

GUIDELINES FOR MACHINERY SPECIAL SURVEY CARRIED OUT ON CONTINUOUS SURVEY BASIS

機器特別檢驗以連續檢驗方式實施準則

CR CLASSIFICATION SOCIETY

JANUARY 2024

REVISION HISTORY 修訂歷史

(This version supersedes all previous ones.)

(此版本取代所有先前之版本)

Revision No. 修訂編號	Editor 編輯者	Date (yyyy-mm) 日期(西元年-月)
001	Rules Section	2018-01
002	Rules Section	2022-12
003	Rules Section	2024-01

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GUIDELINES FOR MACHINERY SPECIAL SURVEY CARRIED OUT ON CONTINUOUS SURVEY BASIS

機器特別檢驗以連續檢驗方式實施準則

General 通則

- 1.1 Machinery Continuous Survey is to be performed in accordance with the Rules for Construction and Classification of Steel Ships published by the CR Classification Society (hereinafter referred to as the Society). 機器連續檢驗係根據財團法人驗船中心(以下簡稱本中心)鋼船建造與入級規範之規定辦理。
- 1.2 Machinery Continuous Survey is to be performed upon application of the Owner. The survey schedule is to be fixed after examining the information and proposed arrangement submitted by the Owner and the classification status of the vessel concerned.

機器連續檢驗依船東之申請辦理。檢驗實施時間將依照船東所提供之資料與計畫,以及船級現況而定。

1.3 If a Machinery Special Survey is performed on a continuous basis, each item of the Machinery Special Survey requirements is to be completed within a 5-year cycle.

如機器特別檢驗以連續檢驗實施時,則機器特別檢驗規定之每一檢驗項目應在 5 年之週期內完成。

1.4 A list of the survey status listing all the items that are overdue or will become due within 6 months is to be sent to the Owner of the ships for which Machinery Continuous Survey(s) is applicable.

凡採用機器連續檢驗之船舶,本中心依檢驗情況列表通知船東,內容包含已過期未受檢之項目及將在 6 個月內 到期之項目。

2 Application 適用

The Machinery Continuous Survey system applies to those items of machinery and equipment of well experienced type. 機器連續檢驗系統適用於成熟型式的機器及設備項目。

The following machinery and equipment are applicable to Machinery Continuous Survey system. 以下機器設備適用於機器連續檢驗系統。

- 2.1 Main propulsion machinery 主推進機器
 - 2.1.1 Steam turbines 蒸汽渦輪機
 - Turbine rotors accompanied with bearings casings 渦輪機轉子連同軸承外殼
 - Couplings between turbine and reduction gears 渦輪機與減速齒輪之間的聯結器
 - Nozzle valves 噴嘴閥
 - Maneuvering valves 操縱閥
 - 2.1.2 Reciprocating internal combustion engines 往復式內燃機
 - Cylinder covers 氣缸蓋
 - Cylinder liners 缸套

- Pistons (piston pins and piston rods to be accompanied) 活塞(連同活塞銷與活塞桿)
- Crosshead pins and their bearings 十字頭銷及其軸承
- Connecting rods 連桿
- Crank pins and their bearings 曲柄銷及其軸承
- Crank journals and their bearings 曲柄軸頸與其軸承
- Camshafts and their driving gears 凸輪軸及其傳動齒輪
- Turbochargers 渦輪增壓機
- Auxiliary blowers 輔助鼓風機
- Air inter-coolers 空氣中間冷卻器

附屬主要泵與冷卻器(例如艙底水泵/滑油泵/燃油泵/冷卻水泵/滑油冷卻器/中央淡水冷卻器/電控系統的液壓油泵)

2.1.3 Electric propulsion installations 電力推進裝置

- Propulsion motors 推進電動機
- Prime mover of propulsion generator 推進用發電機之原動機
- Propulsion generator 推進用發電機
- Subsidiary equipment and control units of electric propulsion installations 電力推進裝置的附屬設備及控制裝備
- Propulsion motor running test 推進電動機運轉試驗

2.2 Power transmission system and main shafting 動力傳動系統與主軸系

- Reduction / reversing gears 減速 / 倒俥齒輪
- Flexible couplings 撓性聯結器
- Clutch 離合器
- Thrust shafts and bearings 推力軸及其軸承
- Intermediate shafts and bearings 中間軸及其軸承

