

## STCW1995 版轉換為 2010 版船上訓練紀錄簿應補差項目表：一、二等輪機長

專長 FUNCTION：管理級-輪機工程

### MARINE ENGINEERING AT THE MANAGEMENT LEVEL

項次 Ref No	訓練 Training			評估標準 Criteria for Evaluation	適任性證明 Competence Demonstrated 同部門較自身高階之 甲級船員簽名/日期 Assessor (Signature/Date)	
2	適任 Competence： 計劃及安排操作 Plan and schedule operations					
2.1	機器及其輔機設計特性與機械作動之理論知識（輪機長） Theoretical knowledge of design features, and operative mechanism of the machinery and associated auxiliaries			對設計特性與機械作動能適當之說明與瞭解 <i>Explanation and understanding of design features and operating mechanisms are appropriate</i>		
	科目/職責 Task/Duty	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )		對改進部分之建議 Advice on Areas for Improvement	科目已完成 Task Completed 施訓者簽名/日期 Instructor ( Signature/Date )	
1	熱力學與熱傳學 Thermodynamics and heat transmission					
2	力學與流體力學 Mechanics and hydromechanics					
3	柴油機推進特性包括速率、輸出與燃油消耗 Diesel engines propulsive characteristics, including speed, output and fuel consumption					
4	蒸汽渦輪機推進特性包括速率、輸出與燃油消耗 Steam turbines propulsive characteristics, including speed, output and fuel consumption					

.5	燃氣渦輪機推進特性包括速率、輸出與燃油消耗 Gas turbines propulsive characteristics, including speed, output and fuel consumption					
.6	下列機器及其輔機熱循環、熱效率與熱平衡 Heat cycle, thermal efficiency and heat balance of the following machinery and associated auxiliaries: 船用柴油機 Marine diesel engine					
.7	船用蒸汽渦輪機 Marine steam turbine					
.8	船用燃氣渦輪機 Marine gas turbine					
.9	船用鍋爐 Marine steam boiler					
.10	冷凍機與冷凍循環 Refrigerators and refrigeration cycle					
.11	燃油及潤滑油物理與化學性質 Physical and chemical properties of fuels and lubricants					
.12	工程材料學 Technology of materials					
.13	造船學及船舶構造、包括損害管制 Naval architecture and ship construction, including damage control					

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**專長 FUNCTION：管理級-電機、電子及控制工程**  
**ELECTRICAL, ELECTRONIC AND CONTROL ENGINEERING AT THE**  
**MANAGEMENT LEVEL**

項次 Ref No	訓練 Training			適任性證明 Competence Demonstrated	
5	適任 Competence： 管理操作電機及電子控制設備 <b>Manage operation of electrical and            electronic control equipment</b>		評估標準 <b>Criteria for Evaluation</b>	同部門較自身高階之 甲級船員簽名/日期 Assessor (Signature/Date)	
5.1	管理操作電機及電子控制設備之理論知識 (輪機長) Theoretical knowledge of manage operation of electrical and electronic control equipment		設備及系統操作係依據操作 手冊。性能標準係依據技術說 明書 <i>Operation of equipment and system            is in accordance with operating            manuals. Performance levels are in            accordance with technical            specifications.</i>		
	科目/職責 Task/Duty	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )	對改進部分之建議 Advice on Areas for Improvement	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )	
1	船舶電工學、電子學、大功率電子及自動控 制工程與安全設施 Marine electro technology, electronics, power electronics, automatic control engineering and safety devices				

.2	下列自動控制設備與安全設施之設計特性與系統結構 Design features and system configurations of automatic control equipment and safety devices for the following: 主機 Main engine 發電機與配電系統 Generator and distribution system 蒸汽鍋爐 Steam boiler					
.3	電動機操作控制系統之設計特性與系統結構 Design features and system configurations of operational control equipment for electrical motors					
.4	高電壓裝置之設計特性 Design features of high-voltage installations					
.5	液壓與氣壓控制設備之特性 Features of hydraulic and pneumatic control equipment					

