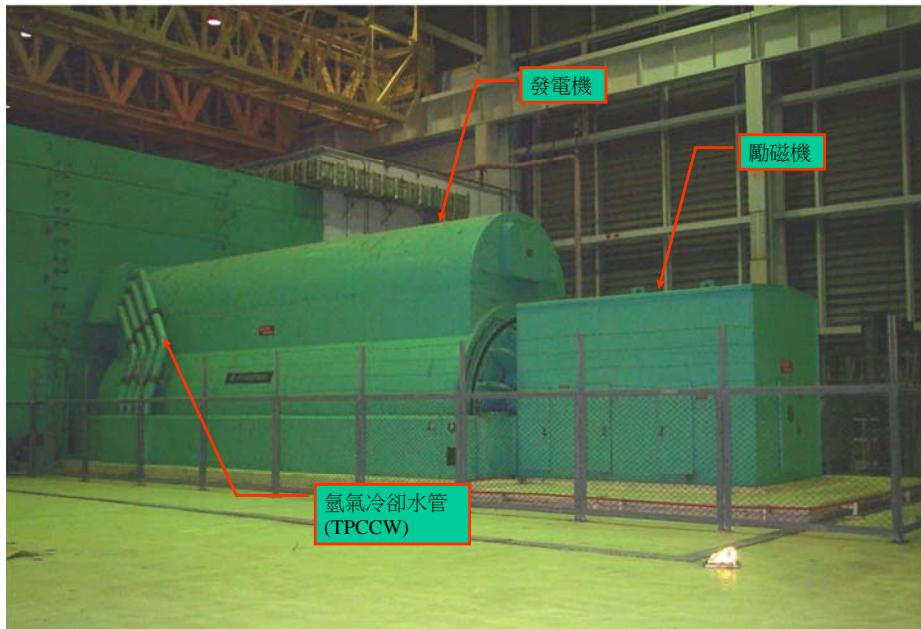


核二廠 電廠設備實像辨識

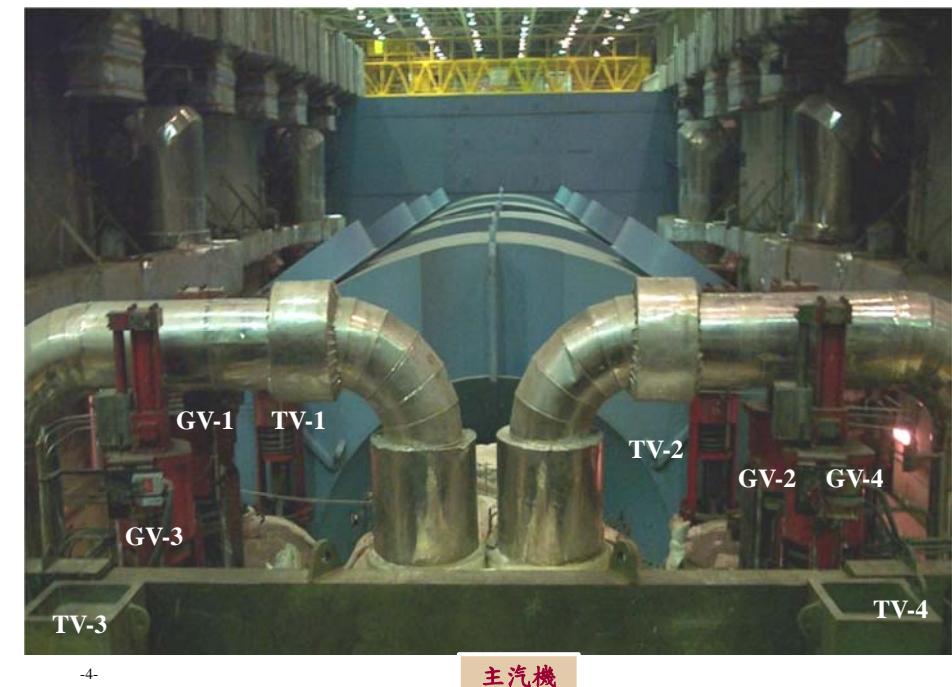
模擬操作中心
104年7月

1

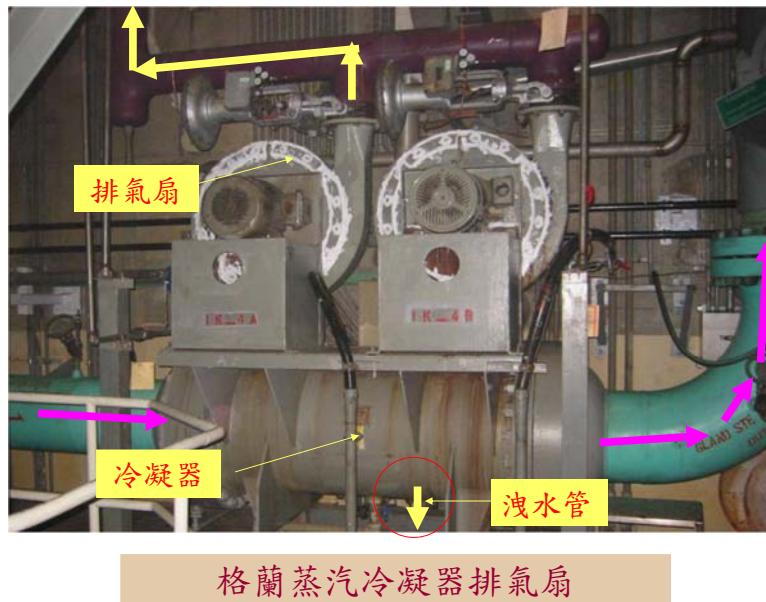


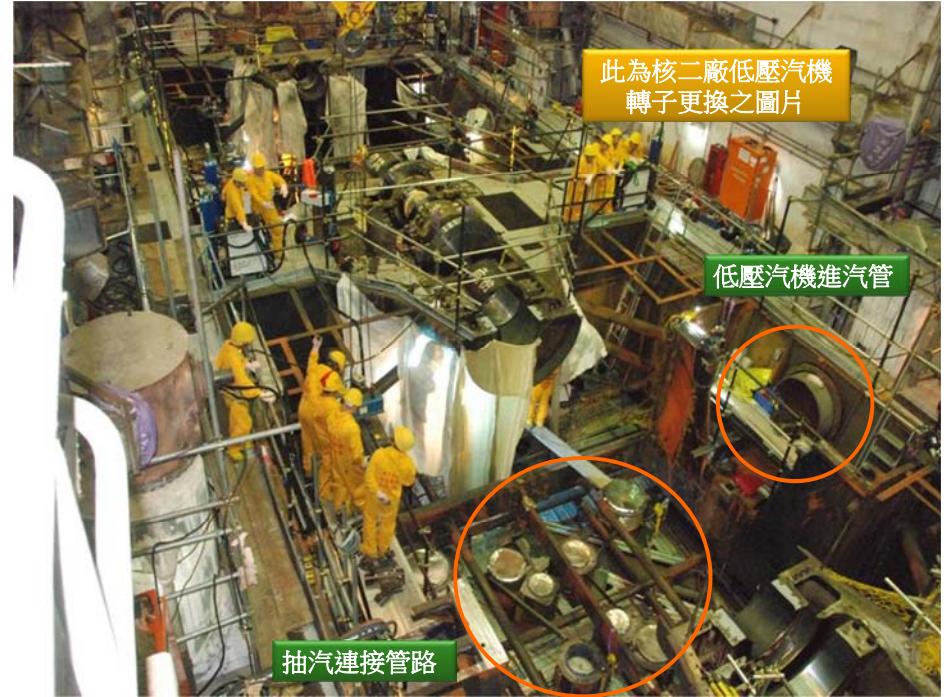
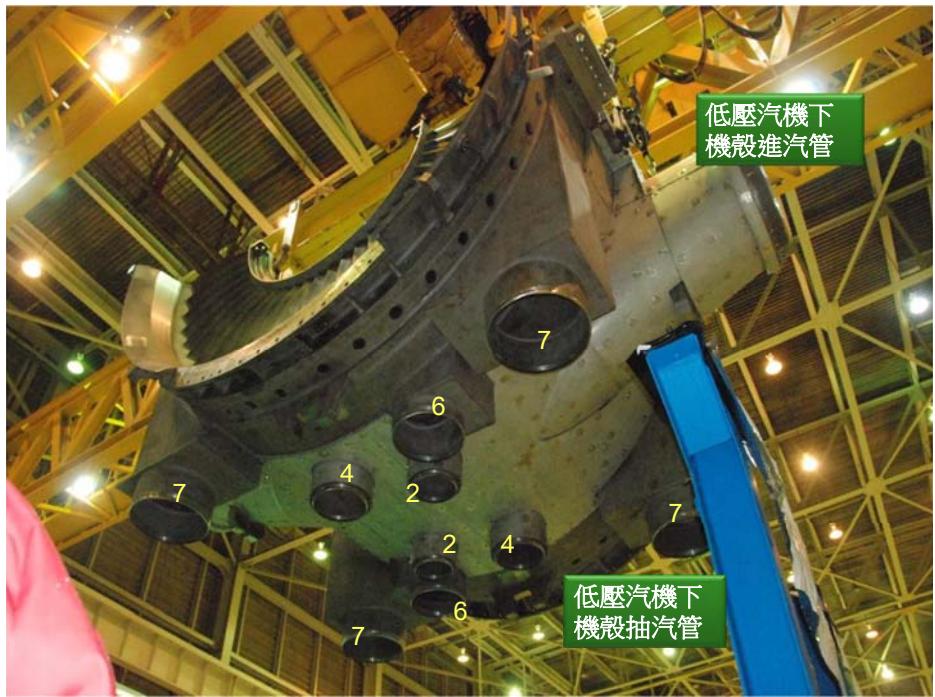
汽機廠房 設備實像