2.3 Auxiliary engines 輔助發動機

- Main and auxiliary generator engines including port-use generator engine 主輔發電機引擎包含港內使用的發電機引擎
- Emergency generator engines 應急發電機引擎
- Other engines used for essential auxiliaries 其他用於主要輔機的發動機

2.4 Water jet propulsion systems 噴水推進系統

- Hydraulic pumps for steering actuating systems 轉向致動系統的液壓泵
- Lubricating oil pumps 滑油泵
- Coolers 冷卻器
- Other items considered to be necessary by the Society 本中心認為必要的其他項目

2.5 Azimuth thrusters 全向推進器

2 Application 適用

- Gear, gear shafts, shaft coupling, bearings and cluches for propusion 推進用的齒輪、齒輪軸、軸聯結器、軸承及離合器
- Gear, gear shafts, shaft coupling and bearings for steering 轉向用的齒輪、齒輪軸、軸聯結器及軸承
- Hydraulic pumps and hydraulic motors for azimuth steering gears 全向轉向裝置的液壓泵與液壓馬達
- Lubricating oil pumps 滑油泵
- Coolers 冷卻器
- Other items considered to be necessary by the Society 本中心認為必要的其他項目

2.6 Air compressors and blowers 空氣壓縮機與鼓風機

- Main and auxiliary starting air compressors 主輔啟動空氣壓縮機
- Air compressors for control system 控制系統用空氣壓縮機
- Boiler fans 鍋爐風機
- Scavenging pumps, blowers, exhaust gas turbochargers 掃氣泵、鼓風機、排氣渦輪增壓機
- Fans for machinery spaces and serving hazardous spaces 用於機艙和危險空間的風扇
- Gland exhaust fans 衛帶排風機
- Machineries and equipment of venting, purging, gas freeing and ventilation systems (for tankers) 排氣、驅氣、清除油氣及通風系統的機器與裝備(油輪用)

2.7 Cooling water pumps 冷卻水泵

- Circulating pumps for main steam turbine 主蒸汽渦輪機用循環泵
- Jacket C.F.W. pumps 缸套中央淡水泵
- Piston C.F.W. / oil pumps 活塞中央淡水/滑油泵
- Fuel valve (F.V.) C.F.W. / oil pumps 燃油閥中央淡水/滑油泵
- Turbocharger pumps 渦輪增壓機泵
- Main central sea water(C.S.W.) pumps 主中央海水泵
- C.S.W. pumps for L.O. coolers 滑油冷卻器用中央海水泵
- C.F.W. pumps for generator 發電機用中央淡水泵
- Sea water(S.W.) service pumps 海水常用泵
- Air coolers C.F.W. pumps 空氣冷卻器中央淡水泵

2.8 F.O. pumps 燃油泵

- F.O. supply pumps 滑油供應泵
- F.O. service pumps 滑油常用泵
- F.O. transfer pumps 燃油輸送泵
- F.O. circulating pumps 燃油循環泵
- boiler burning pumps 鍋爐燃燒泵

2.9 Lubricating oil pumps 滑油泵

- L.O. pumps for main engine 主機用滑油泵
- L.O. pumps for camshaft 凸輪軸用滑油泵
- L.O. pumps for reduction gear 減速裝置用滑油泵
- L.O. pumps for controllable pitch propeller (C.P.P.) 可控螺距螺槳用滑油泵

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- Stern tube L.O. pumps 艉軸管滑油泵
- Thermal oil circulating pumps 熱油循環泵
- Exhaust valve operation oil pumps 排氣閥操作油泵
- Rocker arm L.O. pumps 搖臂滑油泵
- Crosshead L.O. pumps 十字頭滑油泵
- System oil pumps (pumps for feeding oil to hydraulic systems for control and adjustment of essential auxiliaries for propulsion)

系統油泵(液壓系統用供油泵,用以控制與調整推進用主要輔機)

- 2.10 Feed water pumps, condensate pumps and drain pumps 給水泵、冷凝泵及疏水泵
 - Feed water pumps 給水泵
 - Boiler water circulating pumps 鍋爐水循環泵
 - Condensate pumps (for main turbines, generator turbines, cargo oil pump turbines and ballast pump turbines)

冷凝泵(用於主渦輪機、發電機渦輪機、貨油泵渦輪機及壓艙水泵渦輪機)

