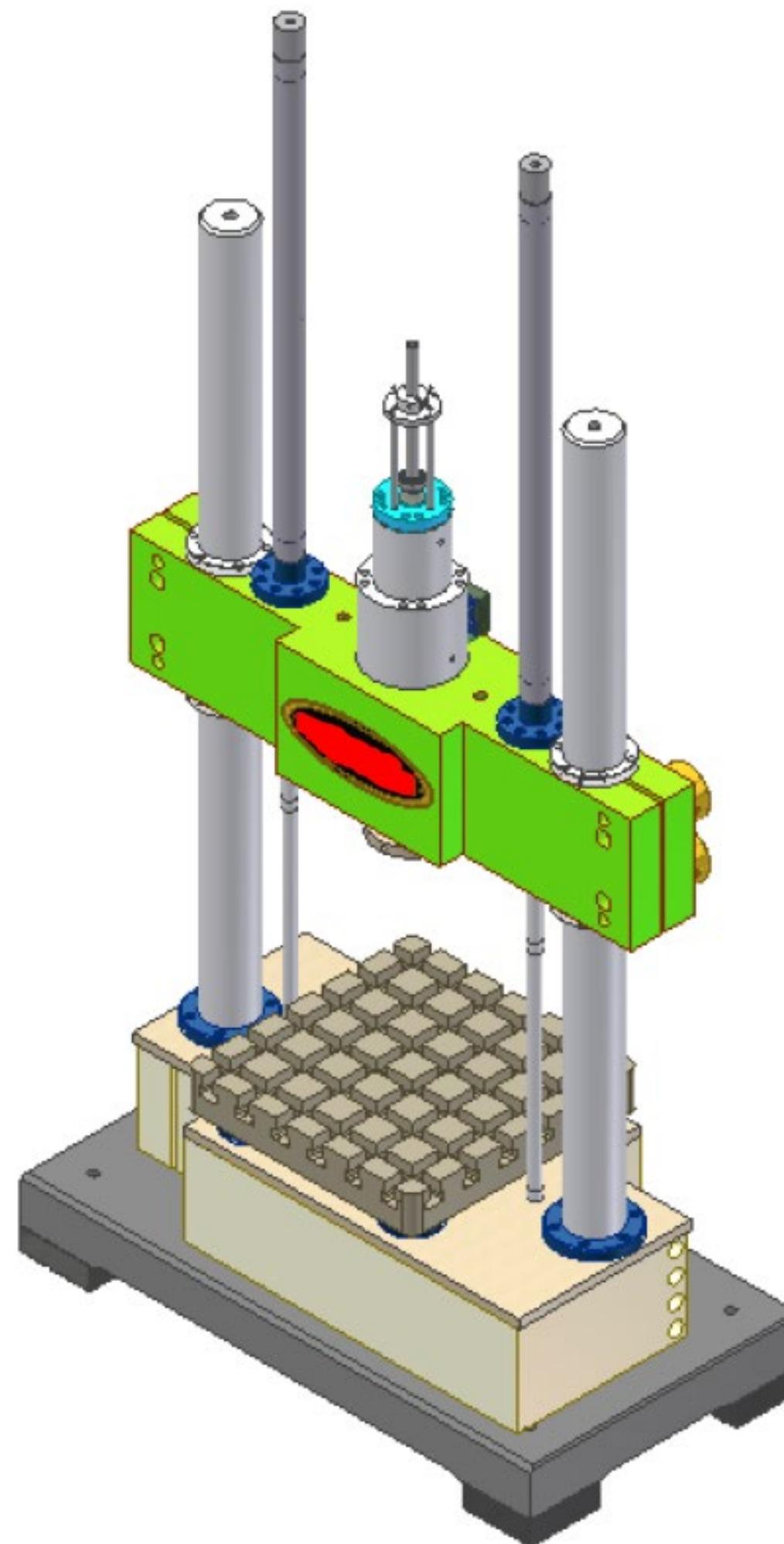


動態實驗機



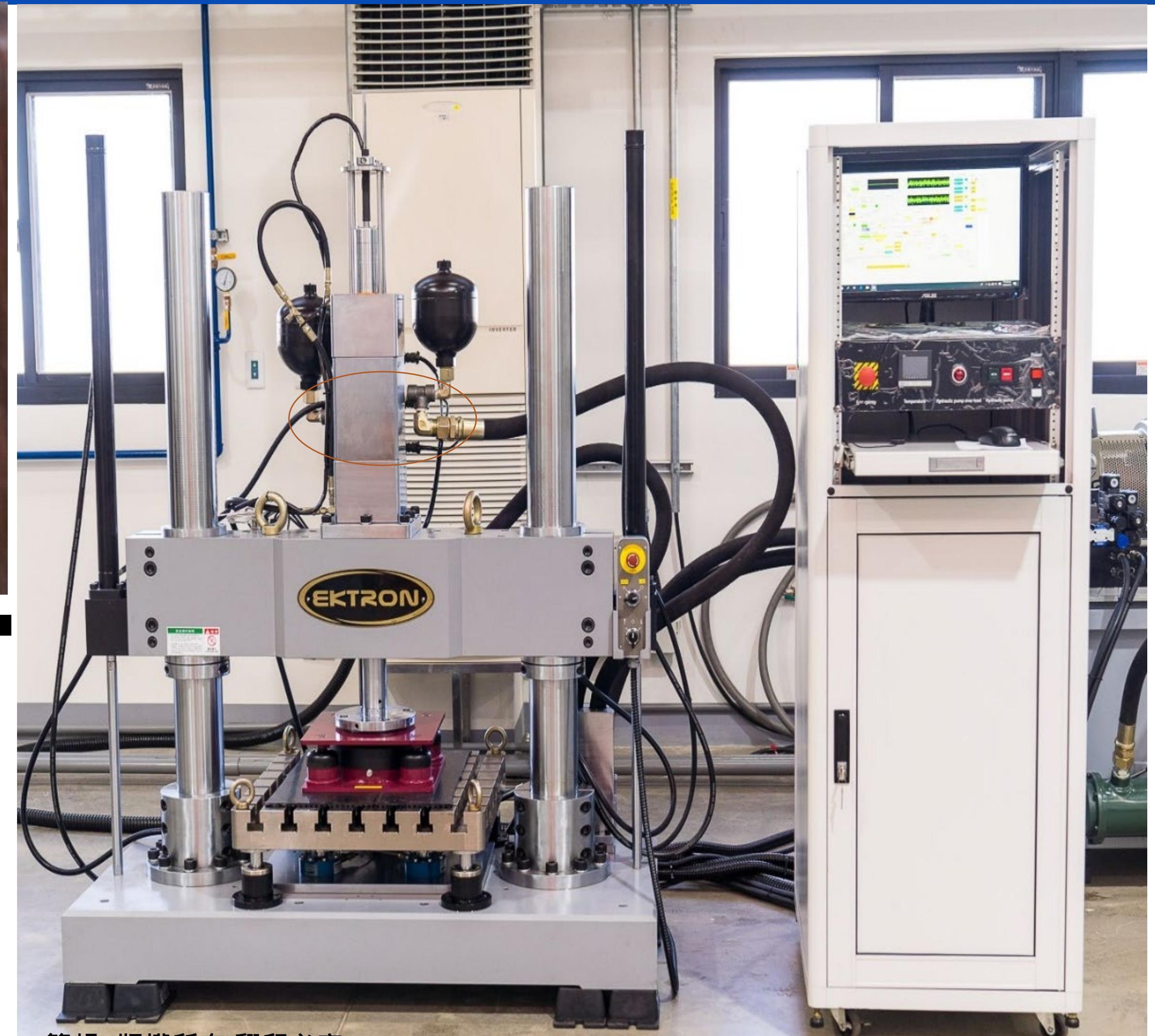
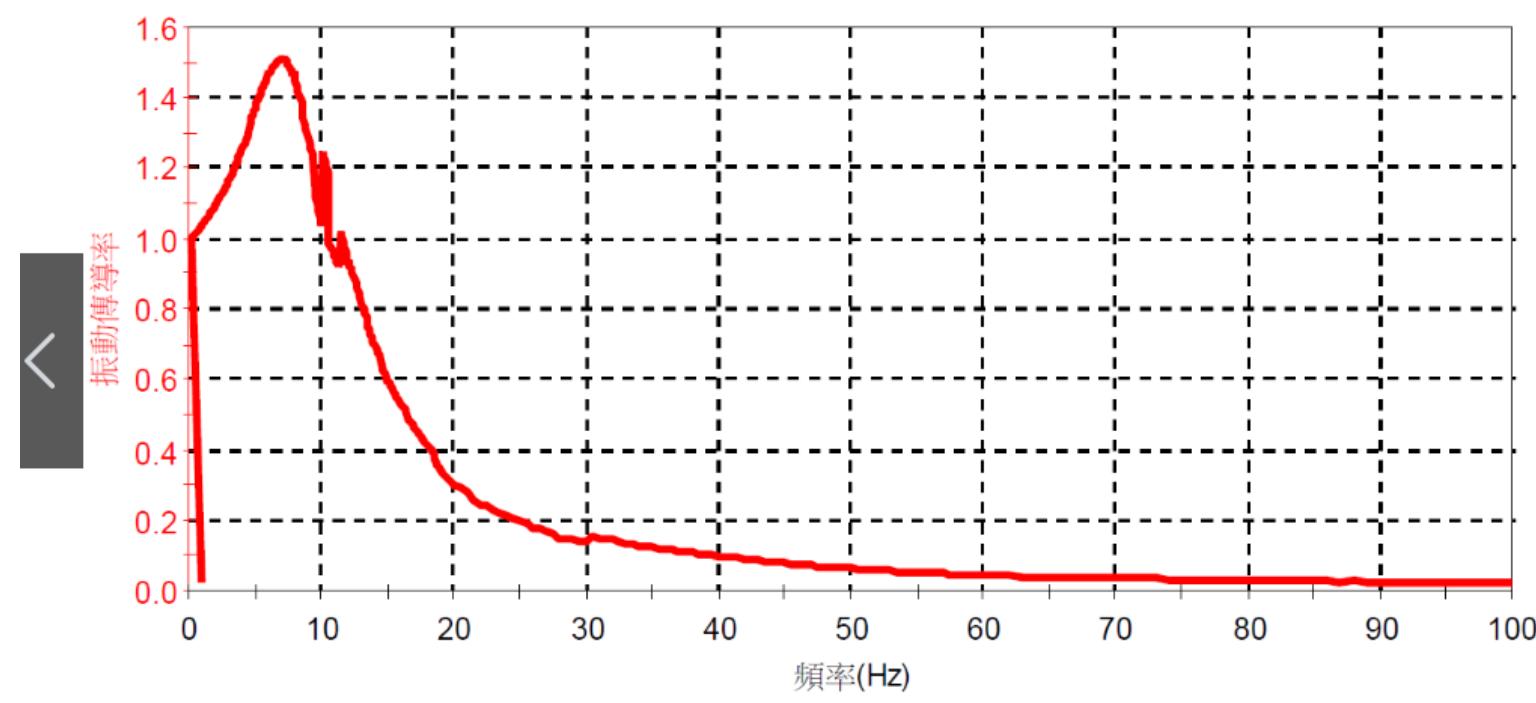
材料試驗機

# 檢測設備-動態疲勞試驗機

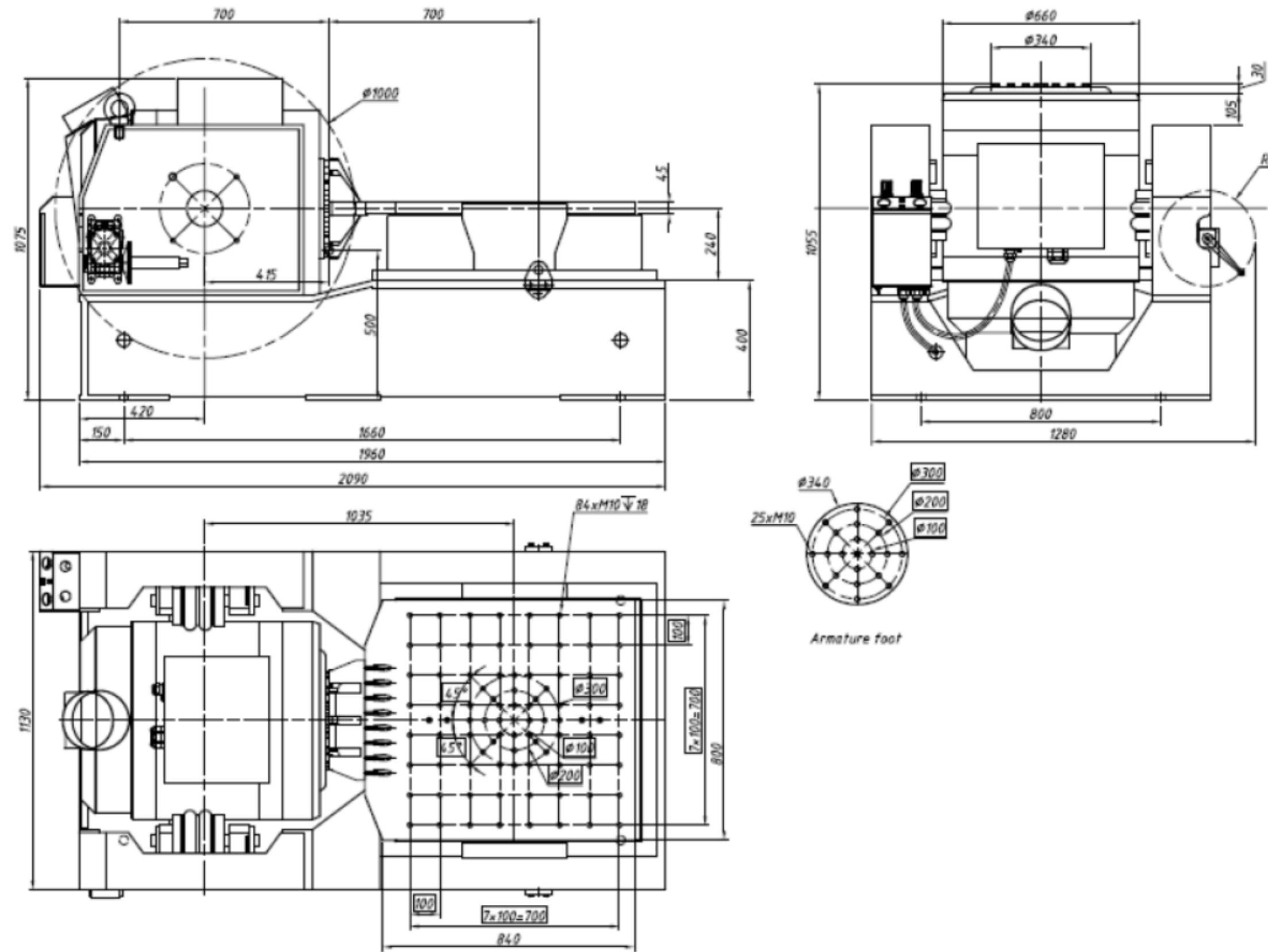


- **動態測試**：進行動剛度試驗測試(其中含動剛度、損失角、阻尼係數、位移振幅、力量振幅、損失因子等參數測試)。
  - (a). 定位移單點頻率測試、定負荷單點頻率測試。
  - (b). 定位移掃頻測試、定負荷掃頻測試(含連續掃頻測試和間隔式掃頻測試)
- **靜態測試**：進行靜剛度試驗測試 (含疲勞測試前靜剛度測試和疲勞測試後靜剛度測試，同時可測位移點相對應的力量值和測試力量點相對應的位移值)。
- **疲勞試驗**：可用測試時間、測試次數作為停止條件後，還含動剛度、損失角、阻尼係數、位移振幅、力量振幅、損失因子等參數作為停止條件(必究)