2



-4-



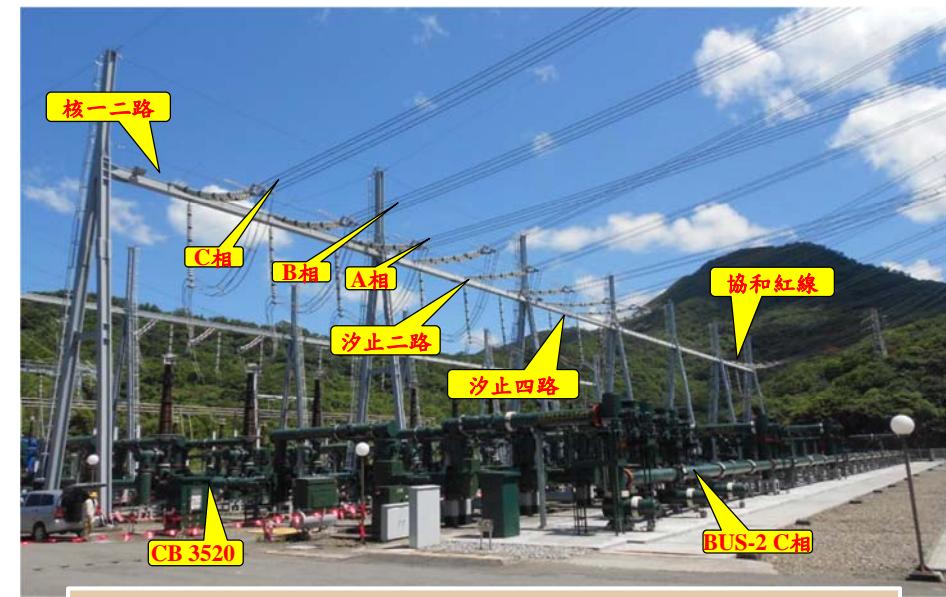
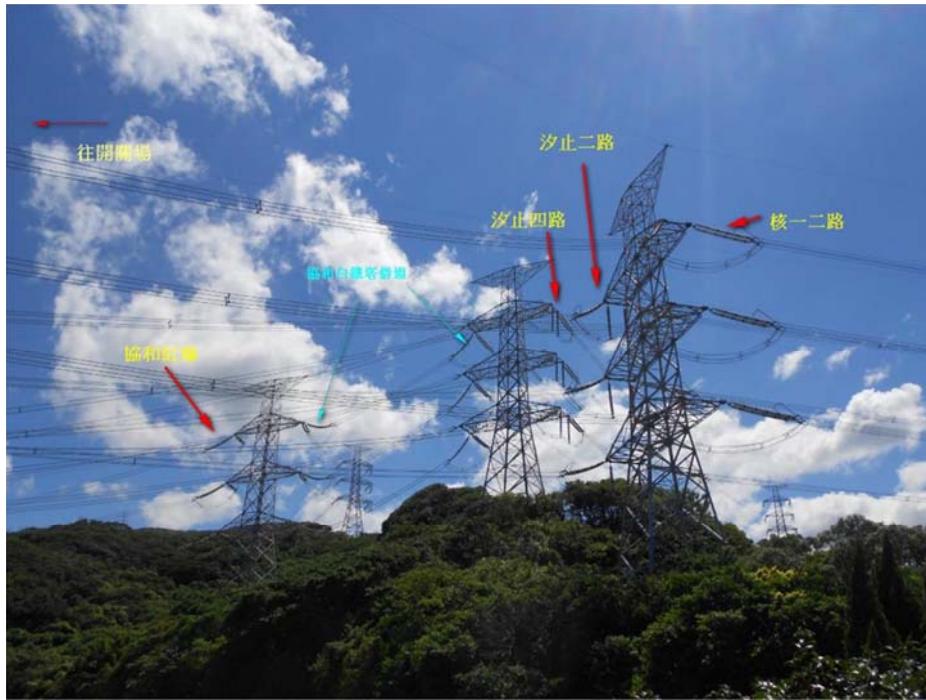