- drain pumps 疏水泵
- 2.11 Bilge pumps, ballast pumps and fire pumps 艙底水泵、壓艙水泵及消防泵
 - Bilge pumps(excluding those for oily bilge & oily water separators) 艙底水泵(不包括含油艙底水及油水分離器)
 - Ballast pumps 壓艙水泵
 - General service (G.S.) pumps 雜用水泵
 - Fire pumps (excluding emergency fire pump) 消防泵(不含應急消防泵)
- 2.12 Condensers and feed water heaters 冷凝器及給水加熱器
 - Main condensers 主冷凝器
 - Aux. condensers 輔冷凝器
 - Gland condensers 填函蓋冷凝器
 - Atmospheric condensers 空氣冷凝器
 - Dirty steam condensers 髒汙蒸汽冷凝器
 - Vent condensers 通風口冷凝器
 - Drain coolers 疏水冷卻器
 - Feed water heaters 給水加熱器
 - Deaerators 除氧器
- 2.13 Coolers 冷卻器
 - Main fresh water (F.W.) coolers (for cylinder jackets and pistons) 主淡水冷卻器(紅套與活塞用)
 - F.V. C.F.W./ oil coolers 燃油閥 中央淡水 / 油冷卻器
 - F.W. coolers for turbochargers 渦輪增壓機用淡水冷卻器
 - F.W. coolers for generator engines 發電機用淡水冷卻器
 - Main L.O. coolers 主滑油冷卻器
 - Turbocharger L.O. coolers 渦輪增壓機滑油冷卻器
 - Camshaft L.O. coolers 凸輪軸滑油冷卻器

2 Application 適用

- Reduction gear L.O. coolers 減速齒輪滑油冷卻器
- Control oil coolers 控制油冷卻器
- L.O. coolers for C.P.P. 可控螺距螺槳用滑油冷卻器
- Stern tube L.O. coolers 艉軸管滑油冷卻器
- L.O. coolers for generator turbines 發電機渦輪機用滑油冷卻器
- Air coolers 空氣冷卻器
- C.F.W. coolers 中央淡水冷卻器
- F.O. coolers 燃油冷卻器

2.14 Oil heaters 油加熱器

- F.O. heaters and L.O. heaters 燃油加熱器及滑油加熱器

2.15 F.O. tanks 燃油櫃

- F.O. settling tanks and service tanks (for main and auxiliary engines) and F.O. tanks for boilers 燃油沉澱櫃及日用櫃(主機及輔機用)以及鍋爐用燃油櫃
- 2.16 Air vessels (for main, auxiliary, control and emergency) 空氣櫃 (主輔機控制及緊急用)
- 2.17 Cargo oil pumping installation 貨油泵送裝置
 - Cargo oil pumps (including chemical, liquid gas pumps) 貨油泵(包含化學、液化氣體泵)
 - Stripping pumps 收艙泵
 - Tank cleaning pumps 洗艙泵
 - Tank cleaning heaters and drain coolers 洗艙加熱器與疏水冷卻器
 - Drain coolers for cargo oil heaters 貨油加熱器用疏水冷卻器
- 2.18 Deck machinery 甲板機械
 - Steering gears (including their hydraulic pumps or motors) 舵機(包含其液壓泵或電動機)
 - Windlass (including their hydraulic pumps or motors) 錨機(包含其液壓泵或電動機)
 - Mooring winches (including their hydraulic oil pumps) 繋泊絞車(包含其液壓油泵)
- 2.19 Fresh water generator (for main boiler water to use for driving steam turbines) 淡水製造機(用於驅動蒸汽渦輪機的主鍋爐水)
- 2.20 Cargo refrigerating installation 貨物冷凍設備
 - Compressors 壓縮機
 - Condenser cooling water (C.W.) pumps 冷凝器冷卻水泵
 - Primary refrigerant Pumps 主冷凍劑泵
 - Brine pumps 鹽水泵
 - Condensers 冷凝器
 - Evaporators 蒸發器
- 2.21 Other items of machinery, equipment and refrigerating installations which the society considers to be covered by MCS.