# 動態測試機：材料特性檢測

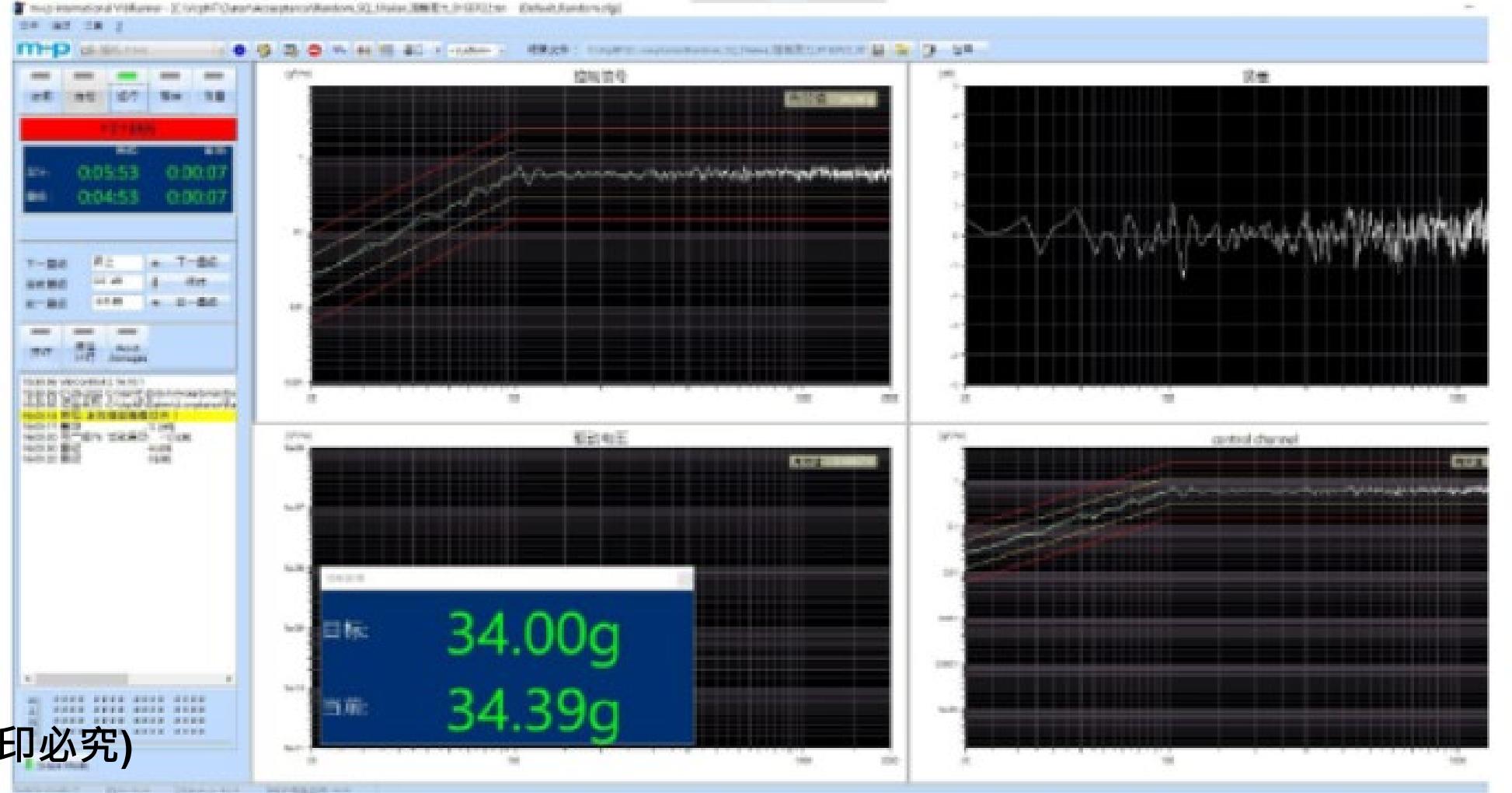


# 檢測設備-振動試驗機



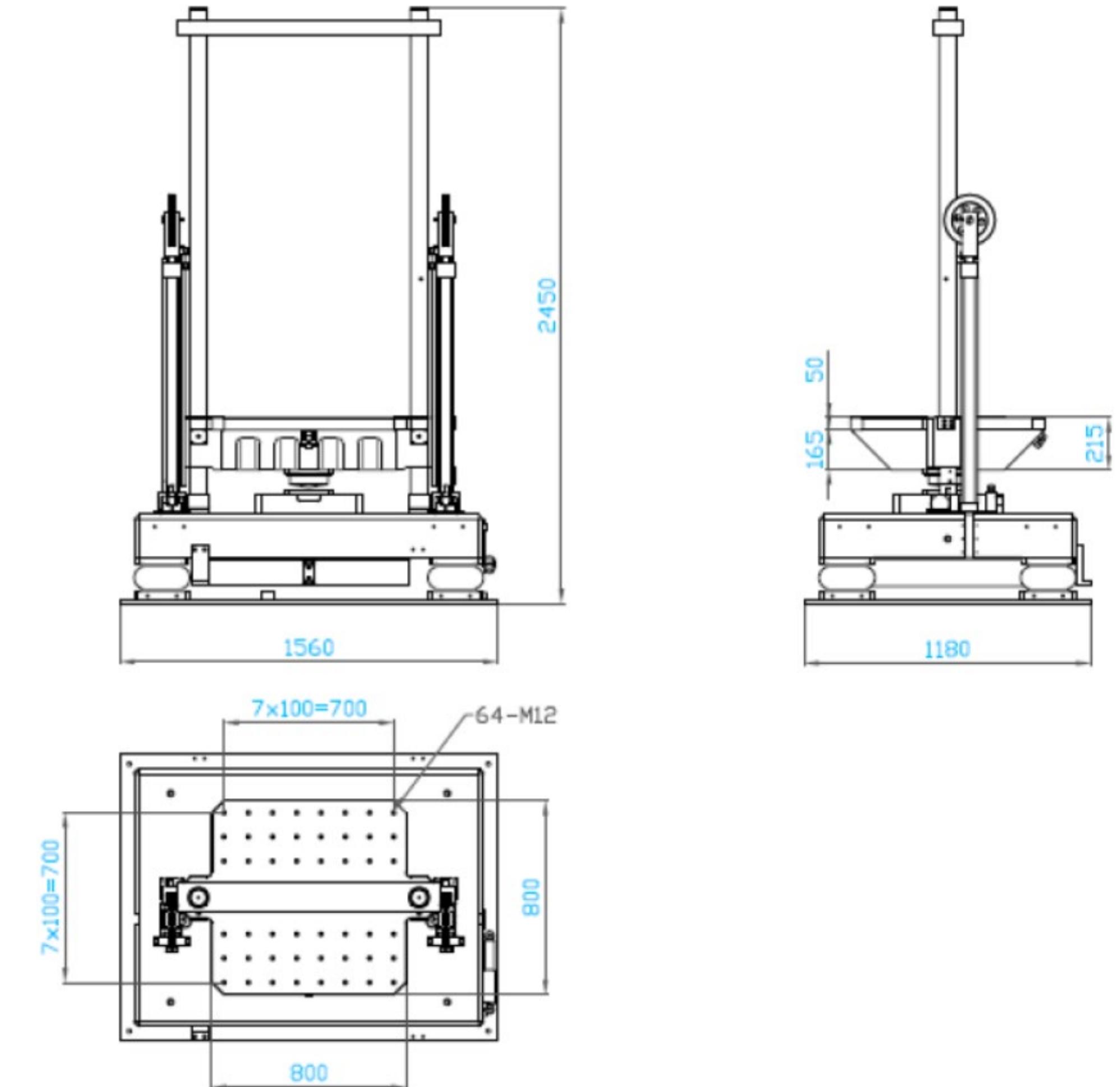
- ✓ 激振 (垂直+水平式)
- ✓ 額定正弦峰值力 : 22,000 N ( 2,200kgf )
- ✓ 額定隨機激振力 : 20,000 Nrms
- ✓ 最大衝擊推力 : 44,000 N ( 4,400kgf )
- ✓ 頻率範圍 : 1 – 2800 Hz
- ✓ 最大衝程 (振幅) : 76 mm ( PEAK – PEAK )
- ✓ 最大速度 : 2.0 m/s
- ✓ 台面尺寸 : 800×800 mm

# 振動環境實境模擬測試

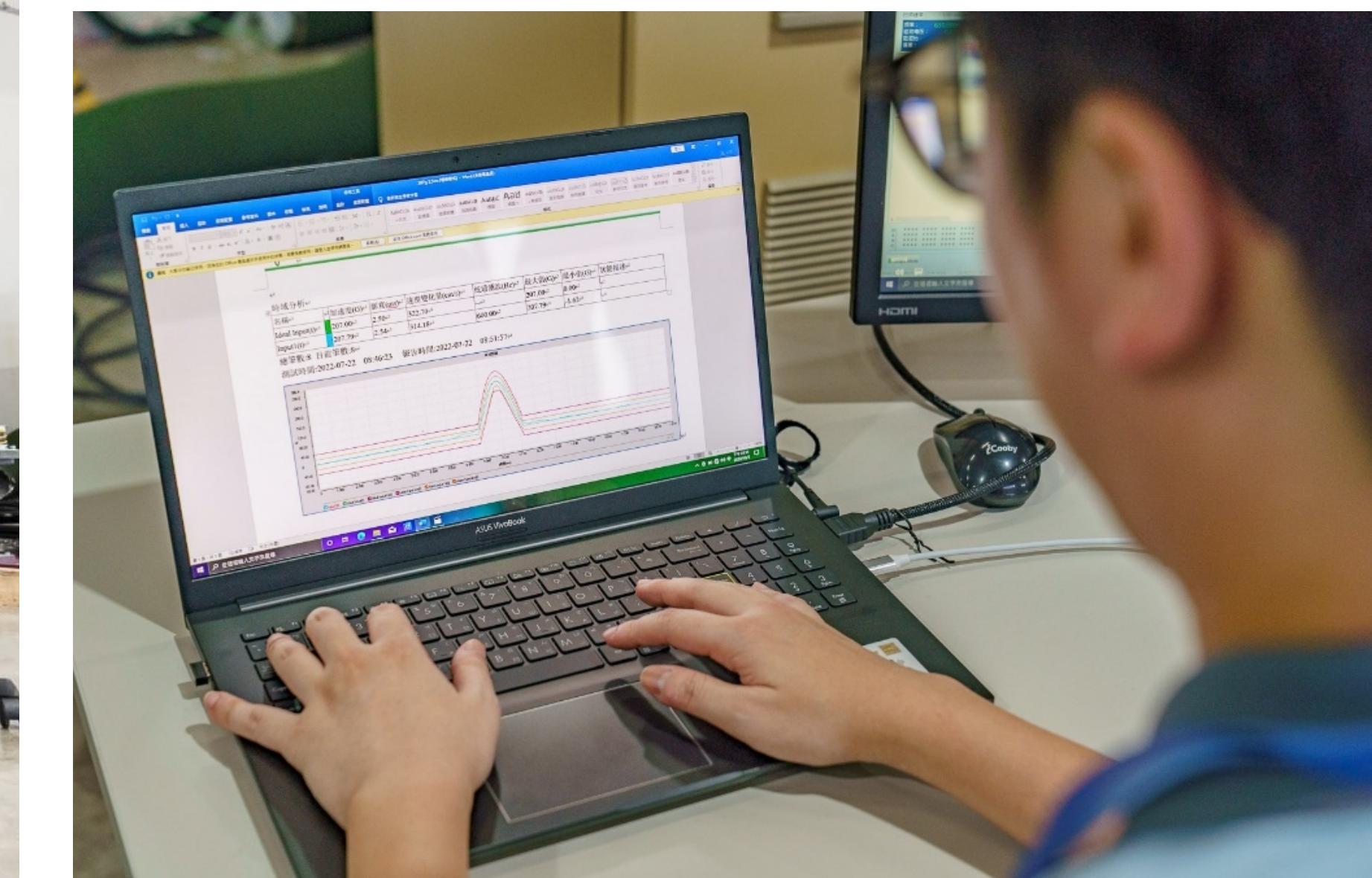
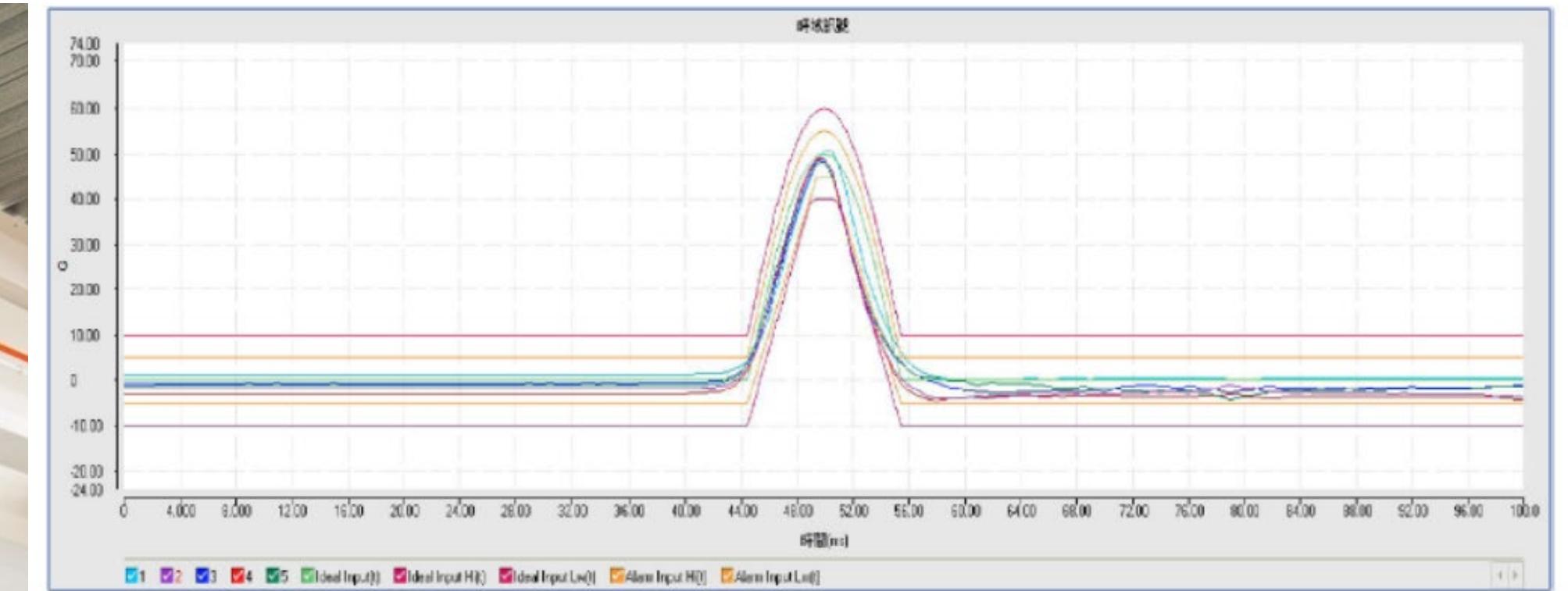