電力系統 設備實像

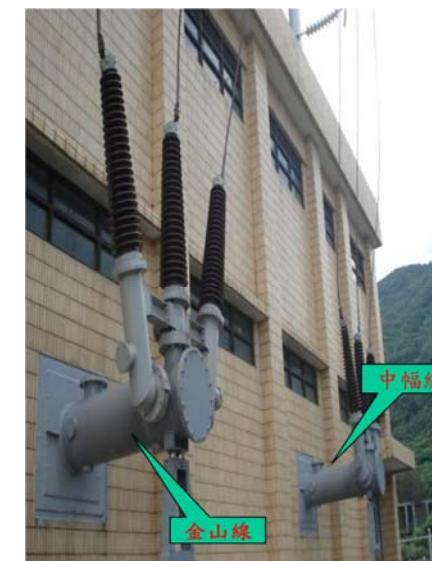


SWYD開關場外線圖



345KV SWYD開關場外線圖

-P18-



69KV 開關場照片GIS

-P20-

啟動變壓器及現場隔離開關箱與匯流排



機組輔助變壓器



-P22-



開關廠控制室



開關廠內數位式
氣渦輪機控制盤



移動式4.16 KV柴油發電機



氣渦輪機
廠房



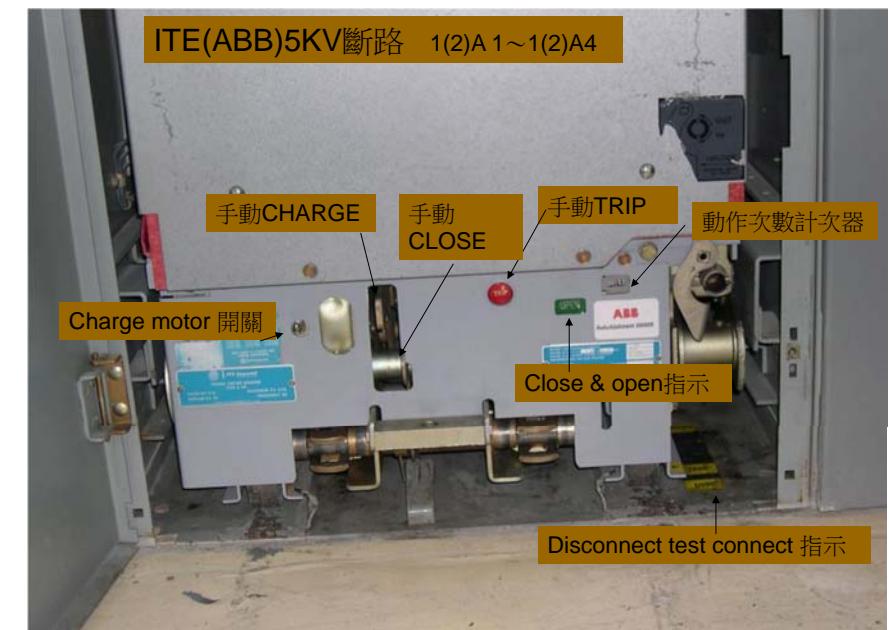
二號氣渦輪機



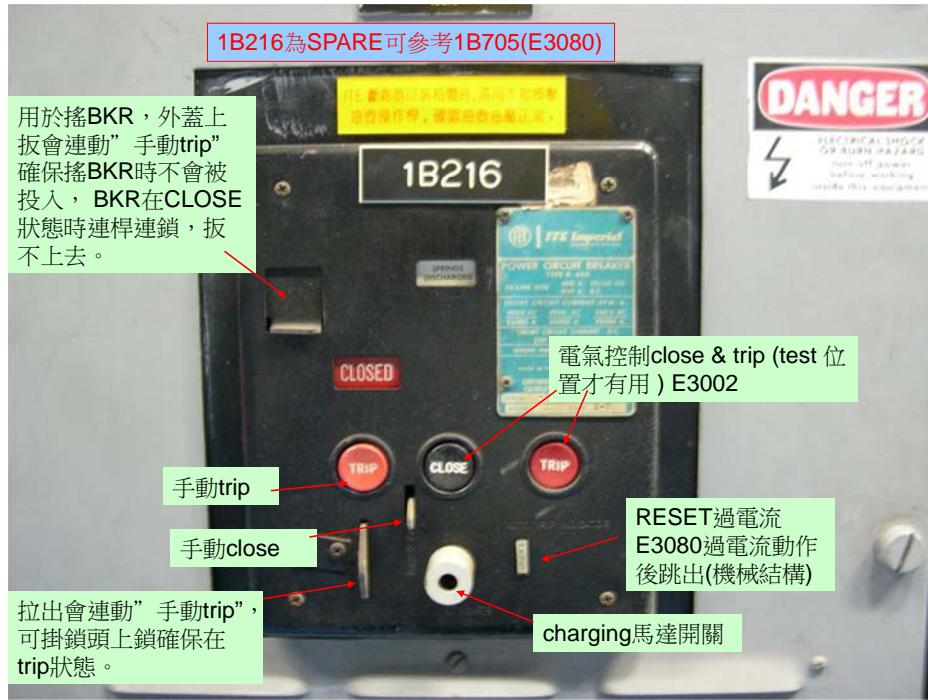
數位式氣渦輪機控制盤

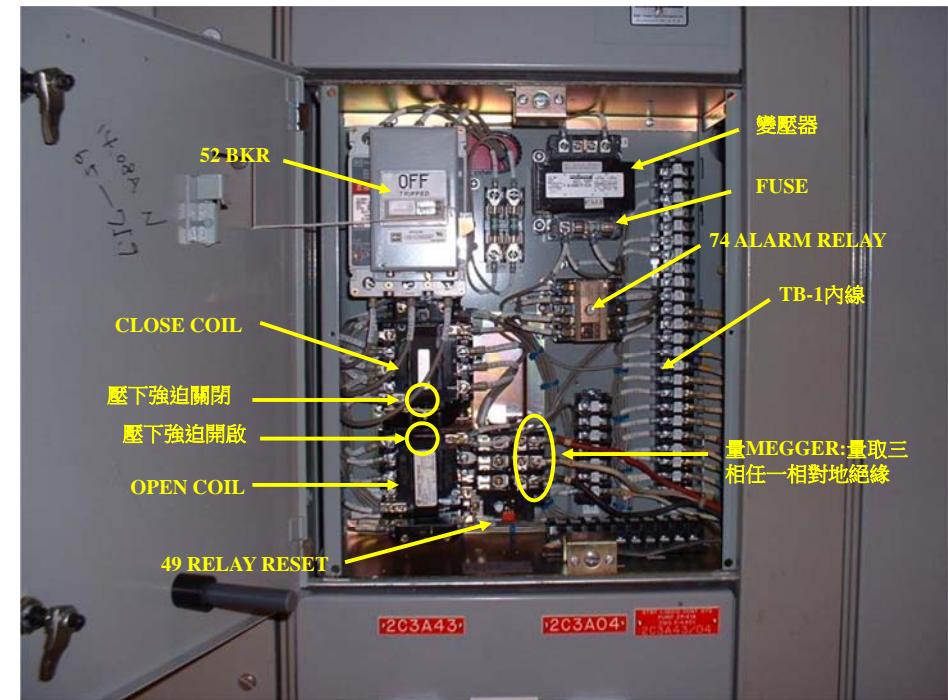


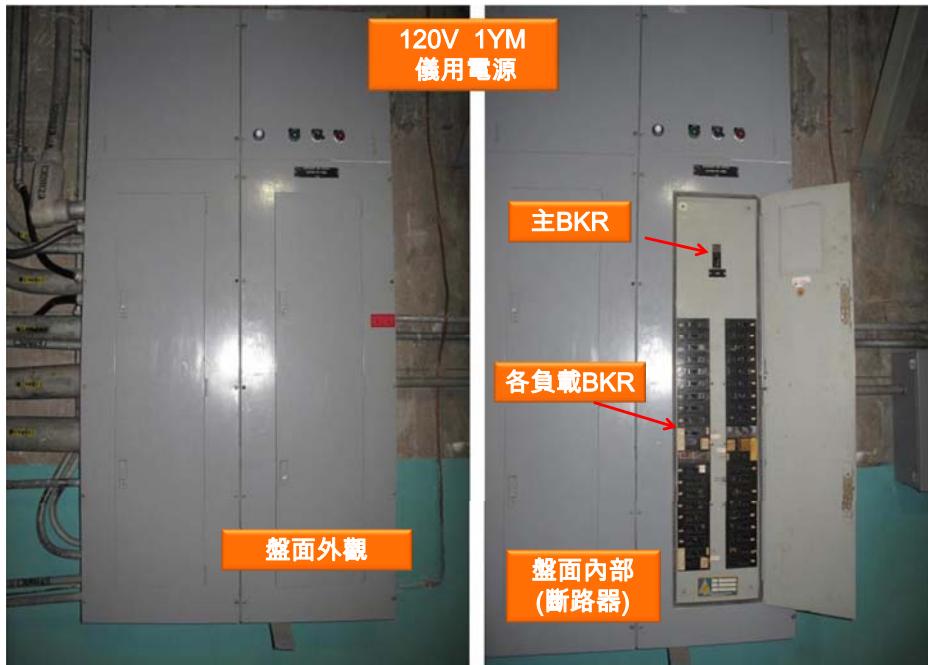
汽機廠房
開關室











核二廠閥的種類

閥類設備實像/圖像

➤ 較常用管閥概略區分：

- (1) 閘閥(Gate Valve)
- (2) 球形閥(Globe Valve)/球閥(Ball Valve)
- (3) 止回閥(Check Valve)
- (4) 蝶閥(Butterfly Valves)
- (5) 釋壓與安全閥(Relief and Safety Valve)

