



PSC重點檢查項目與強化應對機制研討會

副總驗船師兼檢驗處處長

郭學舉

2021年7月28日

2017年起執行

「強化國輪管制檢查作業」

- 2017年3月2日起依主管機關指示執行「強化國輪管制檢查作業」。
- 依船舶之風險評等給予不同之檢驗頻率，並針對PSC主要關注之檢驗項目予以確認；CR驗船師及航港局檢查員一同登輪執行。
- 各種預防性加強檢驗執行次數：

期間	船舶預防性 加強檢驗	公司DOC 額外評鑑	船上SMC 額外評鑑
2017.3.2 ~ 2017.12.31	87 (於國外20艘次)	11	4
2018全年	200 (於國外41艘次)	7	9
2019全年	144 (於國外34艘次)	9	7
2020全年	128 (於國外10艘次)	5	5

2020東京備忘錄之船旗國評比

國輪為白名單第13名

2021.4.30公布

表現度評比	船旗國
白名單 (共40國)	China, Republic of Korea, Hong Kong, Singapore, Germany, Bahamas, Bermuda (UK), Malaysia, Marshall Islands, France, Japan, Norway, Taiwan , Belgium, Denmark, Isle of Man (UK), Panama, Liberia, Thailand, Cayman Islands (UK), Malta, Greece, Portugal, Viet Nam, Gibraltar (UK), Russian Federation, Tuvalu, Cyprus, Netherlands, Antigua and Barbuda, United Kingdom (UK), Philippines, Bangladesh, Italy, U.S.A., Indonesia, Switzerland, Curacao, Chile, Sweden
灰名單 (共18國)	Saudi Arabia, Vanuatu, Turkey, Luxembourg, Kuwait, Saint Vincent and the Grenadines, India, Iran, Cook Islands, Sri Lanka, Pakistan, Qatar, Belize, Dominica, Comoros, Niue, Barbados, Croatia
黑名單 (共7國)	Democratic People's Republic of Korea, Kiribati, Palau, Jamaica, Mongolia, Sierra Leone, Togo

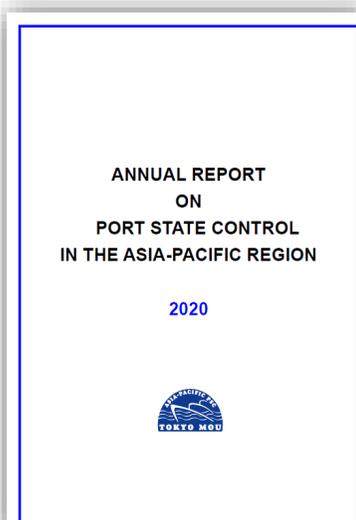
2020東京備忘錄之驗船機構評比

CR為高表現度第11名

2021.4.30公布

- 共82個驗船機構
- 17個驗船機構列為高表現度
- CR排名第11名

排名	驗船機構	表現度評比
1	China Classification Society (CCS)	高表現度 High Performance
2	RINA Services S.p.A. (RINA)	
3	American Bureau of Shipping (ABS)	
4	DNV GL AS (DNV-GL)	
5	Korean Register (KR)	
11	CR Classification Society (CR)	
17	Indian Register of Shipping	
18~28	Medium
28~82	Low and not listed

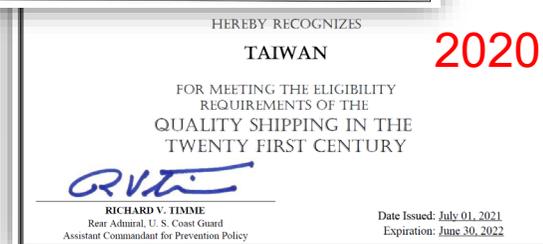
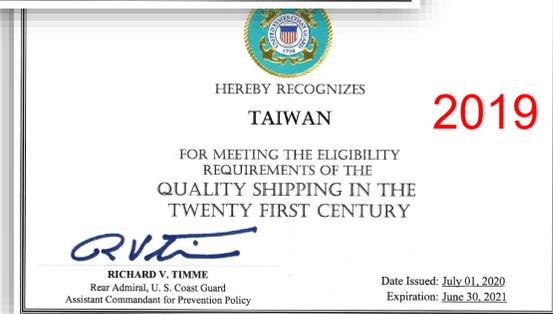