# 檢測設備-衝擊試驗機

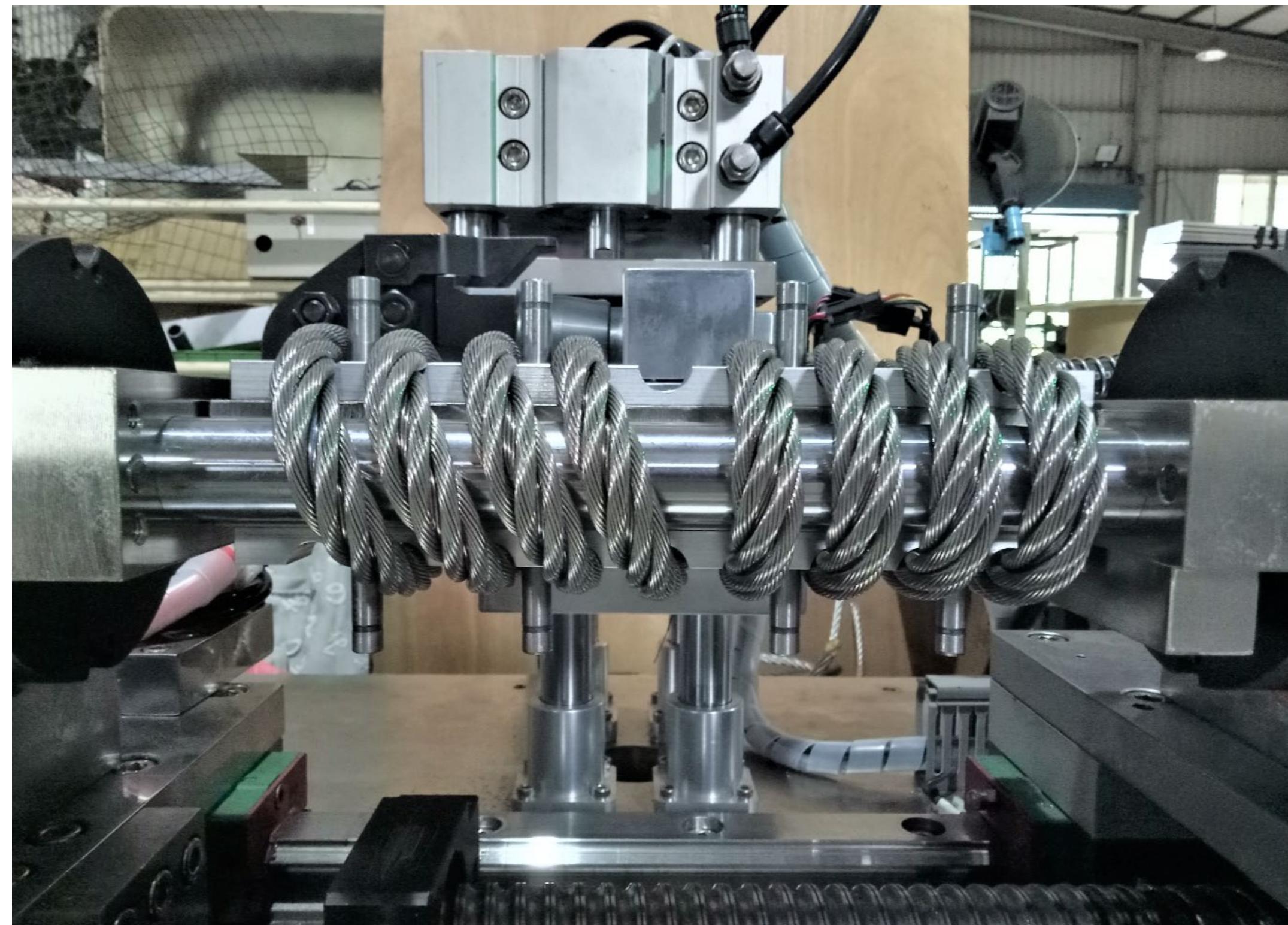
- ✓ 最大負載能力 : 200 Kg<sub>w</sub>
- ✓ 工作台尺寸 : 800×800 mm
- ✓ 衝擊波形 : 半正弦波
- ✓ 衝擊峰值加速度 : 150 – 3000 m/s<sup>2</sup> (15-300G)
- ✓ 衝擊連續時間 : 30 – 3.0 ms
- ✓ 最大速度變化量 : 7.6 m/s
- ✓ 衝擊波形:後峰鋸齒波(三角波)
- ✓ 衝擊峰值加速度 : 150 – 1000 m/s<sup>2</sup> (15-100G)
- ✓ 衝擊連續時間 : 18 – 6 ms
- ✓ 最大速度變化量 : 3.2 m/s



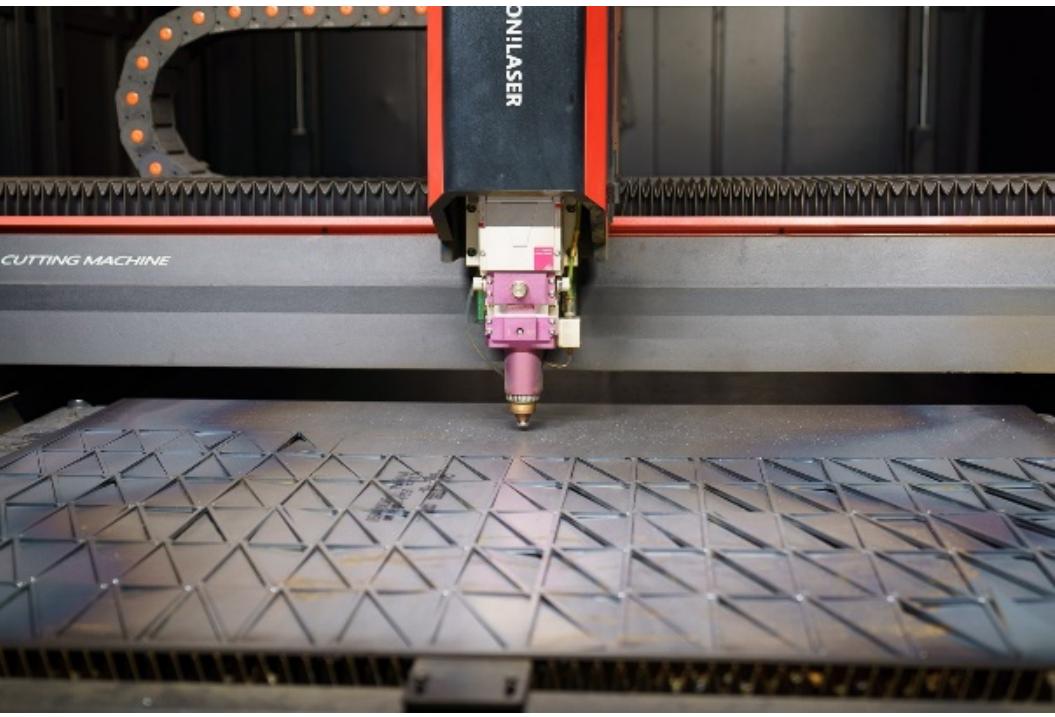
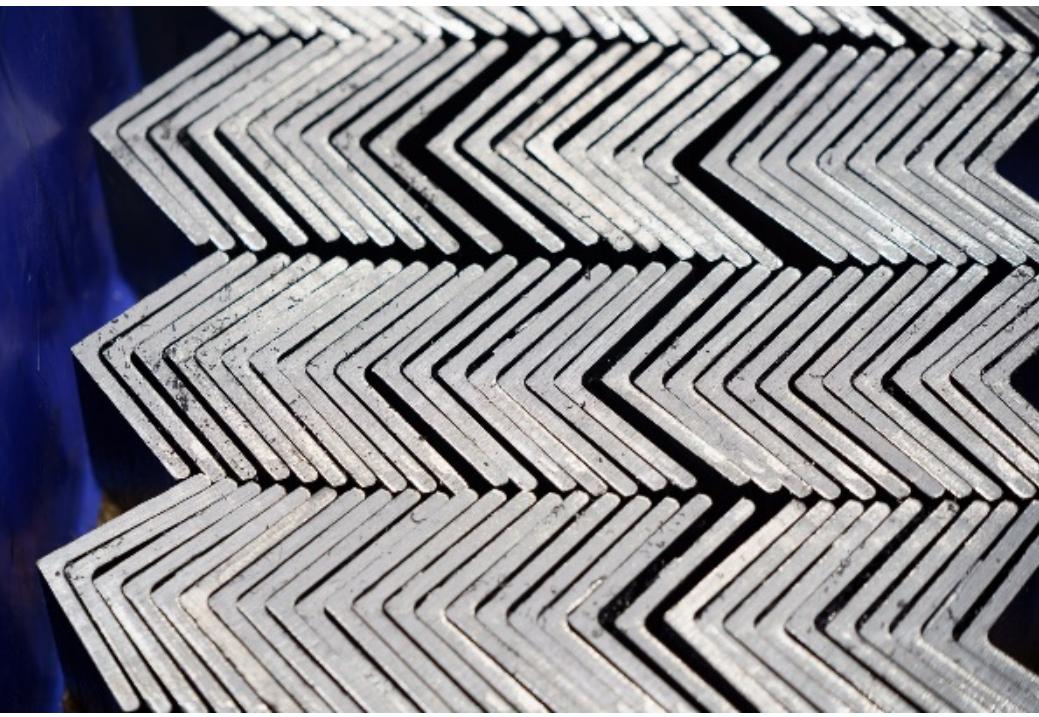
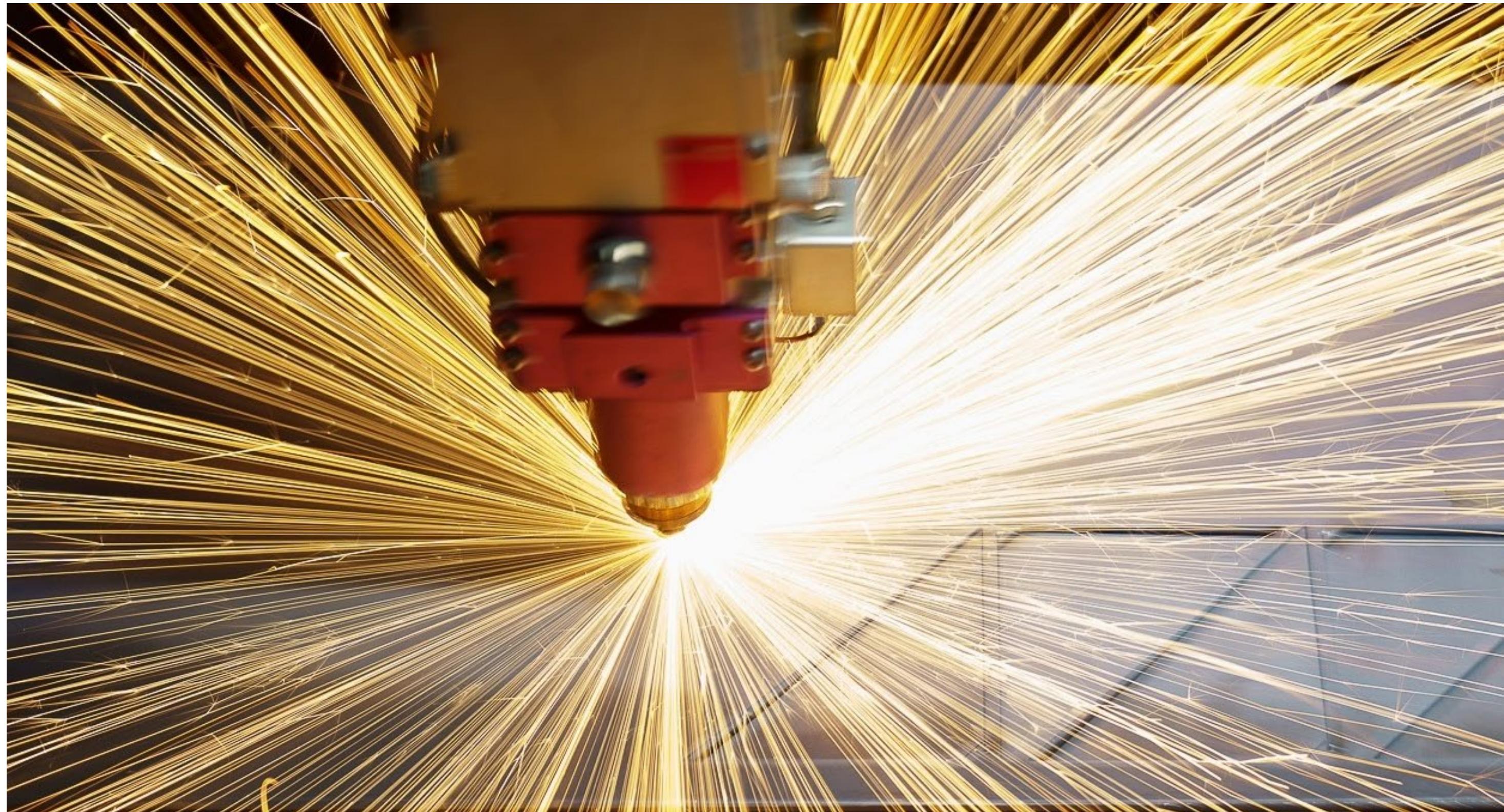
# 衝擊振動測試：爆破震波模擬