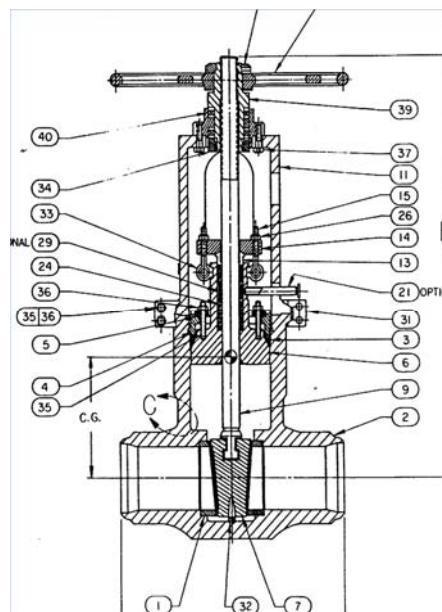
➤ 依動力可概分為

- (1) AOV (2) MOV (3) 液壓閥 (4) 手動閥

49

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閘閥



51



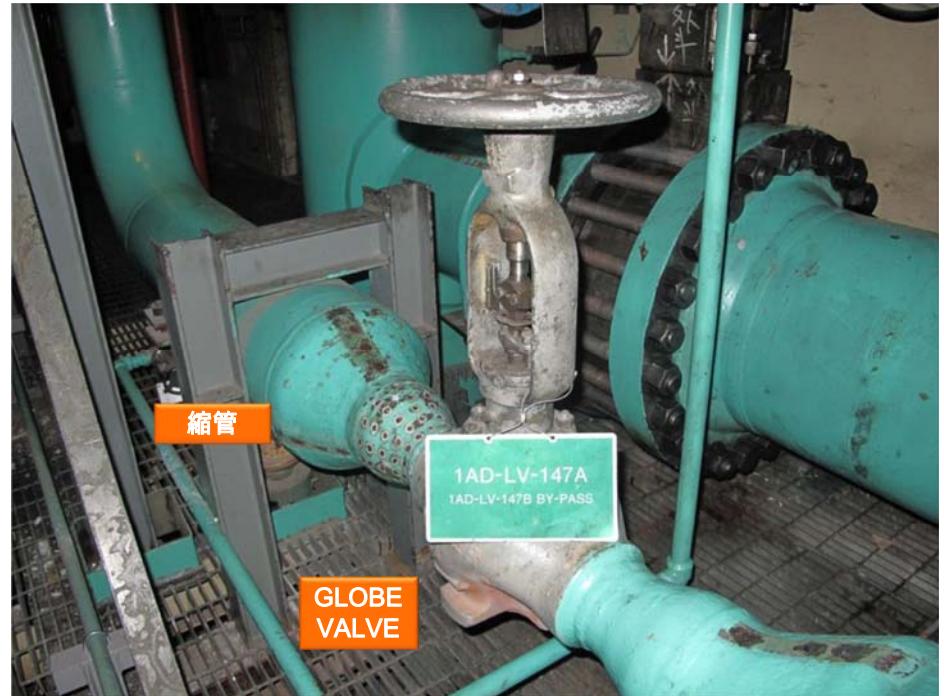
電動閘閥

手動閘閥



球形閥(Globe Valve)

- 因外型而得名。
- 考量擾流減至最少，同時能得到可靠的流量控制，適於作節流控制。



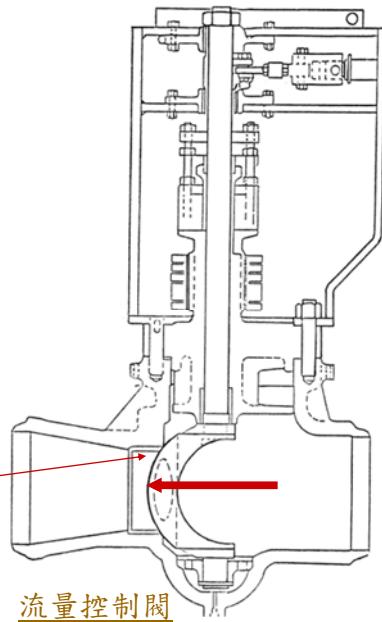
球閥(Ball Valve)

- 90° 開關的閥門。
- 閥盤為一只高度拋光的球體，球體中心線以圓孔或其他形狀孔穿過。
- 構造簡單且最易維修的一種。
- 球閥之閥塞使用高度拋光的球體閥塞，轉動球體即可達到關斷的目的。
- 僅以 90° 操作即可由全開到全關，流損甚低。



功能：

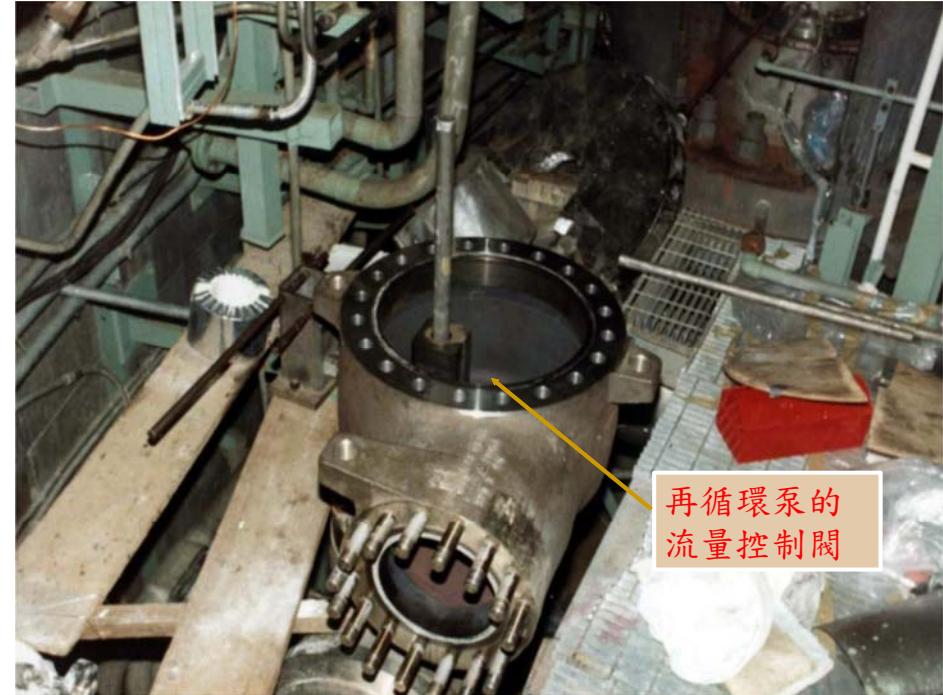
用以控制爐心流量，可手動或自動控制。



控制閥為球閥，具電動液壓引動器以調節開度

流量控制閥

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止回閥(Check Valve)

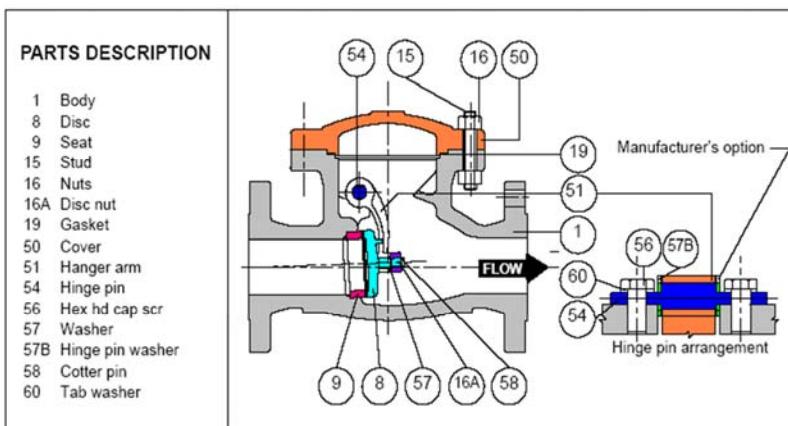


Figure 8.1B Swing check valve API 603 stainless bolted cover 14–24" integral seats.