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## 專長 FUNCTION：管理級-保養及維修

### MAINTENANCE AND REPAIR AT THE MANAGEMENT LEVEL

項次 Ref No	訓練 Training			適任性證明 Competence Demonstrated	
7	適任 Competence： 管理安全有效保養及維修程序 Manage safe and effective maintenance and repair procedures		評估標準 Criteria for Evaluation	同部門較自身高階之 甲級船員簽名/日期 Assessor (Signature/Date)	
7.1	安全與有效保養及維修程序之理論知識 (輪機長) Theoretical knowledge of safe and effective maintenance and repair procedures		保養及維修工作依技術、法 定、安全及程序說明書正確 予以規劃執行 Maintenance and repair activities are correctly planned in accordance with technical, legislative, safety and procedural specifications.		
	科目/職責 Task/Duty	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )	對改進部分之建議 Advice on Areas for Improvement	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )	
1	實用輪機工程 Marine engineering practice				

**專長 FUNCTION：管理級-船舶操作管控與照護船上人員**  
**CONTROLLING THE OPERATION OF THE SHIP AND CARE FOR PERSONS ON BOARD AT THE MANAGEMENT LEVEL**

項次 Ref No	訓練 Training		評估標準 Criteria for Evaluation	適任性證明 Competence Demonstrated	
10	適任 Competence： 俯仰、穩度及應力之控制 Control trim, stability and stress			同部門較自身高階之 甲級船員簽名/日期 Assessor (Signature/Date)	
10.1	影響俯仰及穩度之理論與因素 (輪機長) The theories and factors affecting trim and stability		穩度及應力狀況始終保持於安全限度內 Stability and stress conditions are maintained within safe limits at all times		
	科目/職責 Task/Duty	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date)	對改進部分之建議 Advice on Areas for Improvement	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date)	
1	瞭解船舶構造之基本原理 Understanding of fundamental principles of ship construction				
2	瞭解影響俯仰及穩度之理論與因素及保持俯仰及穩度之必要措施 Understanding of the theories and factors affecting trim and stability and measures necessary to preserve trim and stability				
3	船舶某艙區受損連續泛水時對船舶俯仰及穩度影響之知識，及應採取之因應措施 Knowledge of the effect on trim and stability of a ship in the even of damage to and consequent flooding of a compartment and countermeasures to be taken				
4	國際海事組織有關船舶建議案之知識 Knowledge of IMO recommendations concerning ship stability				

11	<p style="text-align: center;"><b>適任 Competence :</b>  <b>監督及控制對法定要求之</b>  <b>遵守及確保海上人命安全與保護海上環境之措施</b>  <b>Monitor and control compliance with legislative requirements</b>  <b>and measures to ensure safety of life at sea and the protection</b>  <b>of the marine environment</b></p>	<p style="text-align: center;"><b>評估標準</b>  <b>Criteria for Evaluation</b></p>	<p style="text-align: center;"><b>適任性證明</b>  <b>Competence</b>  <b>Demonstrated</b>  同部門較自身高階之  甲級船員簽名/日期  Assessor ( Signature/Date )</p>		
11.1	<p>包含於國際協議及公約內之有關國際海事法規 ( 輪機長 )  International maritime law embodied in  international agreements and conventions</p>	<p>監督操作及維護之程序符合  法定要求。並能迅速完全  確認潛在之不符合項目  <i>Procedures for monitoring  operations and maintenance  comply with legislative  requirement. Potential  non-compliance is promptly fully  identified</i></p>			
	<p style="text-align: center;">科目/職責  Task/Duty</p>	<p style="text-align: center;">科目已完成  Task Completed  施訓者簽名/日期  Instructor( Signature/Date )</p>	<p style="text-align: center;">對改進部分之建議  Advice on Areas for  Improvement</p>	<p style="text-align: center;">科目已完成  Task Completed  施訓者簽名/日期  Instructor( Signature/Date )</p>	
.3	<p>防止船舶污染國際公約有關要求之責任  Responsibilities under the relevant  requirements for the Prevention of  POLLUTION FROM Ships</p>				
.6	<p>防止船舶污染環境之方法及設備  Methods and aids to prevent pollution of the  marine environment by ships</p>				