# 生產設備-鋼索式避震器捲纜機



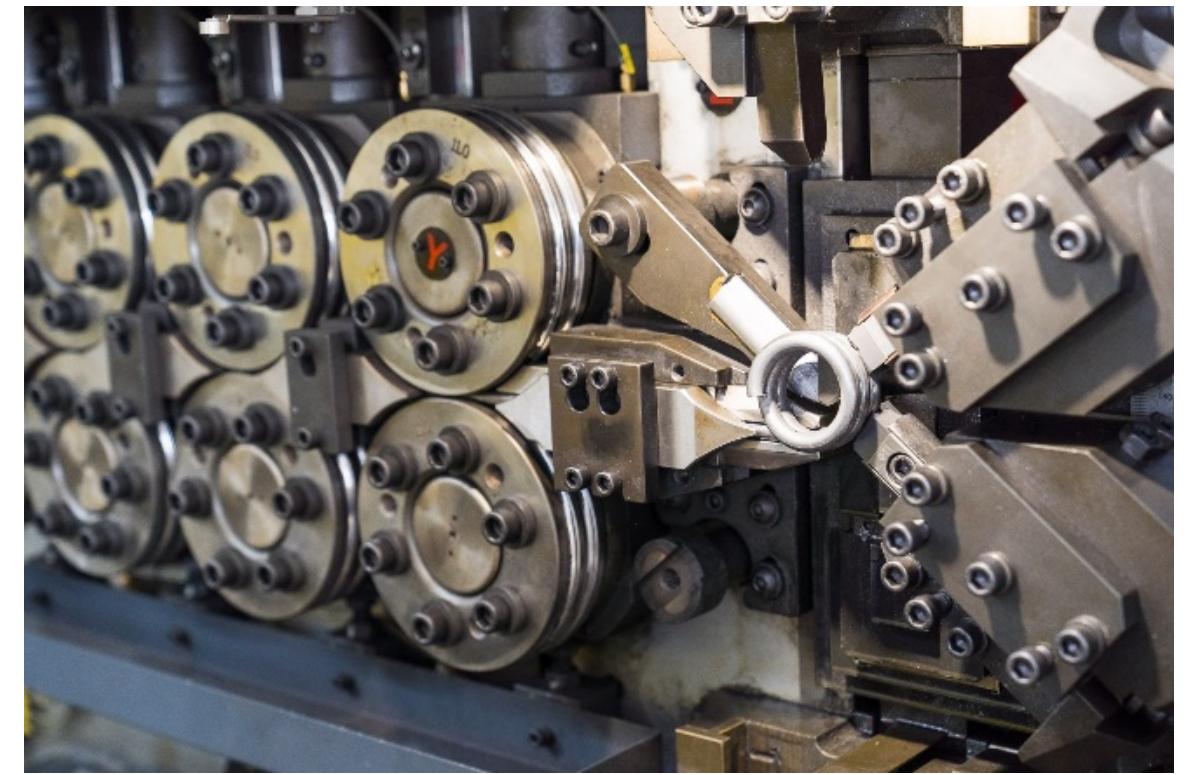
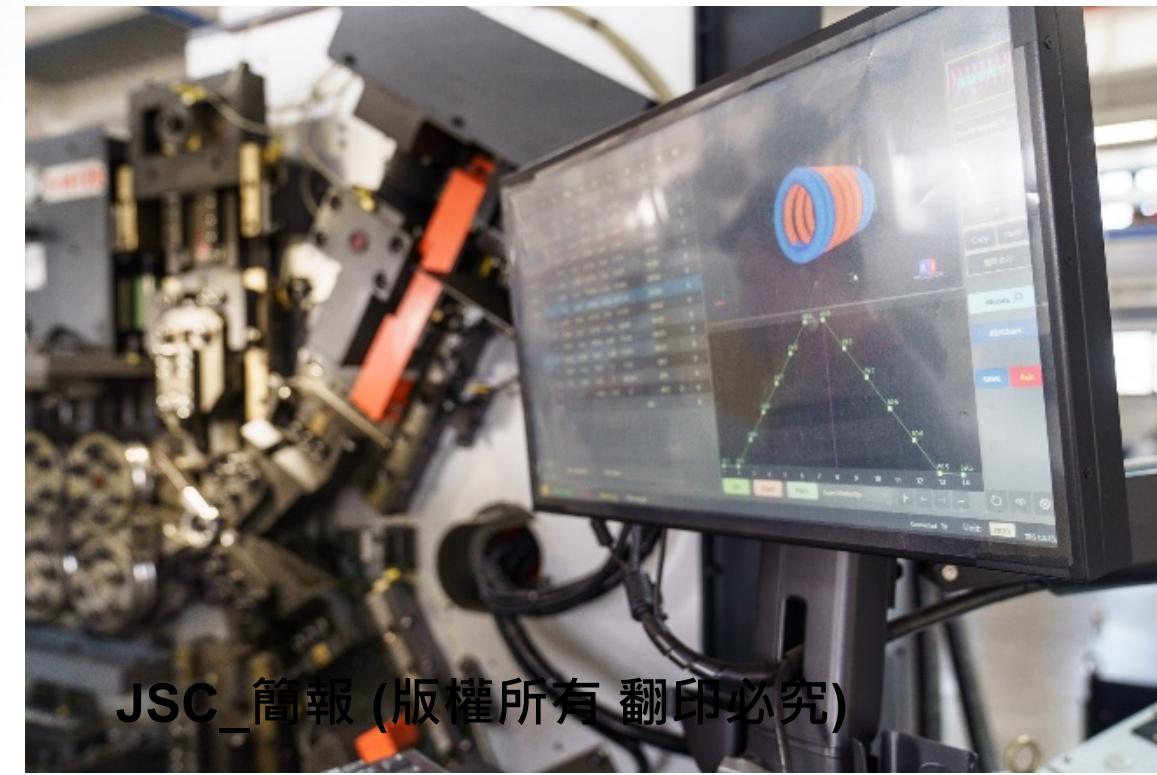
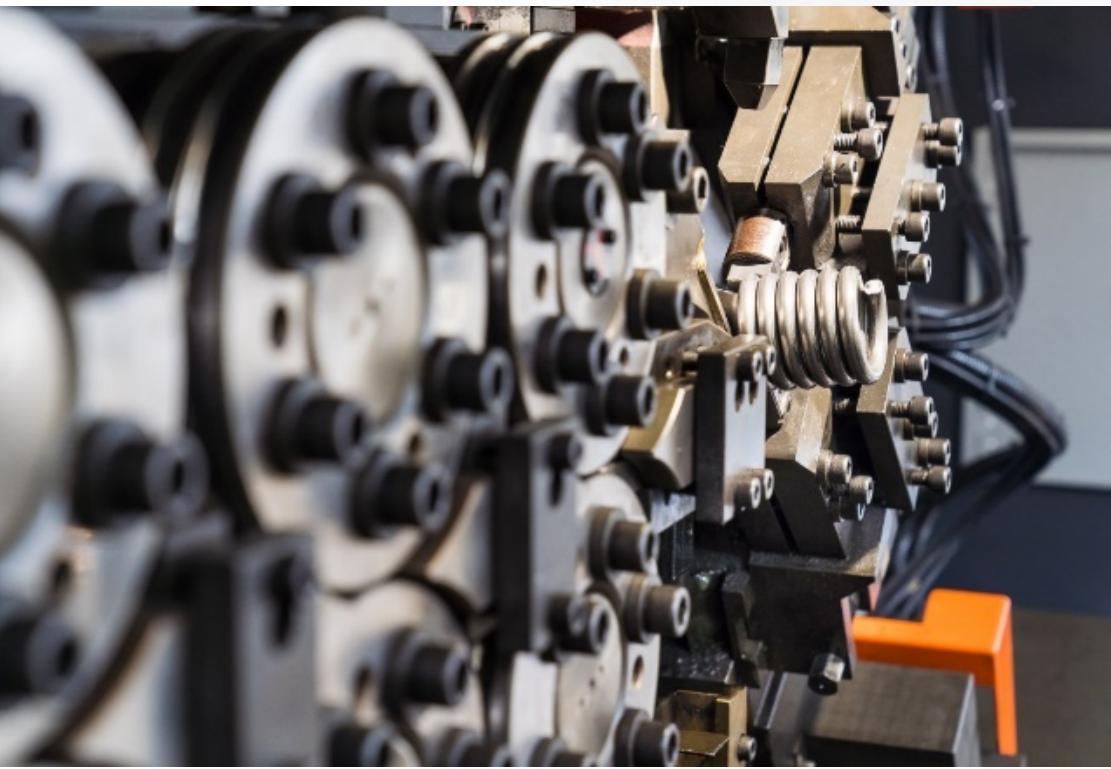
# 生產設備-精密雷射切割



# 生產設備-機械手臂自動焊接



# 生產設備-彈簧自動化生產



# 生產設備-橡膠加硫機



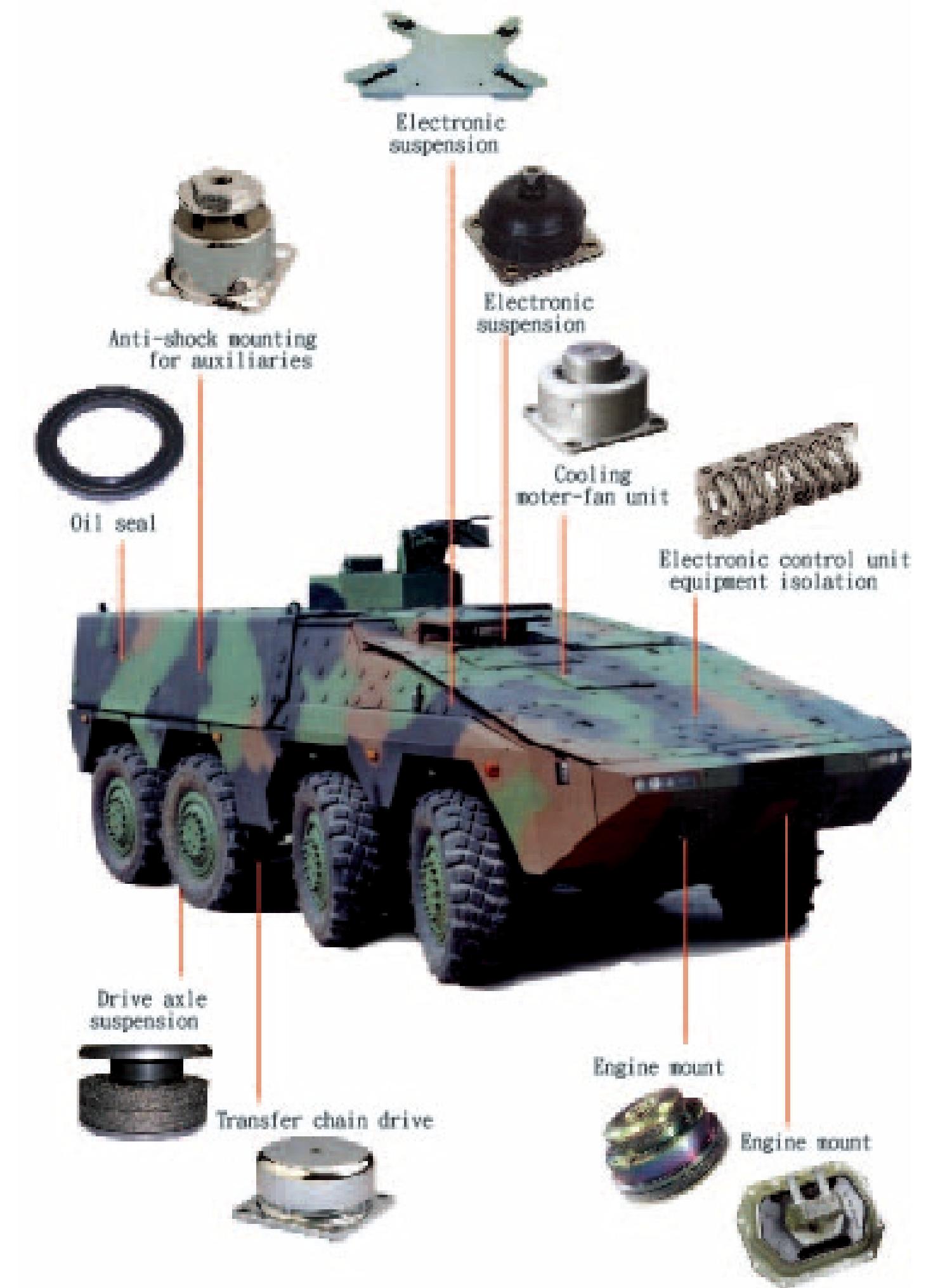
# 生產設備-粉體烤漆設備



# 國防用途：車載、艦載、飛行器、射控系統



# 國防用途：車載射控



# 國防用途：艦載應用



## OUR MISSION : ACOUSTICS AND VIBRATION MANAGEMENT

To meet technical and operational Navy requirements, Hutchinson has developed a specific product range and has increased the fields of their applications covering the most advanced needs in these domains :

- passive isolation generated by on board equipment like turbo-alternators, diesel engines, pumps, torpedoes...
- noise isolation of the hydrofoils
- acoustic protection of sea water pipework and components against the effects of severe vibration generated under normal operating conditions, or resulting from exceptional external phenomena
- shock protection by a range of elastomeric mounts specially designed to meet the most severe requirements
- active isolation of the most sensitive equipment
- nuclear or conventional submarines
- surface war ships such as frigates, patrol ships, anti-submarine vessels and minesweepers...
- Active noise & vibration control to manage the underwater radiated noises and to improve onboard comfort.