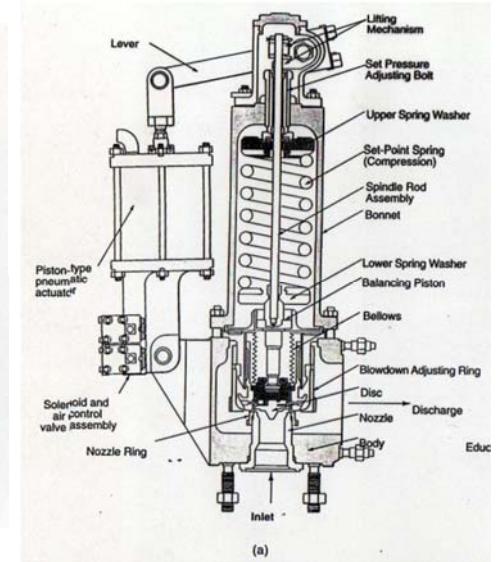
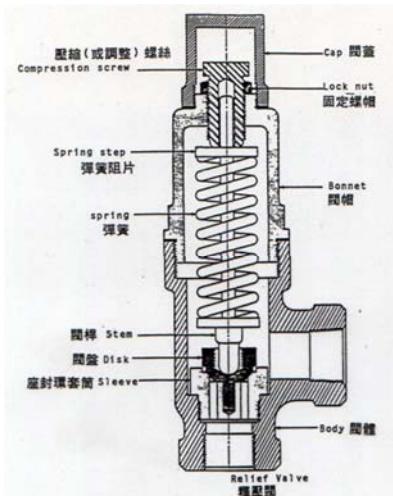




海水泵室循環水泵
出口管路78吋蝶形閥



安全釋放閥/釋壓閥

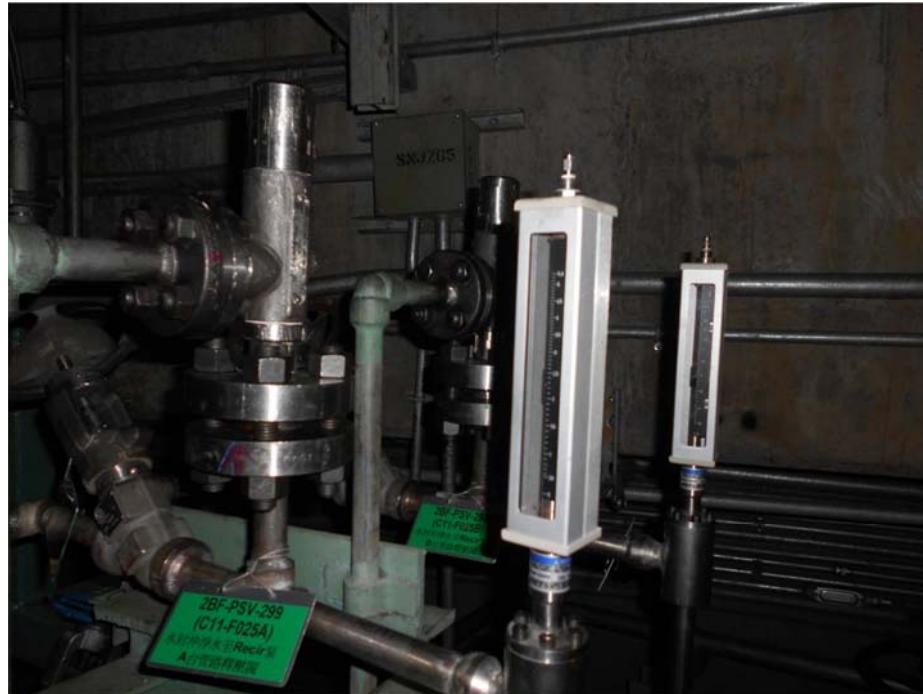


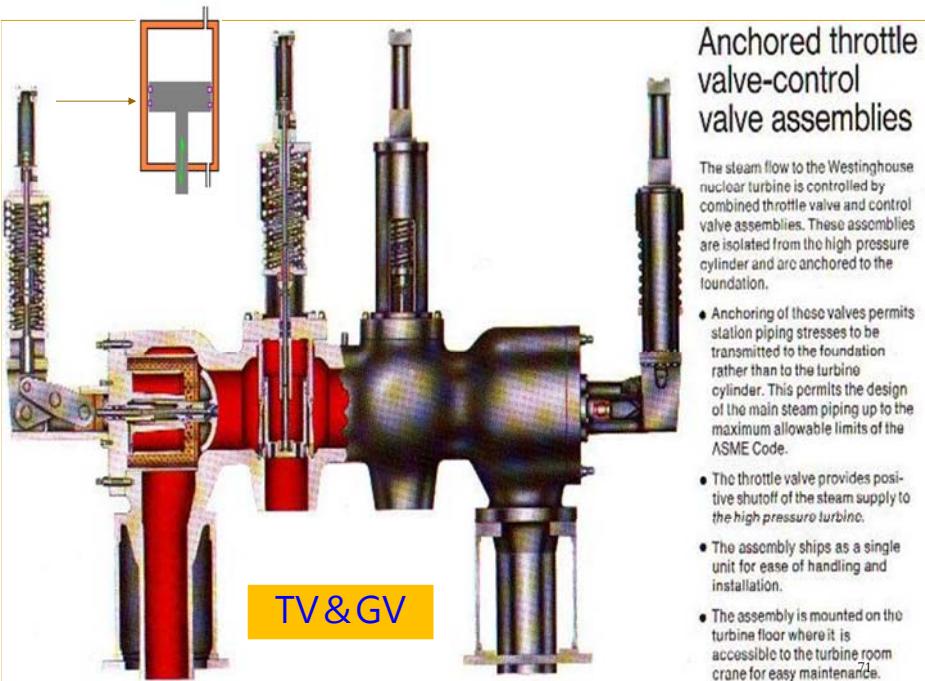
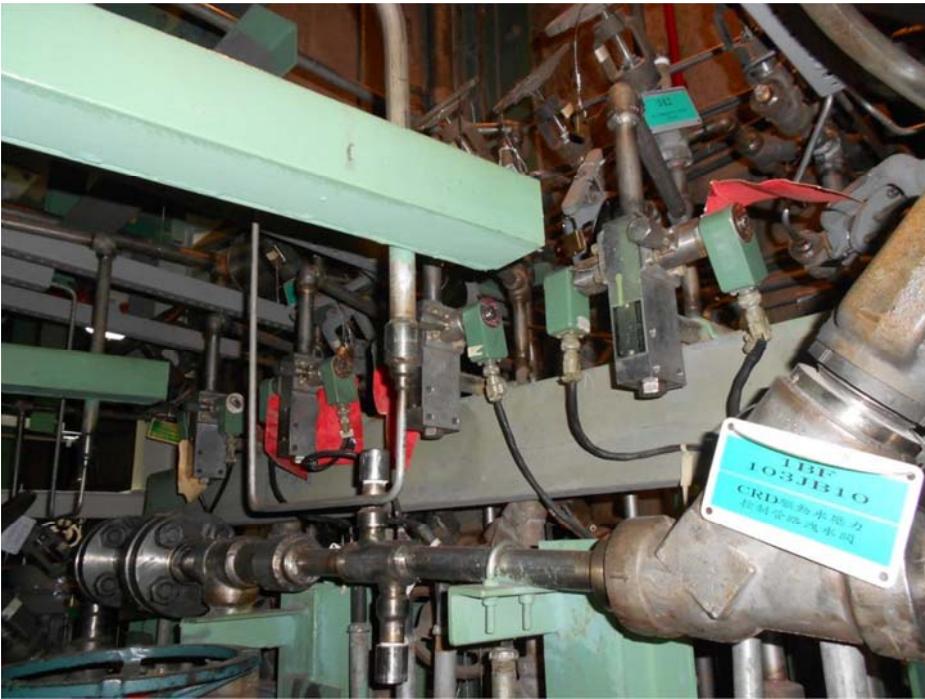


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Anchored throttle valve-control valve assemblies

The steam flow to the Westinghouse nuclear turbine is controlled by combined throttle valve and control valve assemblies. These assemblies are isolated from the high pressure cylinder and are anchored to the foundation.