本中心認為機器連續檢驗應涵蓋的其他機器、裝置及冷凍設備項目。

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3 Kind of Machinery Continuous Survey Required for Credit 註記所需的機器連續檢驗的種類

- 3.1 Overhaul inspection under surveyor's attendance (Survey mark in record "S") 驗船師在場的拆開檢查(在紀錄中檢驗標誌"S")
 - 3.1.1 Following items are to be required surveyor's attendance. 下列項目須驗船師在場。
 - (a) Steam Turbine driving Main Propulsion and Auxiliary including its components 蒸汽渦輪機驅動主推進和輔機,包括其組件
 - (b) Gas turbine driving Main Propulsion and Auxiliary including its components 燃氣渦輪機驅動主推進和輔機,包括其組件
 - (c) Reduction/Reversing Gears and Power Transmission system (Coupling, Clutch) 減速/倒俥裝置和動力傳輸系統(聯結器、離合器)
 - (d) Water Jet Propulsion Systems 噴水推進系統
 - (e) Azimuth Thrusters 全向推進器
 - (f) Refrigerating Compressor (at least 1 set) of Cargo Refrigerating Unit 貨物冷藏裝置的冷凍壓縮機(至少 1 台)
- 3.2 Confirmatory survey based on the Chief Engineer's inspection report (Survey mark in record "E") 確認檢驗依據輪機長的檢查報告(在紀錄中檢驗標誌"E")
 - 3.2.1 Where any of the machinery and equipment listed in below 3.2.2 is opened up at sea and inspected by the Chief Engineer in routine maintenance work, such inspection may be accepted as Confirmatory Survey as equivalent to open-up inspection under supervision of the Surveyor provided that the maintenance records are kept in order and in compliance with the following (a) ~(d).

在下面 3.2.2 所列的任何機器及設備,如果在海上進行例行維護工作時拆開及由輪機長檢查,只要維護紀錄保存完整,並符合以下(a)~(d)的規定,該檢查可以接受為確認檢驗,等同於在驗船師的監督下進行拆開檢查。

(a) 1 copy of the inspection report (referred to A.1 and to be attached photographs) including the following items on the machinery and equipment inspected by the chief engineer should be submitted to the attending Surveyor.

由輪機長檢查的機器及設備檢查報告(參照 A.1 並附照片)副本 1 份,應包括以下項目,並應提交給現場的驗船師。

- (i) Signature of the chief engineer 輪機長的簽名
- (ii) Date and place of the inspection 檢查的日期和地點
- (iii) Inspection items and their results 檢查項目及其結果
- (iv) Operating conditions before and after the inspection 檢查前後的操作狀況
- (b) Parts replaced with spares or repaired should be kept onboard until the confirmation by the Surveyor. (If this part would not be kept onboard, it is required to take and keep the photograph.)

 用備件更換或修復的零件應保留在船上,直到驗船師確認。(如果該零件不保留在船上,則需要拍照並保存照片。)
- (c) Visual inspection should be made for the main engine, and inspection under operating condition as well as visual inspection should be made for the other machinery. 主機應進行目視檢查,其他機器應在操作狀況下進行檢查,以及目視檢查。

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- (d) As a result of the confirmatory survey stated in (a) through (c) above, open-up inspection and/or reinspection may be required where deemed necessary by the Surveyor.

 在上述(a)至(c)項所述的確認檢驗結果,如果驗船師認為必要,可要求拆開檢查和/或重新檢查。
- 3.2.2 Items of machinery applicable for confirmatory survey are as follows:

適用於確認檢驗的機器項目如下:

- (a) Reciprocating Internal Combustion Engines used as main propulsion machinery 用於主推進機器的往復式內燃機
 - Cylinder Covers 氣缸蓋
 - Cylinder Liners 氣缸套
 - Pistons (Piston Pins and Piston Rods to be accompanied) 活塞(連同活塞銷和活塞桿)
 - Crosshead Pins and their Bearings 十字頭銷和其軸承
 - Connecting Rods 連桿
 - Crank Pins and their Bearings 曲柄銷和其軸承
 - Crank Journals and their Bearings 曲柄軸頸和其軸承
 - Camshafts and their Driving Gears 凸輪軸和其傳動裝置
 - Turbo-Chargers 渦輪增壓機
 - Auxiliary Blowers 輔助鼓風機
 - Air Inter-Coolers 空氣中間冷卻器
 - Attached essential Pumps and Coolers (e.g. Bilge Pumps, L.O. Pumps, F.O. Pumps, Cooling Water Pumps, Hyd. Oil Pumps for Electric Control System).