Holding main Naval approvals, Hutchinson is also ISO 9001 certified.

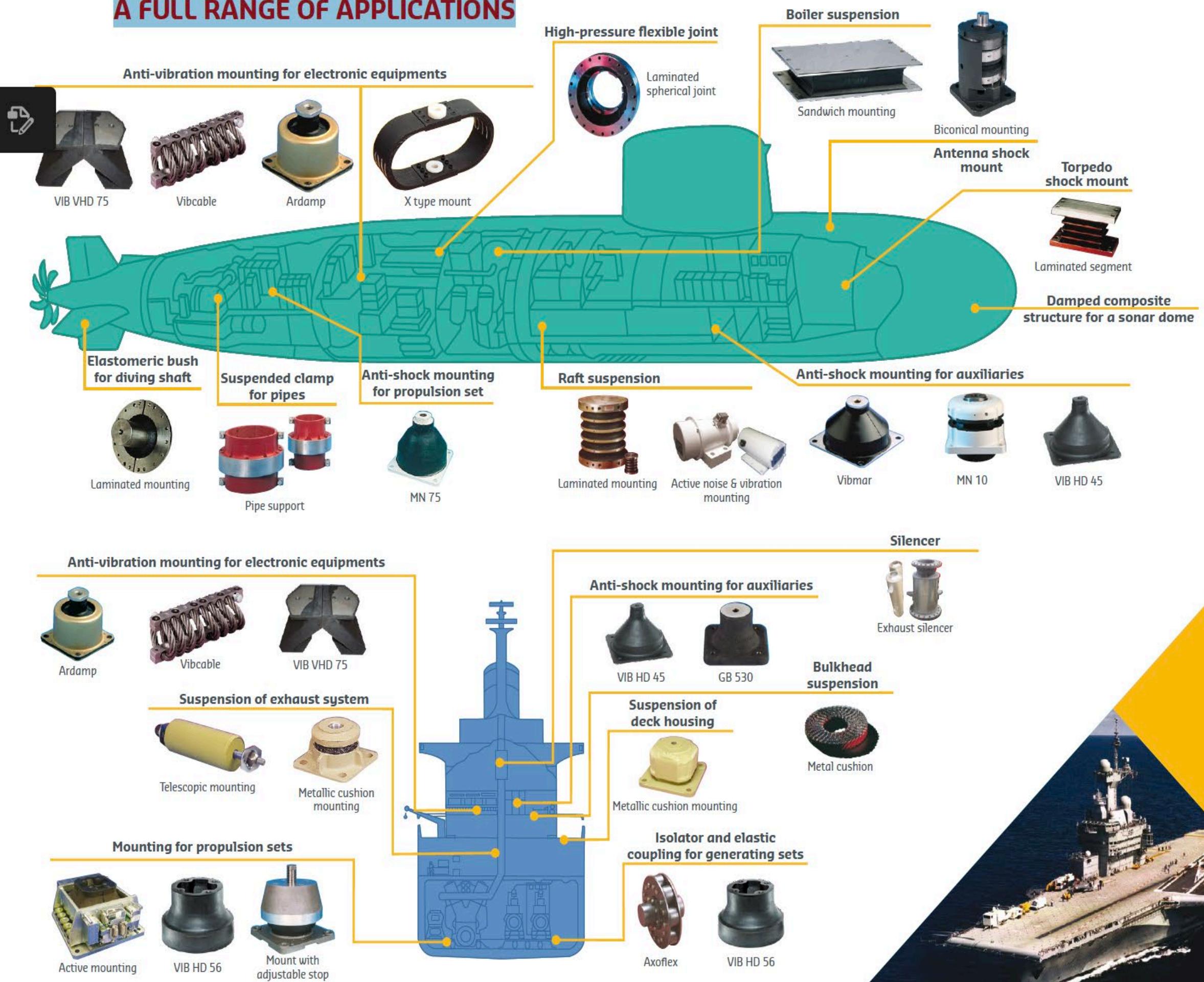


## A 80 YEARS EXPERIENCE IN THE MARINE AND NAVY INDUSTRY

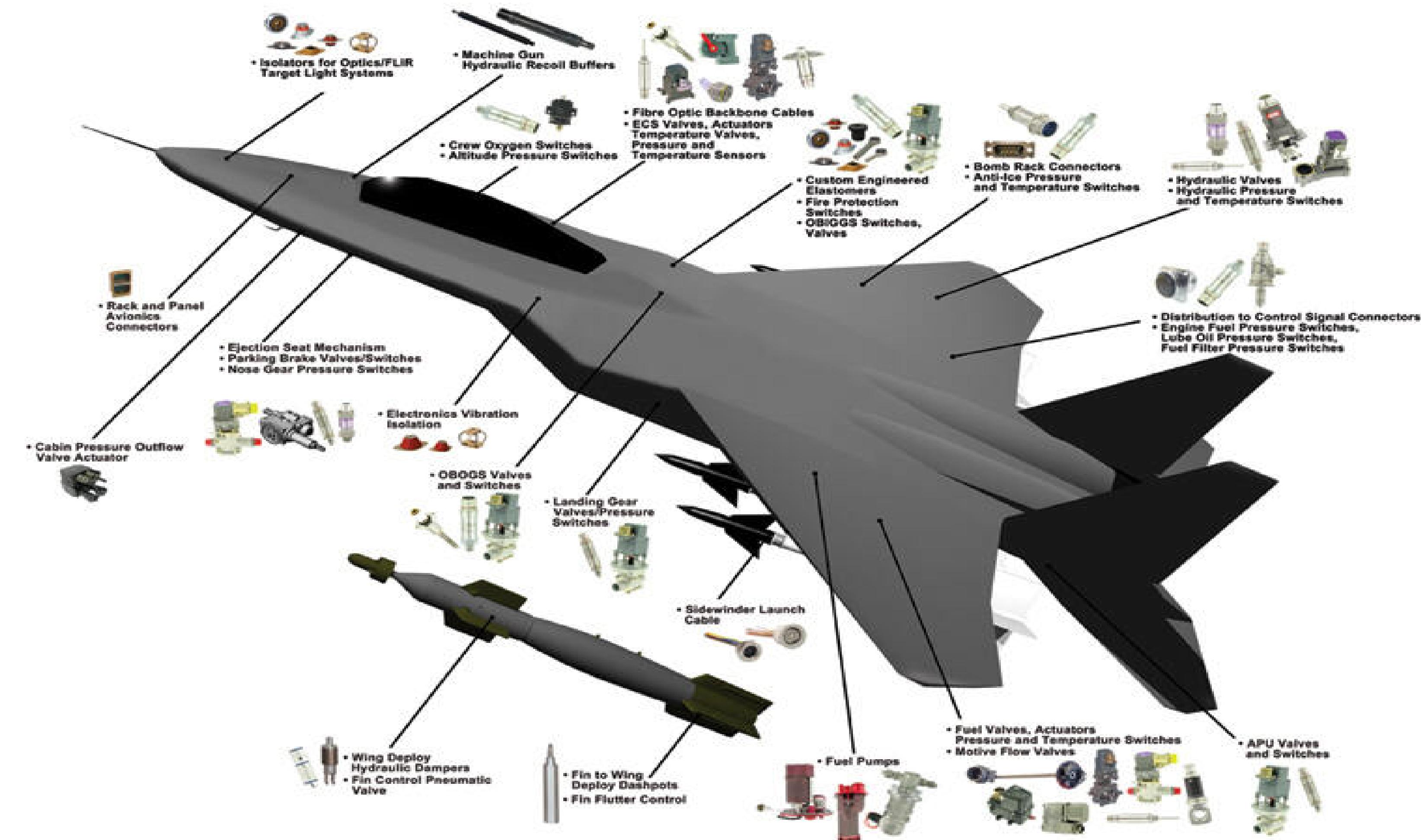
Created in 1934 to develop engine suspensions, Paulstra is a world leader of technical rubber products.

In 1974, Paulstra became a member of the Hutchinson Group integrated by the TOTAL group the same year. Through Research and Development, Paulstra demonstrates its expertise in solving noise and vibration control problems for the most severe environmental conditions.

## A FULL RANGE OF APPLICATIONS



# 國防用途：飛行器應用



# 國防用途：鋼索避震器 JSC-Cable Mounts



# 國防用途：射控箱應用

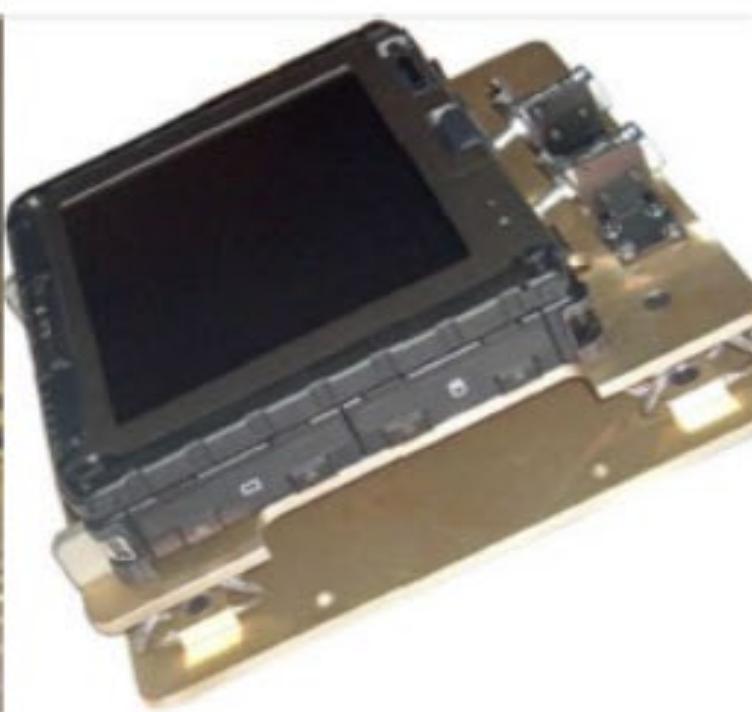
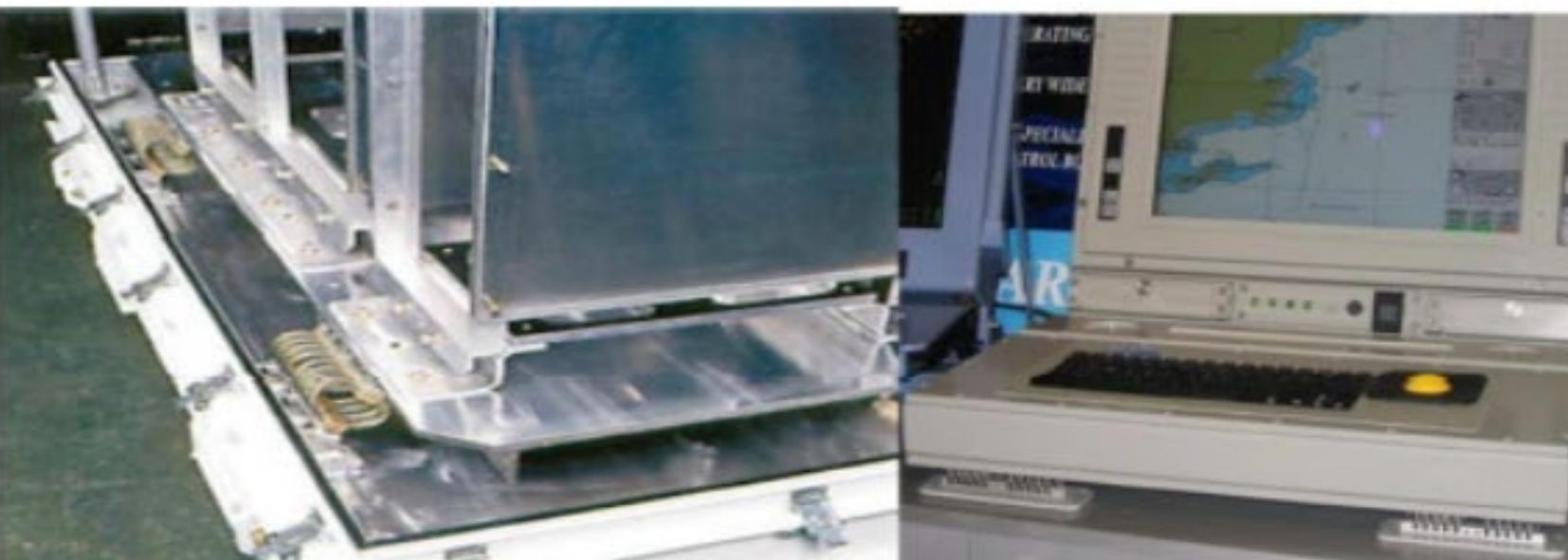
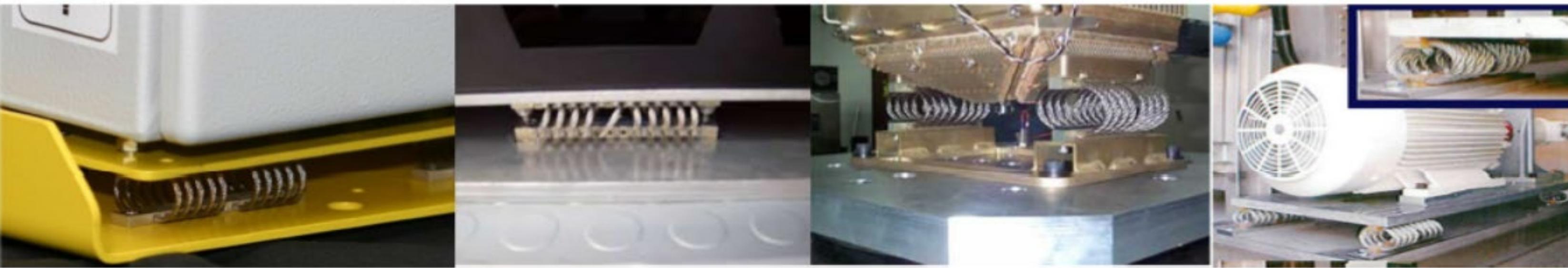
- ✓ 車載電腦或射控系統，在運動或發射時，受到環境振動或衝擊力，都可能導致機能失靈。
- ✓ 艦載指管系統設備、火箭控制箱、飛彈運送裝置等。