- Anchoring of those valves permits station piping stresses to be transmitted to the foundation rather than to the turbine cylinder. This permits the design of the main steam piping up to the maximum allowable limits of the ASME Code.
- The throttle valve provides positive shutoff of the steam supply to the high pressure turbine.
- The assembly ships as a single unit for ease of handling and installation.
- The assembly is mounted on the turbine floor where it is accessible to the turbine room crane for easy maintenance.

節流閥內之 大 小 閥



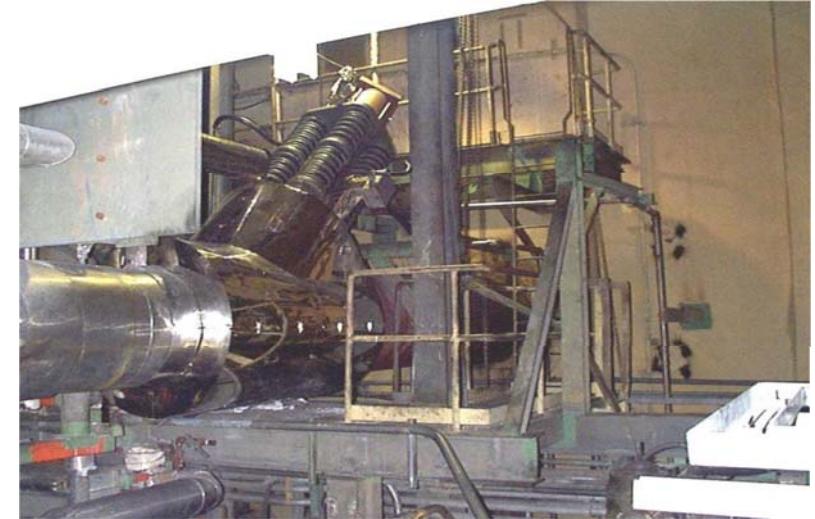
TV

蒸汽旁通閥



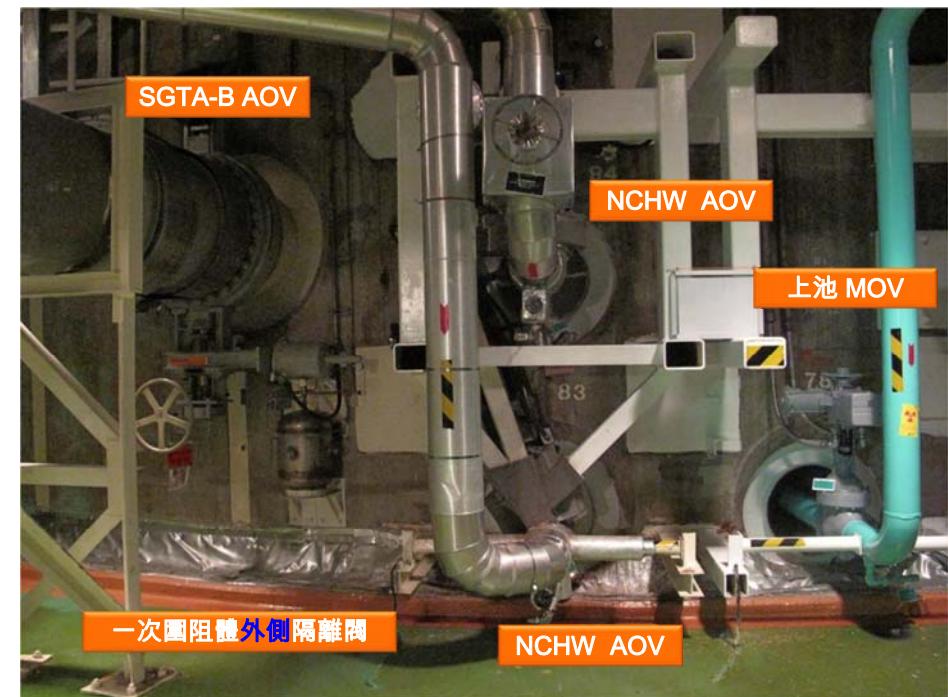
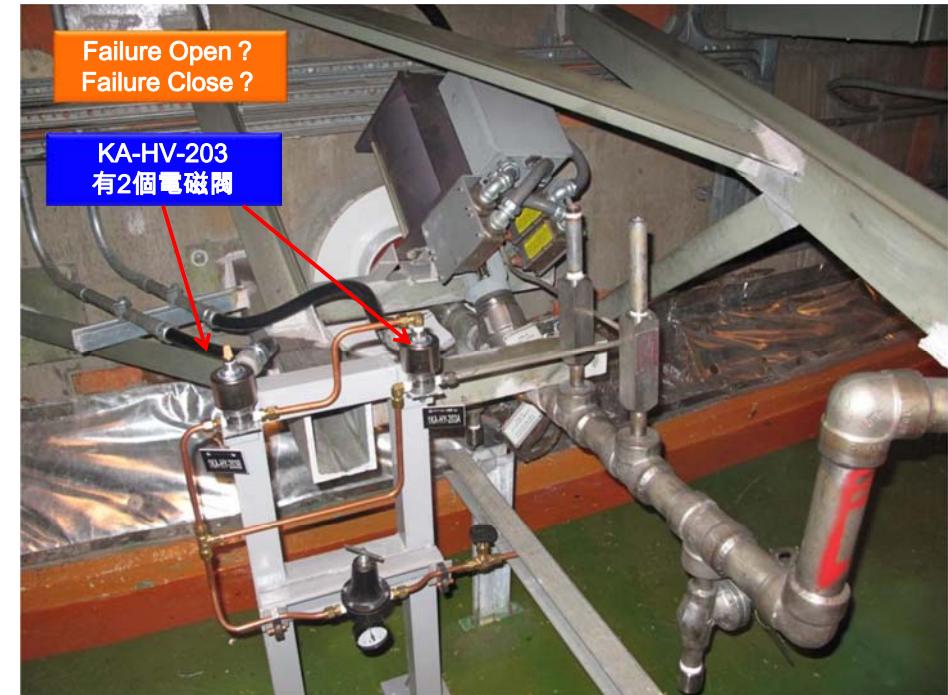
-73-