 附屬必要泵和冷卻器(例如污水泵、滑油泵、燃油泵、冷卻水泵、用於電控制系統的液壓油泵)
- (b) Electrical propulsion installations 電力推進裝置
 - Propulsion electric motors 推進電動機
 - Prime mover of propulsion generators 推進用發電機之原動機
 - Propulsion generators 推進用發電機
 - All ancillary equipment and control units of electric propulsion installations 電力推進裝置的 附屬設備和控制裝備
 - Propulsion electric motor running test 推進電動機運轉試驗
- (c) Reciprocating Internal Combustion Engines used for driving Main Generators, important auxiliaries for main propulsion of the ship and those for the safety of life and the ship. However confirmatory survey may only be acceptable when the Surveyor can confirm the followings by the record and for photograph.

用於驅動主發電機的往復式內燃機,船舶主推進系統的重要輔機以及用於人命安全和船舶安全的設備。然而,只有當驗船師能夠通過紀錄和/或照片確認以下情況時,才得以接受確認檢驗。

- (i) The engine was completely opened up and a careful examination was made on all cylinder units. 發動機完全拆開,並對所有氣缸裝備詳細檢查。
 - Cylinder Liners 氣缸套
 - Cylinder Covers 氣缸蓋
 - Cylinder Cover valves 氣缸蓋閥
 - Piston 活塞
 - Piston Rings 活塞環
 - Connecting Rods and Top and Bottom end bearings 連桿及其頂部和底部軸承
 - Piston Pins 活塞銷

- 3 Kind of Machinery Continuous Survey Required for Credit 註記所需的機器連續檢驗的種類
 - Camshaft Driving Gear 凸輪軸傳動裝置
 - Turbo-Chargers 渦輪增壓機
 - Air Intercoolers 空氣冷卻器
 - Crankcase and Crankcase Doors 曲軸箱和曲軸箱門
 - Engine foundation bolts, and Crankcase Safety valves. 發動機基座螺栓和曲軸箱安全閥
- (ii) All main bearings were taken out for examination. 所有主軸承取出檢查。
- (iii) An examination was made on all crankpins and journals to detect cracks, especially at fillets and areas in the vicinity of oil holes, and oil grooves of the crankshaft.
 對所有曲柄銷和曲柄軸頸檢查,以檢測裂紋,尤其是在曲軸的內圓角和靠近油孔以及油槽的區域。
- (iv) Crank web deflections were measured and recorded. 曲軸臂撓度測量並紀錄。
- (v) Wear-downs of the cylinder liners were measured and recorded. 氣缸套磨耗測量並紀錄。
- (vi) L.O. Coolers attached to the Engine and Pumps (L.O. Pumps, Cooling Water Pumps, etc.) of direct driven type were opened up and examined.

 附屬在發動機上的滑油冷卻器以及直接驅動型的泵(滑油泵、冷卻水泵等)拆開並檢查。
- (vii) The service hours of crankpin bolts were checked and recorded. 曲柄銷螺栓使用時數檢查並紀錄。
- (d) Shafting 軸系
 - Thrust shaft & bearing 推力軸和軸承
 - Intermediate shafts & bearings 中間軸和軸承
- (e) Auxiliary machinery 輔機
 - Air compressors 空氣壓縮機
 - Pumps 泵
 - Heat Exchangers 熱交換器
 - Deck Machinery 甲板機器
 - Evaporators 蒸發器
- (f) Air reservoirs (Main, Aux, Control, General Service, Emergency) 空氣瓶(主、輔、控制、通用、緊急)
- (g) Cargo Refrigerating Installation 貨物冷藏設備
 - (i) Refrigerating compressors 冷藏壓縮機
 - (1) Open-up inspection of at least 1 unit of compressors should be carried out by the Surveyor within 1 cycle of Machinery Continuous Survey.
 - 在一個機器連續檢驗週期內至少 1 台壓縮機應由驗船師進行拆開檢查。
 - (2) For the screw type compressor, the interval of open-up survey may be extended up to 25,000hrs.

對於螺桿式壓縮機,拆開檢驗的間隔可以延長至 25,000 小時。

- (ii) Condenser Cooling Water Pumps 冷凝器冷卻水泵
- (iii) Primary Refrigerant Pumps 主冷媒泵
- (iv) Brine Pumps 鹵水泵

- 3 Kind of Machinery Continuous Survey Required for Credit 註記所需的機器連續檢驗的種類
 - (v) Evaporators, etc. 蒸發器等
 - 3.2.3 The Chief Engineer holds a valid licence issued by a government authority acceptable to the Society. 該輪機長持有由政府主管機構簽發並經本中心接受之有效執照。
 - 3.2.4 Each machinery and equipment applicable for Confirmatory Survey is to be opened up within each due date. The open-up inspection record by the Chief Engineer is to be submitted to the Surveyor on or before the forthcoming periodical survey.