# 國防用途：突擊艇 JSC-Cable Mounts



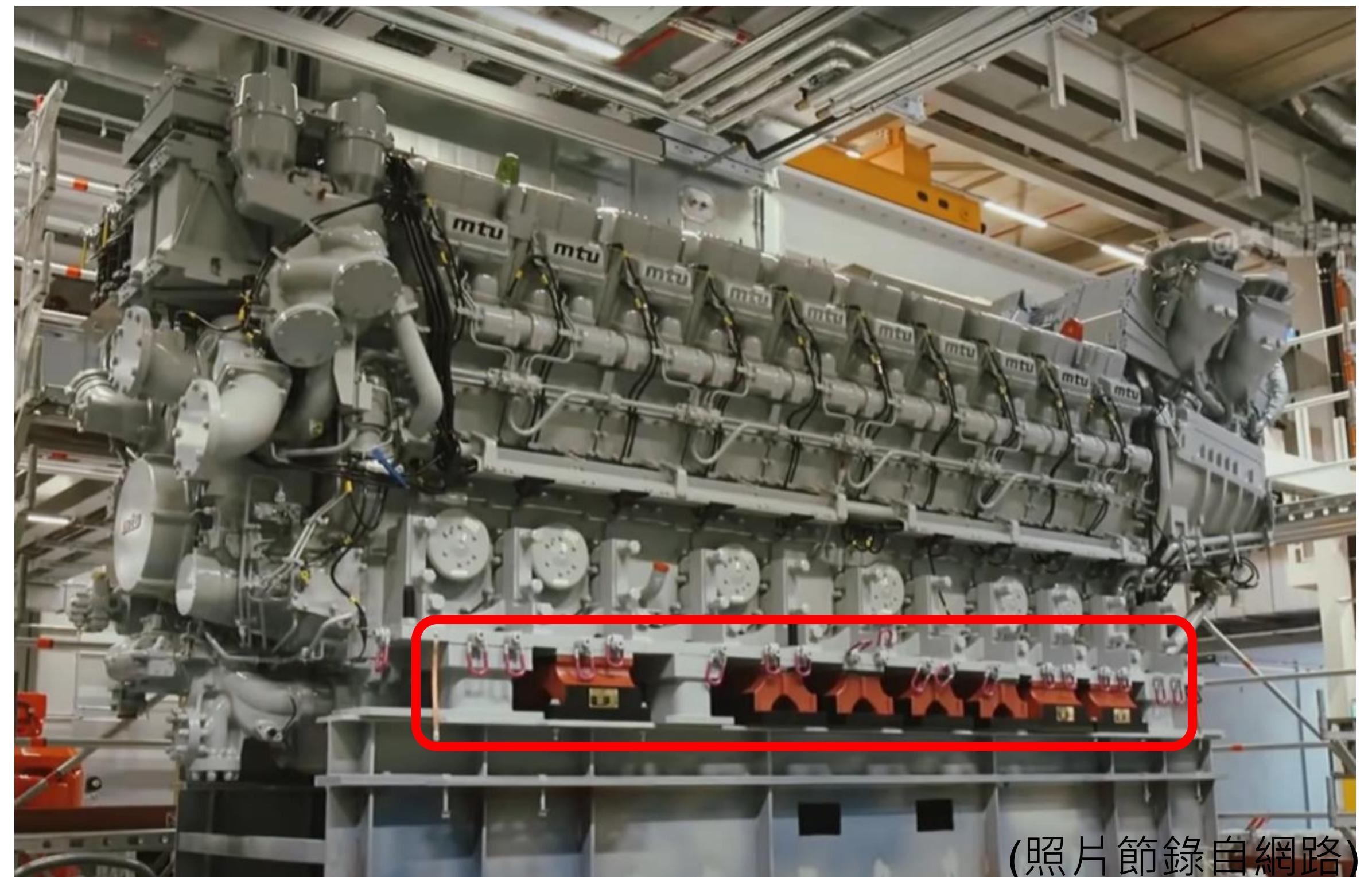
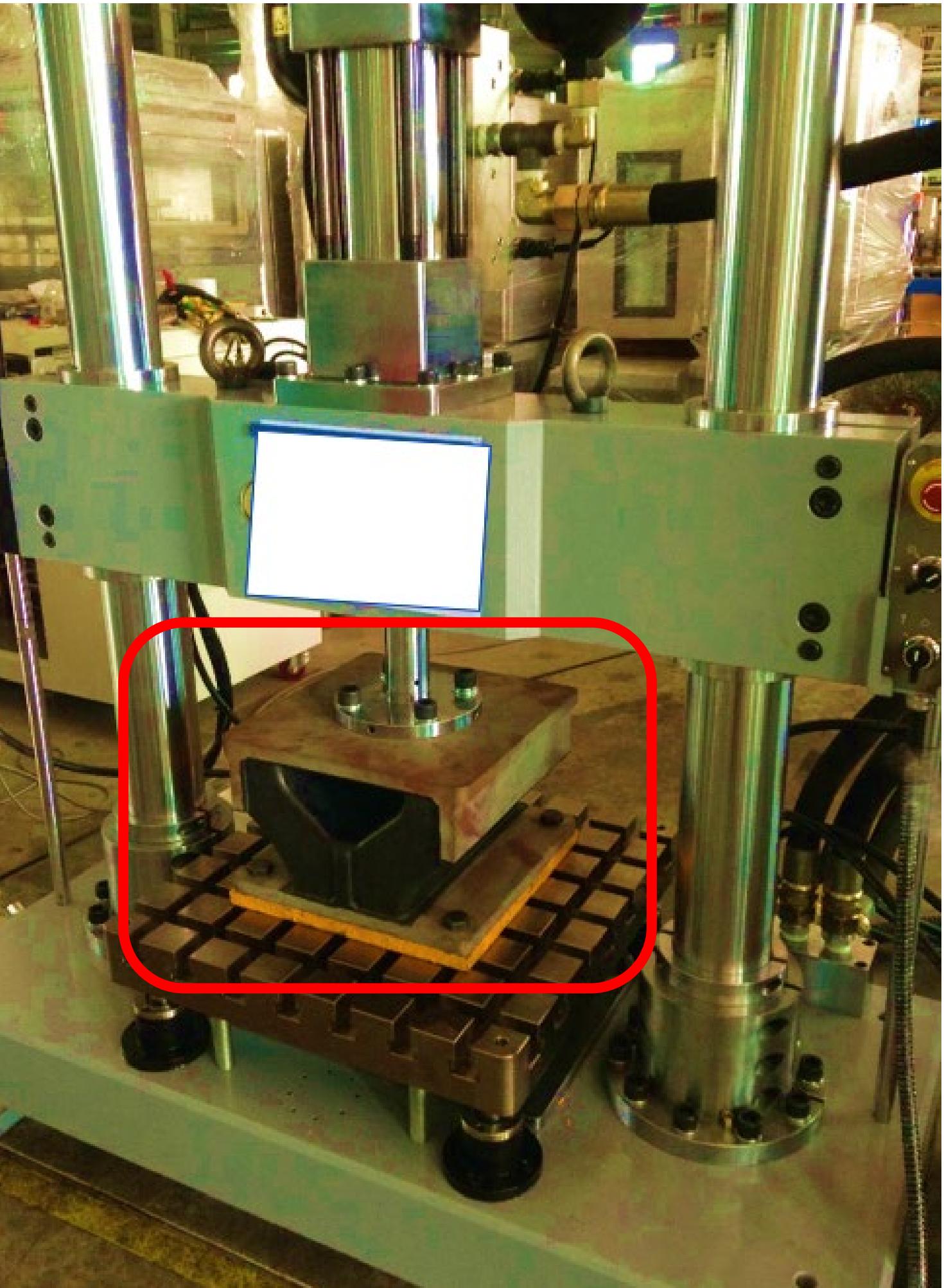
# 國防用途：鋼索避震器 JSC-Cable Mounts



# 國防用途：鋼索避震器 JSC-Cable Mounts



# 國防用途：艦載設備

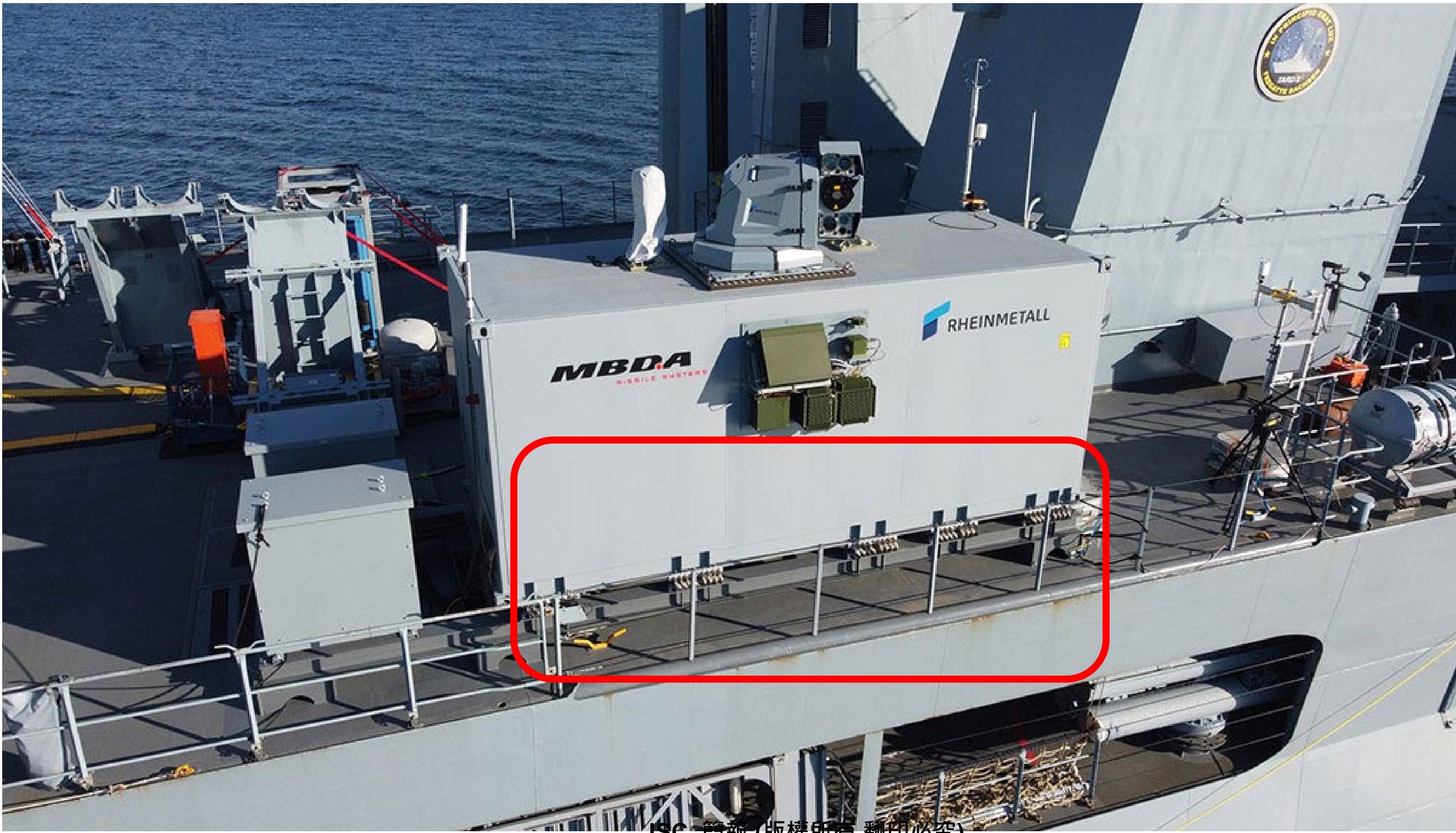


(照片節錄自網路)