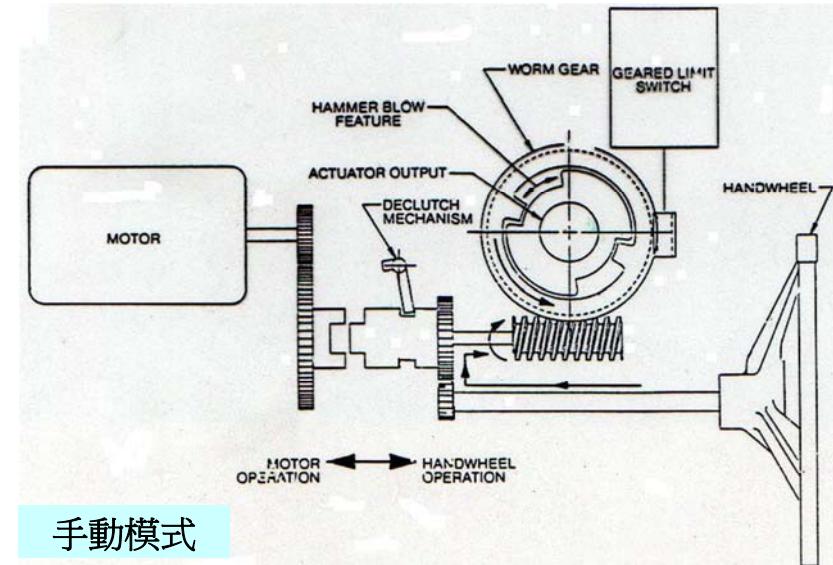
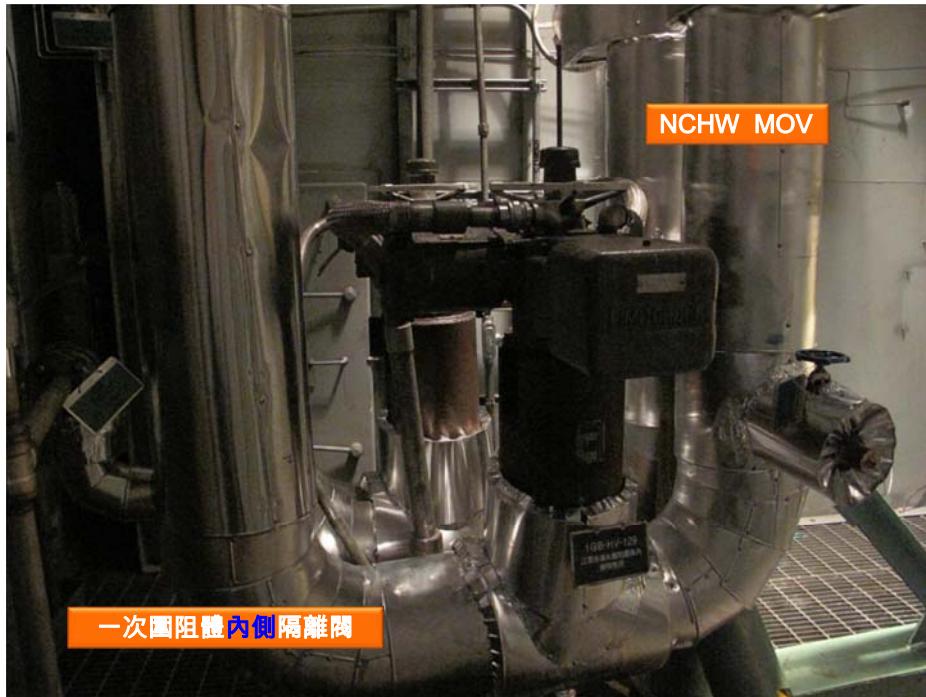
MSIV本體



-74-



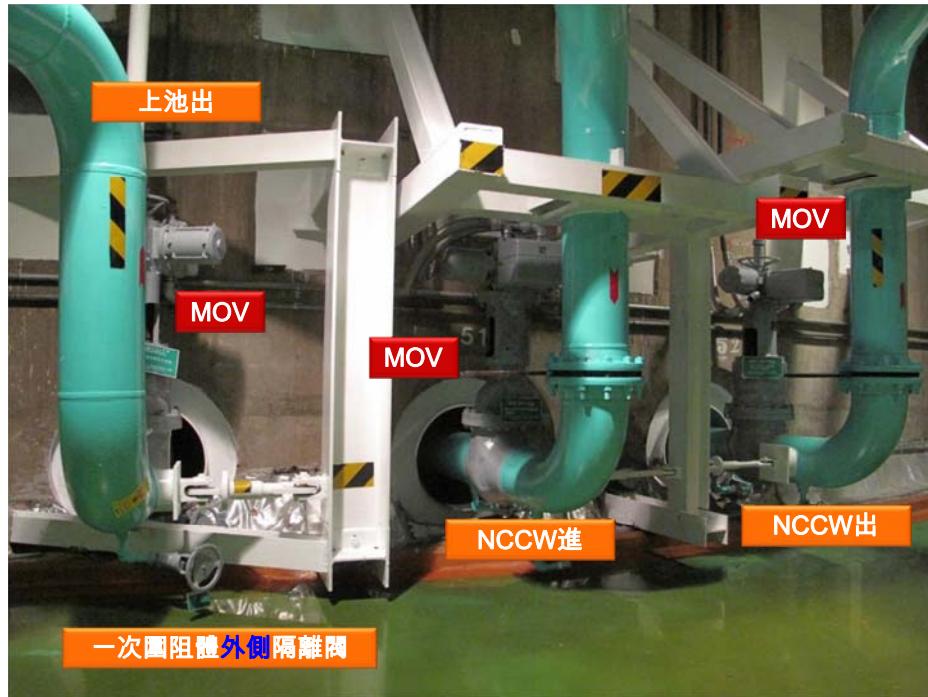




手動模式

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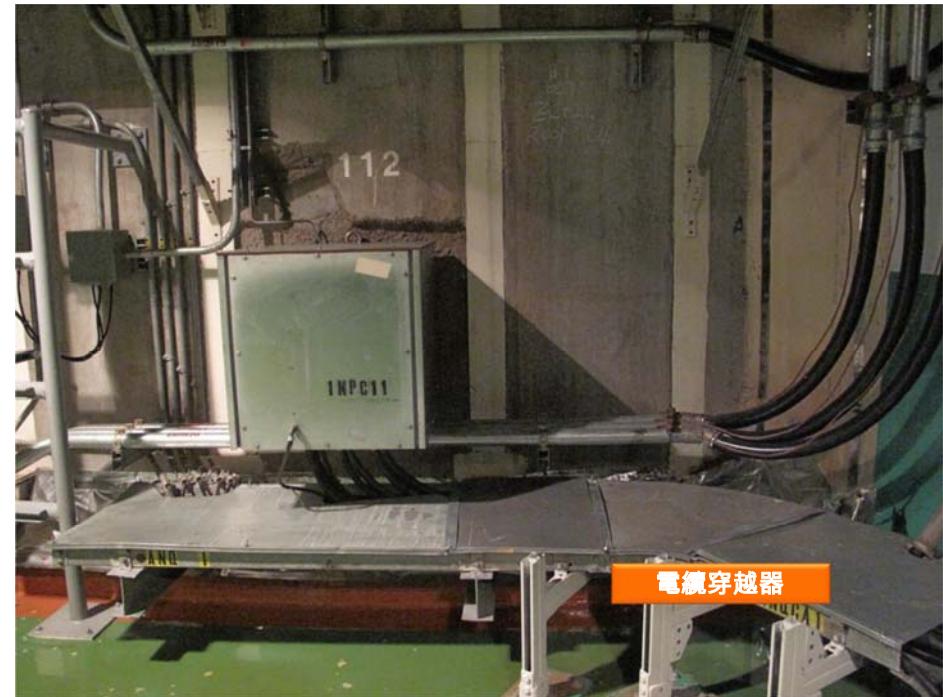
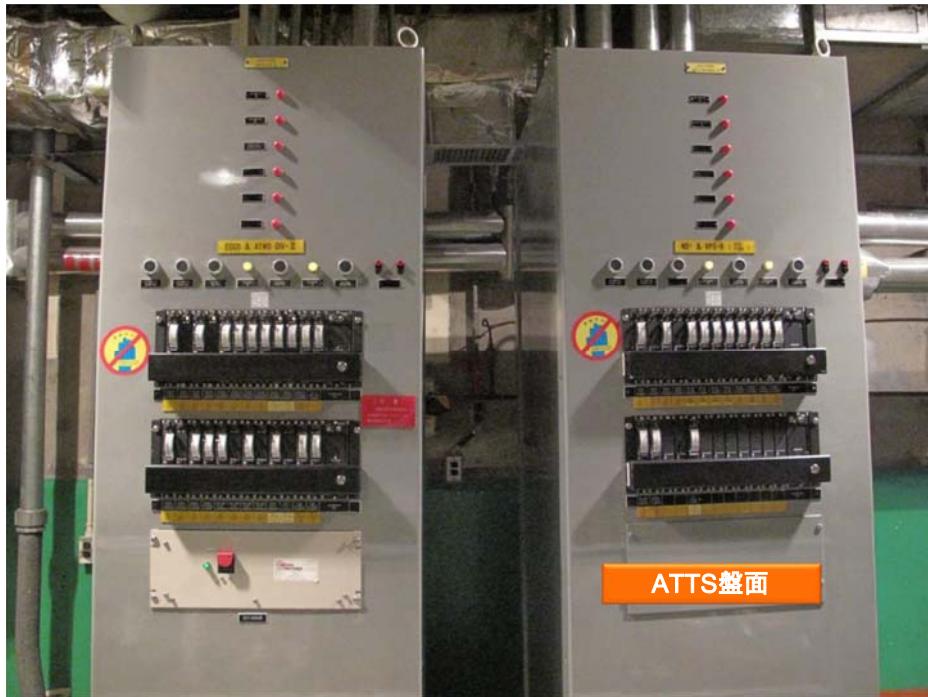