每項適用於確認檢驗的機械和設備應在各自拆開檢查的到期日內進行。輪機長拆開檢查的紀錄應在 即將到來的定期檢驗或之前提交給驗船師。

3.2.5 After being surveyed by the Chief Engineer, the items of the machinery are to be subjected to a visual inspection or running test by the Surveyor according to a report submitted by the Chief Engineer showing the items that have been inspected by him. When deemed necessary by the Surveyor, the inspected items may be subjected to a resurvey.

機器項目經輪機長檢查後,須由驗船師根據該輪機長就其檢查之項目所提出之報告做目視檢查或操作試驗。如驗船師認為必要時,業經檢查之項目得再受檢。

3.2.6 The survey carried out by the Chief Engineer is to be recorded in the engine log book, and the record is to be shown to the Surveyor.

輪機長檢查之項目應紀錄在輪機日誌上,該紀錄應出示給驗船師。

3.2.7 Next due date of inspection by Chief Engineer: 輪機長下次檢查之到期日

The end of month after 5 years counting from the inspection date by Chief Engineer regardless of the date of Confirmation Survey by Surveyor.

自輪機長檢查之日起5年後的月底,無論驗船師的確認檢驗日期為何。

3.3 Confirm Machinery Continuous Survey items with the master of the ship on board 在船上與船長確認機器連續檢驗項目

After completion of Machinery Continuous Survey items, the Surveyor submits report of Form No. KGR6 (including Machinery Continuous Survey items) to the master of the ship on board and the Head Office of the Society for update record of survey status.

機器連續檢驗項目完成後,驗船師將 KGR6(包含機器連續檢驗項目)的報告提交給船長及本中心總部,以更新檢驗狀態紀錄。

Chief Engineer's Report for MCS Confirmatory Survey Appendix 1

附錄1 輪機長機器連續檢驗的確認檢驗報告

A.1 The form of Chief Engineer's Report for MCS Confirmatory Survey can be downloaded from the following website: https://www.crclass.org/apply/

輪機長機器連續檢驗的確認檢驗報告表格可至以下網址下載:https://www.crclass.org/apply/

Chief Engineer's Report for MCS Confirmatory Survey

輪機長機器連續檢驗的確認檢驗報告				
Ship's Name:	Flag:	CR-Registered No.:		
船名:	船旗國:	船級登記編號:		
Owner's Name (Management Company's Name):船東名稱(管理公司名稱)				
C/E's Name:	Nationality of C/E:			
輪機長姓名:	輪機長國籍:			
C/E's License No.:	Validity of C/E's License:			
輪機長執照號碼:	輪機長執照有效日期:			
Issuing States of License:	No. of License endorsed by the flag:			
執照頒發國:	執照之船旗國許可號碼:			
I, the undersigned Chief Engineer of the above ship, carrie the conditions were in order as reported in the attached "Delay to the condition of the condition o	etail of Open-up Inspection by C/			

本人,上述船舶的輪機長於以下簽名,對機器連續檢查項目進行"拆開檢查",並聲明其狀況符合所附"輪機 長拆開檢查細節"

Total Nos. of machinery/equipment inspected by C/E: 由輪機長檢查的機器/設備總數:
Date of Signature of C/E: 簽名日期:
Signature of C/E: 輪機長簽名:
Signature of CR Surveyor: CR 驗船師簽名:

Original to be submitted to the surveyor for retention, copies to be kept by the company and the ship onboard. 附註:

正本提交驗船師留存,副本由公司及船端自存

Details of Open-up Inspection by C/E 輪機長拆開檢查細節

Page 頁(/)

		Tage 貞(/ /		
Name & No. of machinery/equipment: 機器/設備名稱及數量:	Date of C/E's inspection: 輪機長檢查日期:	Place of Inspection: 檢查地點:		
Condition before and after reassembly: 重新組裝前後的狀況:				
Contents of overhaul/inspection/maintenance/repair etc. (measurement records attached : Yes or No) 大修/檢查/維護/修理等內容(是否附測量紀錄:是或否)				
Name of parts replaced/repaired (If parts replaced not kept onboard, it shall take and keep the photos.) 更換/修理的零件名稱(如果更換之零件未保留在船上,則需拍照並保存照片。)				