# 國防用途：艦載設備



# 國防用途：艦載設備



# 國防用途：鋼索避震器 JCM



# 國防用途：飛彈發射器及射控

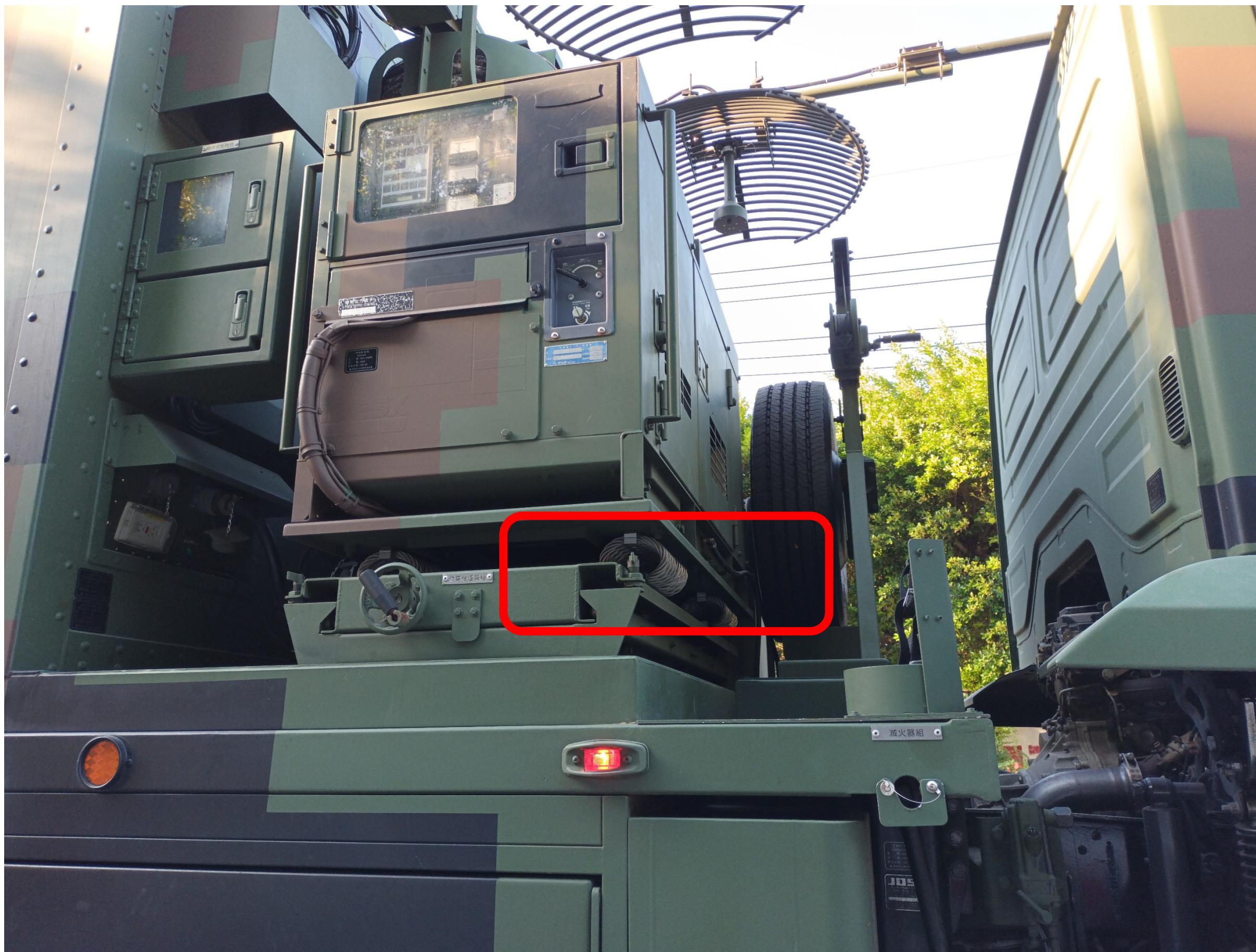


(照片節錄自網路)



(照片節錄自網路)

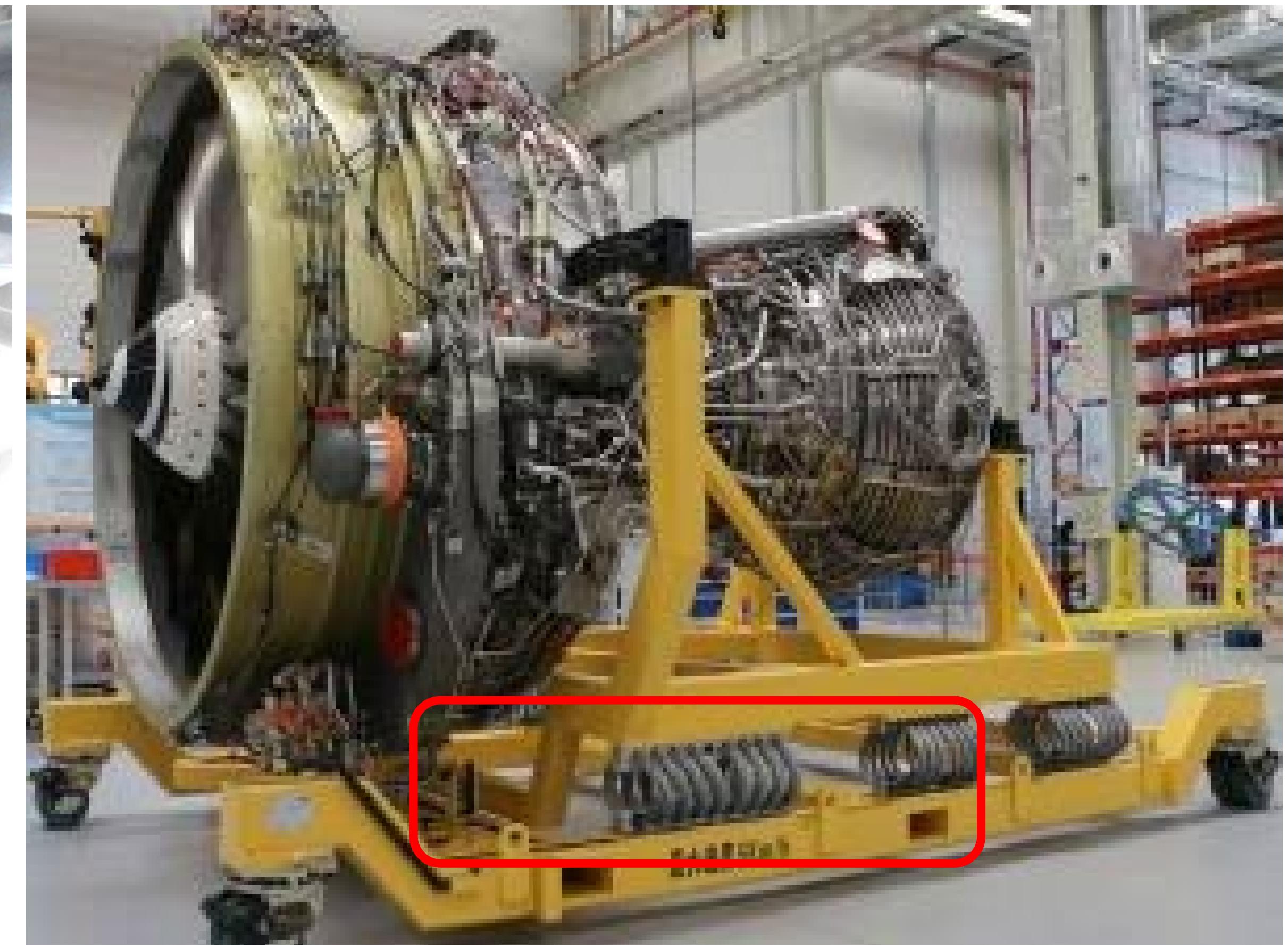
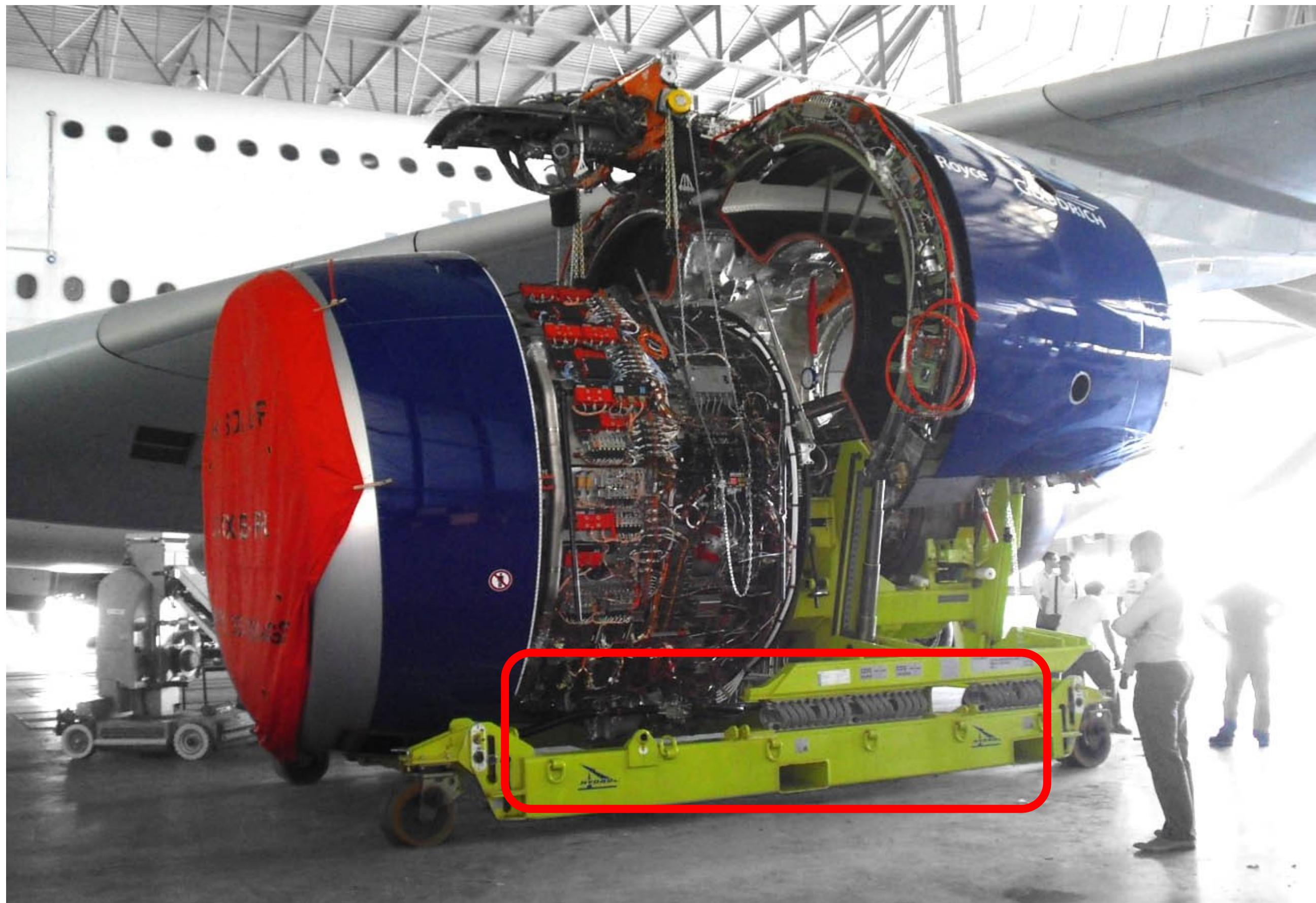
# 國防用途：車載設備