泵、馬達 壓縮機與控制盤 等設備實像

大部分設備已配合於廠房介紹時說明











汽機廠房汽封蒸汽控制盤面



汽機廠房汽封水加氯流量控制盤



汽機廠房超音波
銅水流量偵測盤面



汽機廠房空調控制盤面



汽機廠房TPCCW泵



汽機廠房汽RHR海水增壓泵



汽機廠房核機冷卻水泵



汽機廠房凝結水泵參數監測盤



維護作業



一般支援系統
設備實像



輔助鍋爐儲油槽(40000 GAL)



- 114 -

輔助鍋爐650公秉儲油槽



- 115 -

DIV-1 日用槽



- 116 -

HPCS D/G 日用槽



- 117 -

柴油機儲油槽



Div-1 儲油槽(地下室)



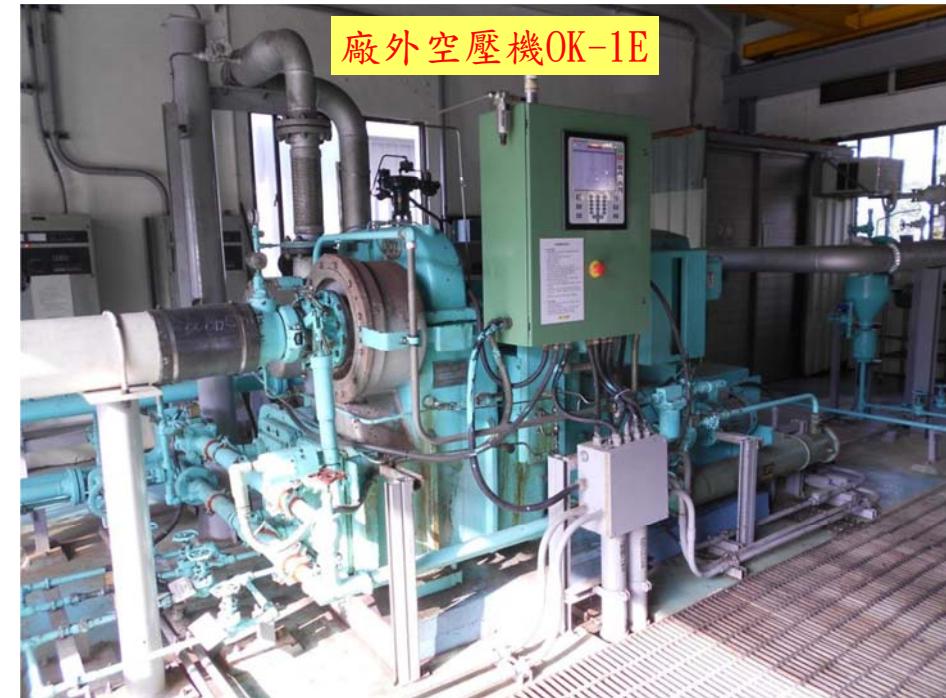
- 119 -

空氣壓縮機





- 121 -



高壓空氣壓縮機停用中



二氧化碳控制盤



消防系統



OSG-XE-102(強震儀)
OSG-XE-109(弱震儀)
包封容器底座EL(-)40噸0吋
(CRD A台到B台走道之間)



強震儀控制盤及感測元件 (輔機廠房三樓)





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核二廠區鳥瞰圖 A、B生水池位置



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圖2 圓潭溪攔水閘門



圖3 圓潭溪水泵室



山上水池(A池)



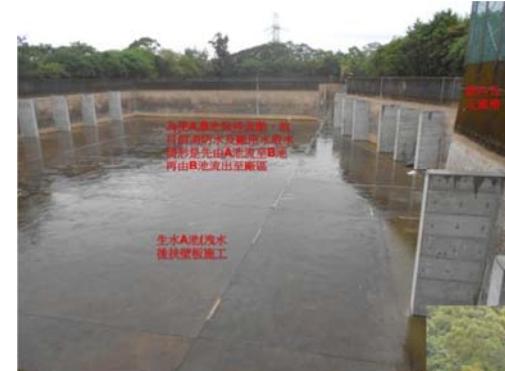
生水管及消防管



山上水池(B池)



自來水加壓泵



生水A池浚水
後扶壁板施工



生水B池完工後
正進行蓄水中

水源

①廠內各型儲水槽貯水量合計超過9000噸

可提供兩部機停機後 9天以上之爐心補水量

多重後備水源

②生水池

共 36800 噸
(海拔90米，靠重力即可補水)

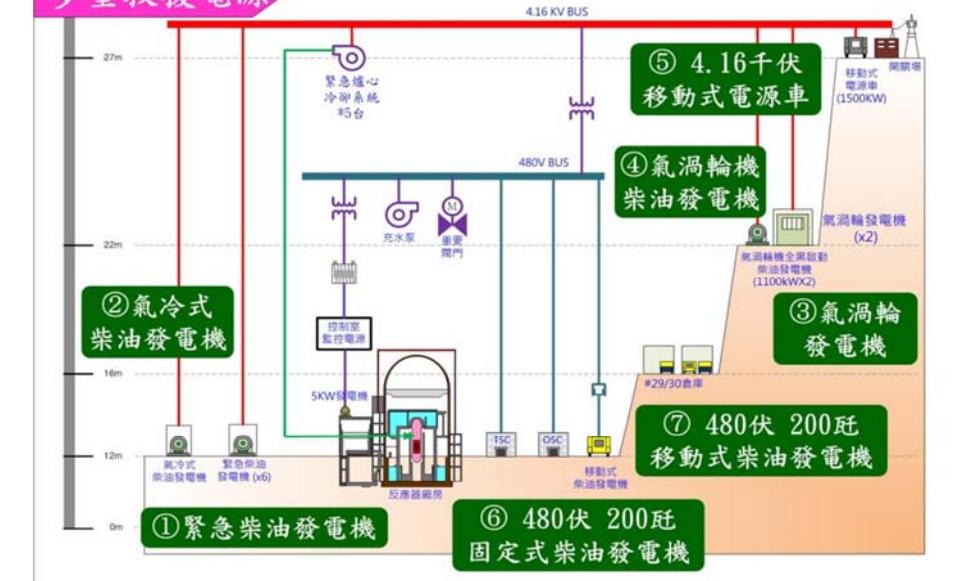


③排洪渠道 貯水
(貯水量2200噸)



④海水 (持續供水)

多重救援電源



多重後備緊急電源，即插即用

4.16千伏1500瓩移動式發電機



480伏 200瓩移動式柴油發電機

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課程完畢！

請多指教
謝謝！！