13	<p align="center"><b>適任 Competence :</b>  <b>研訂應急及損害管制計畫並處置緊急狀況</b>  <b>Develop emergency and damage control plans and handle emergency situations</b></p>		<p align="center"><b>評估標準</b>  <b>Criteria for Evaluation</b></p>	<p align="center"><b>適任性證明</b>  <b>Competence Demonstrated</b>  同部門較自身高階之  甲級船員簽名/日期  Assessor ( Signature/Date )</p>	
13.1	<p>在緊急狀況下保護與防護船上人員安全所採之行動 ( 輪機長 )  Actions to be taken to protect and safeguard all persons on board in emergency</p>		<p>應急程序係依所制訂之應急計畫進行  <i>Emergency procedures are in accordance with the established plans for emergency situations</i></p>		
	<p align="center">科目/職責  Task/Duty</p>	<p align="center">科目已完成  Task Completed  施訓者簽名/日期  Instructor( Signature/Date )</p>	<p align="center">對改進部分之建議  Advice on Areas for Improvement</p>	<p align="center">科目已完成  Task Completed  施訓者簽名/日期  Instructor( Signature/Date )</p>	
1.1	<p>制定應急計畫以反應緊急狀況  Preparation of contingency plans for response to emergencies</p>				
2	<p>船舶構造包括損害管制之知識  Knowledge of ship construction, including damage control.</p>				
3	<p>防火、探火及滅火之方法與設備  Methods and aids for the fire prevention, detection and extinction.</p>				
4	<p>救生設備之功能及使用  Functions and use of life-saving appliances</p>				
14	<p align="center"><b>適任 Competence :</b>  <b>領導與管理技巧之運用</b>  <b>Use of leadership and managerial skill</b></p>		<p align="center"><b>評估標準</b>  <b>Criteria for Evaluation</b></p>	<p align="center"><b>適任性證明</b>  <b>Competence Demonstrated</b>  同部門較自身高階之  甲級船員簽名/日期  Assessor ( Signature/Date )</p>	



14.2	船上人事管理與訓練 (輪機長) Shipboard personnel management and training			訓練之目標與活動係基於對目前適任性與能力及操作要求之評估。操作經證明係依可適用之規則為之。 <i>Training objectives and activities are based on assessment of current competence and capabilities and operational requirement. Operations are demonstrated to be in accordance with applicable rules</i>		
.1	船上人事管理與訓練之知識 Knowledge of shipboard personnel management and training					
.2	有關國際海事公約與建議案及國內法規之知識 A knowledge of related international maritime conventions and recommendations, and national legislation.					
14.3	有效之資源管理 (輪機長) Effective resource management			依計畫操作而資源係依完成必要任務之所需作正確優先順序分配 <i>Operations are planned and resources are allocated as needed in correct priority to perform necessary</i>		
.1	應用有效資源管理之知識與能力 Knowledge and ability to apply effective resource management.					
.2	資源分配、分派與優先順序之知識與能力 Knowledge and ability to allocation, assignment, and prioritization of resources					
14.4	船岸通信 (輪機長) Communication on board and ashore			通信之發送與接收清晰明確 <i>Communication is clearly and unambiguously given and received</i>		
.1	有效之船岸通信 Effective communication on board and ashore					
14.5	決斷與領導 (輪機長) Assertiveness and leadership			證實具有效之領導能力 <i>Effective leadership behaviors are demonstrated</i>		

[1]	決斷與領導包括激勵 Assertiveness and leadership, including motivation					
[2]	所作決策反映尊重團隊之經驗 Decisions reflect consideration of team experiences					
[3]	具有並保持情境意識 Obtaining and maintaining situation awareness					
14.6	運用決策技能之知識與能力 (輪機長) Knowledge and ability to apply decision-making techniques			所做決策對當時處境非常有效 Decisions are most effective for the situation		
	科目/職責 Task/Duty	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )	對改進部分之建議 Advice on Areas for Improvement	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )		
[1]	處境與風險之評估 Situation and risk assessment					
[2]	確定與考量所應作之選擇 Identify and generate options					
[3]	選擇行動之方針 Selecting course of action					
[4]	評估結果之有效性 Evaluation of outcome effectiveness					
14.7	標準操作程序之制定 (輪機長) Development of standard operating procedures			操作經證明係有效並符合可適用之規則 Operations are demonstrated to be effective and in accordance with applicable rules		
	科目/職責 Task/Duty	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )	對改進部分之建議 Advice on Areas for Improvement	科目已完成 Task Completed 施訓者簽名/日期 Instructor( Signature/Date )		
[1]	標準操作程序之制定、履行與監督 Development, implementation, and oversight of standard operating procedures.					