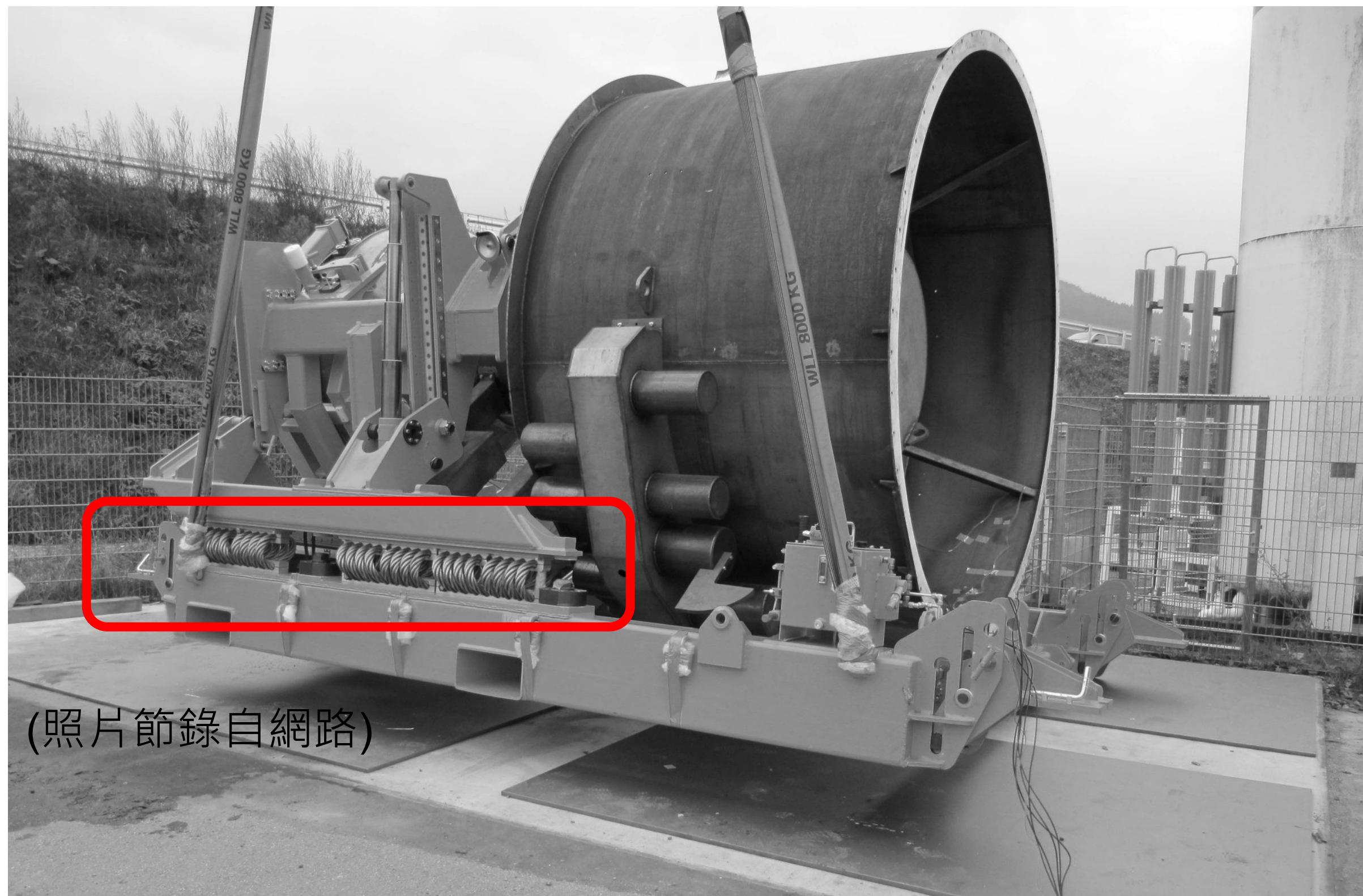
# 國防用途：突擊艇 熱像儀隔振



# 搬運設備應用



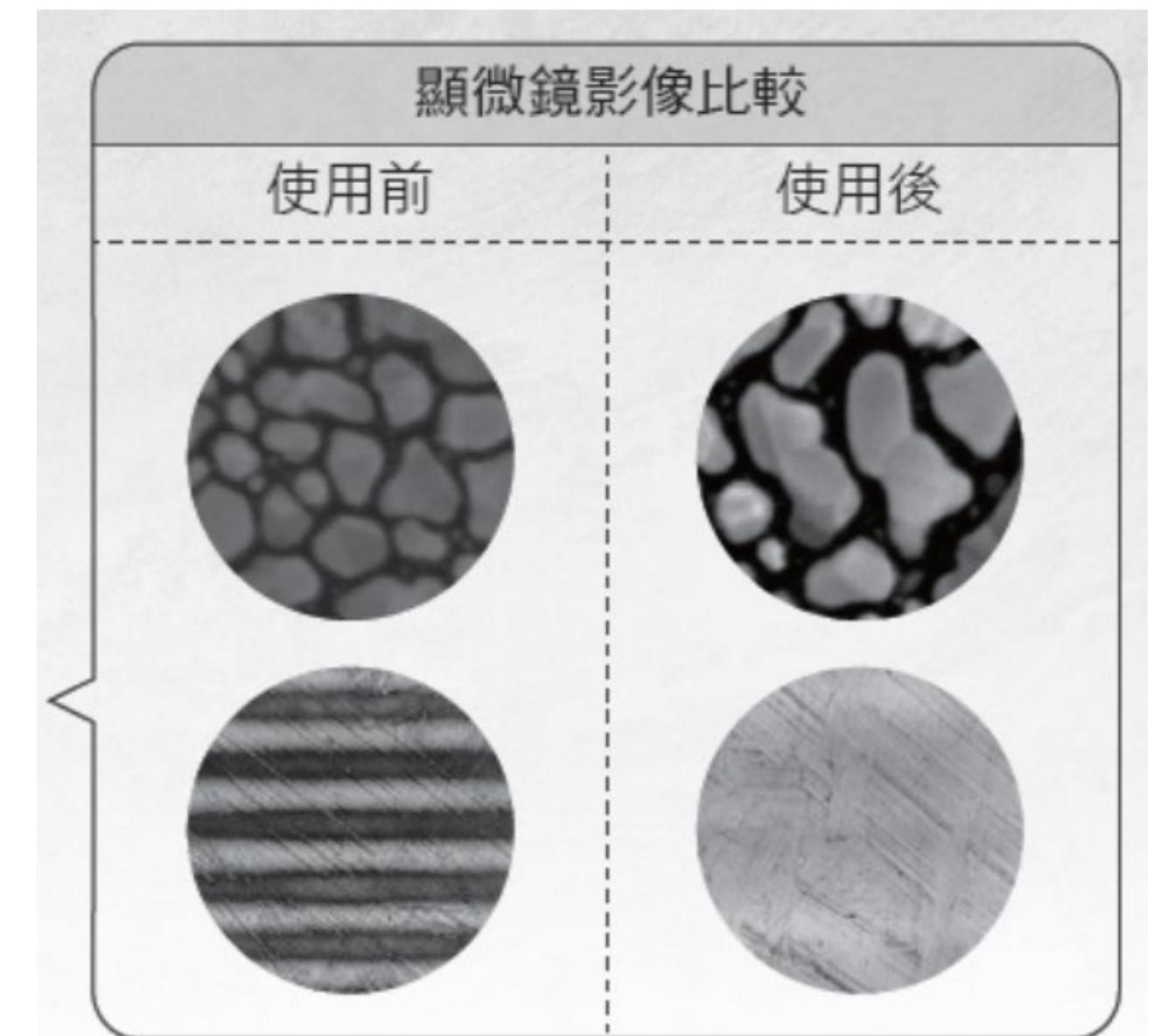
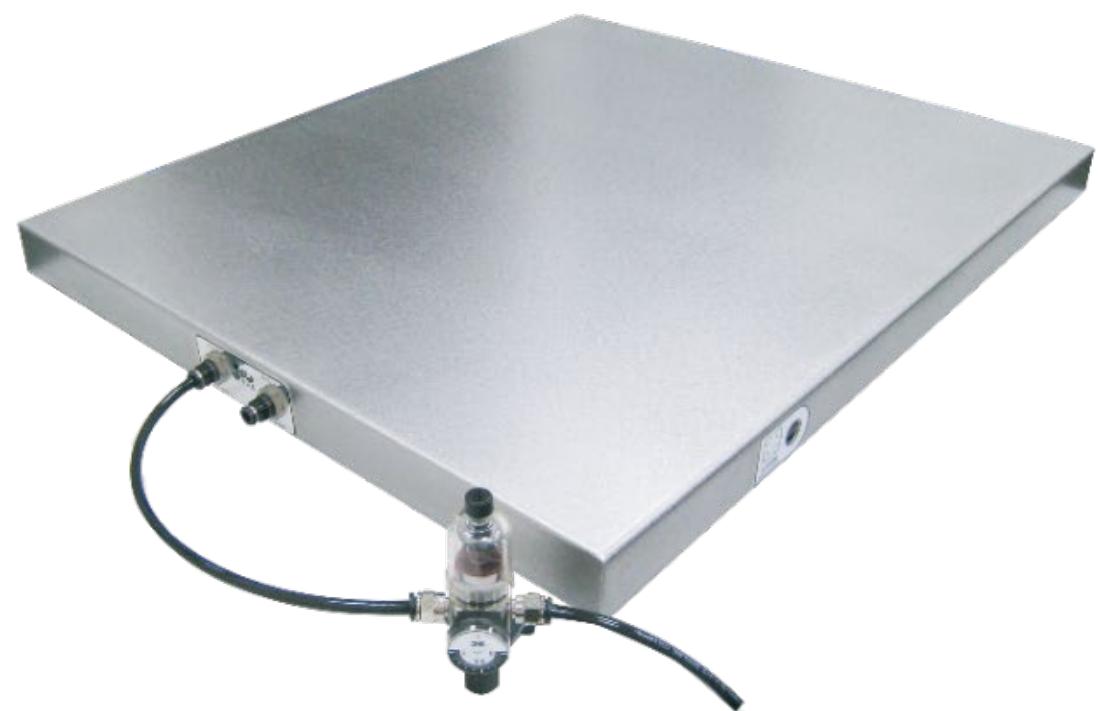
# 搬運設備應用



(照片節錄自網路)

# 精密設備隔振

**JSC**是國內唯一專業  
生產精密隔震設備的廠商  
提供振動諮詢及解決方案



# 精密制振產品

薄膜式避震器



除震桌 / 除震台

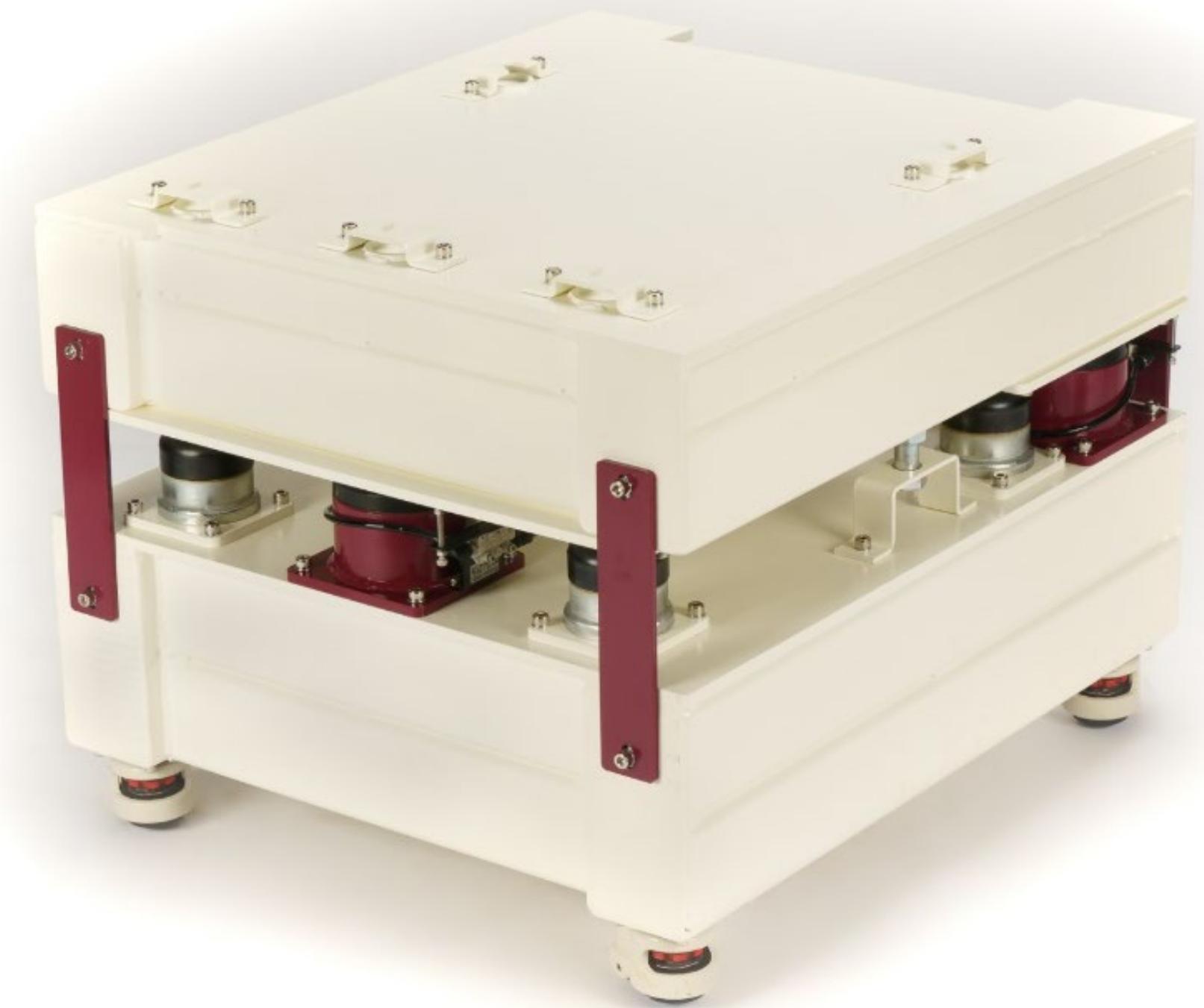


版權所有，未經授權請勿複製轉貼

# 精密隔振：適用各類精密檢測設備



# 精密隔振：三次元機台應用



# 產業設備—生產機械隔振



SK型氣墊 + 沖床



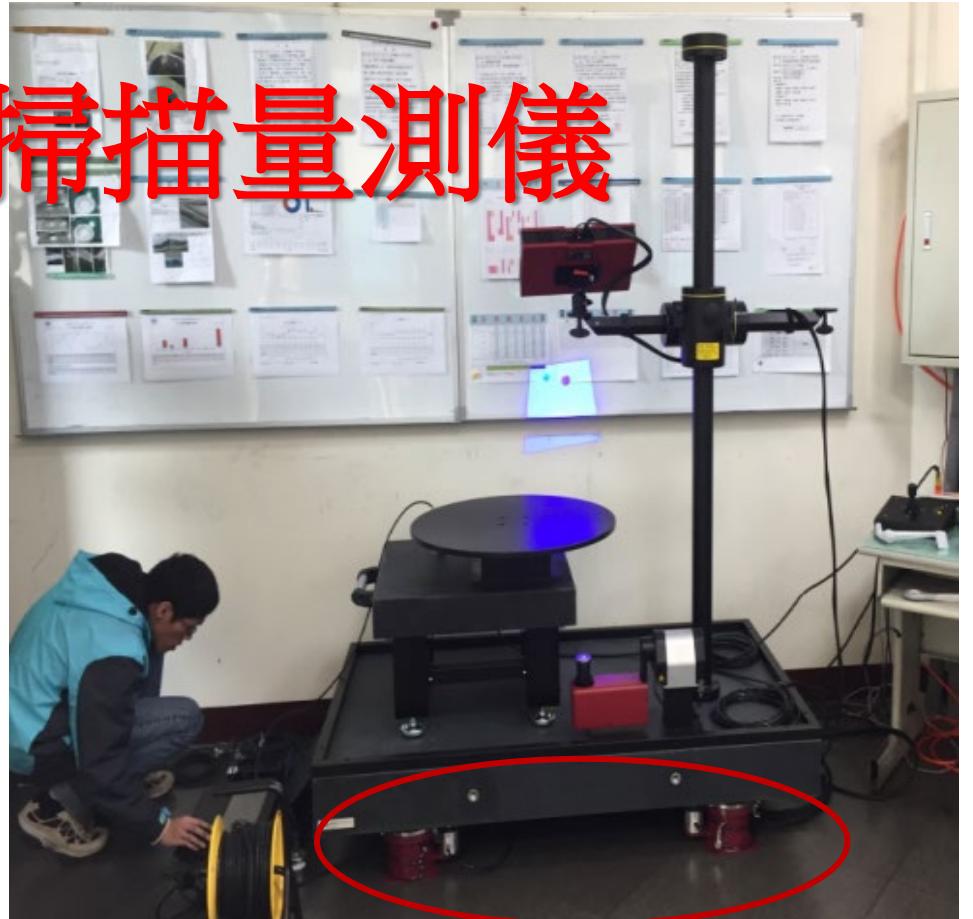
SA型氣墊 + 皮料膜切機



SB型氣墊 + 立式注塑機

# 精密制振：檢測設備應用

SE型 + 3D掃描量測儀



JT除振台 + 三次元測量儀



MR + 影像量測儀



JT除振台 + 高精度表面粗度儀