近年於東京備忘錄之排名

年度	Taiwan 於船旗國排名	CR 於驗船機構排名
2017	36 / 37 白名單	12 / 21 高表現度
2018	35 / 40 白名單	12 / 17 高表現度
2019	19 / 40 白名單	10 / 17 高表現度
2020	13 / 40 白名單	11 / 17 高表現度

2020年國輪於USCG之表現度

- CR船級船舶：2015-2020年 滯留率 **0.0%**
- Taiwan船籍船舶：2015-2020年 滯留率 **0.0%**
- Taiwan 2018、2019及2020年**連續三年**名列“QUALSHIP 21”制度之合格船旗國
- 航行美國線之國輪可以申請成為“QUALSHIP 21”合格船舶，減少在美國受檢之頻率。



Qualified Flag Administrations

Bahamas	Gibraltar	Marshall Islands	Taiwan
Bermuda	Greece	Netherlands	United Kingdom
Canada	Hong Kong	Norway	
Cayman Islands	Isle of Man	Republic of Korea	
Denmark	Italy	Saudi Arabia	
France	Jamaica	Singapore	
Germany	Japan		

今年度全球總共有23個船旗主管機關

各種措施強化船舶PSC受檢表現

Pre-Arrival PSC Checklist

港口國管制檢查表(到港前使用)

歷年CIC檢查題目皆包含於
CR的兩份中英文並列檢查表

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Pre-Arrival PSC checklist 2021-05



Checklist for Onboard Maintenance

船上保養檢查表

This checklist is solely provided as a guidance tool for the ship's Master and crew during routine maintenance and housekeeping on the ship.
此份檢查表僅作為提供船長及船員執行船上例行維護保養及內部管理之指南

The list does not claim to be complete and covers mainly those items that are frequently reported by PSC.
此份檢查表並未完整呈現，且僅涵蓋港口國管制經常提到的項目

Ship Name	
船名	
Checklist No.	
檢查表編號	
Date	
日期	

Onboard Maintenance 2021-05

LINE 條碼



http://line.me/ti/g/fXw_7cSzV7

(使用條碼或網址連結皆可加入)

1. 請張貼於駕駛臺、大臺、二臺、甲板辦公室、機艙控制室等處之明顯位置。
2. PSCO 上船，或即將/可能上船，請船長或輪機長或工程師等務必加入此群組。
3. PSC 檢查結束後請退出群組，俾使本群組服務他船。下一次 PSC 檢查時請再加入。

Version 2021.4

辦理PSC相關研討會

- 於CR技術研討會中向船東說明檢驗重點及常見缺失。
- 針對每年舉辦之「重點檢查活動(CIC)」預先說明問卷各考題之實務因應作法。
- 舉辦本次「PSC重點檢查項目與強化應對機制研討會」。

消防員裝備



- 消防服破損
- 氣瓶壓力不足
- 備用氣瓶數量不足
- 裝備缺失
- 裝備與防火控制圖不符
- 裝備儲放位置堆放雜物無法立即使用



2019 Tokyo MOU CIC問卷



1. 2019 CIC重點檢查活動

2019 CIC Question 4

回答"NO"可能遭滯船



- Is the steering gear system and its related emergency alarms operational?
操舵系統及其應急警報是否做動正常? (SOLAS VI/26)
- 開航前12小時內，船員確認並測試操舵裝置。定期或短程航行船舶每週至少一次。測試應包含：
 - ▶ 滿舵運作測試
 - ▶ 操舵裝置及其連動部件目視檢查
 - ▶ 駕駛室與舵機室之通信操作
- 駕駛室與舵機室應張貼操作說明(遙控系統和操舵裝置動力設備之轉換程序)



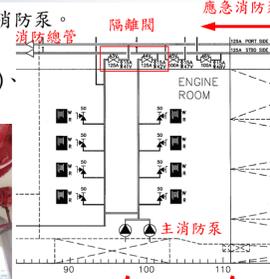
1. 2019 CIC重點檢查活動

2019 CIC Question 8

回答"NO"可能遭滯船



- 機艙無人當值或僅一人當值之貨船應可遠端啟動一部主消防泵。
啟動位置：消防控制站/駕駛台。(SOLAS II-2/10 2.1.2.2.2)
- 具有機器由中央控制站操作(CAS)、無人當值機艙(CAU)、由駕駛台操作機器(CAB)等CR船級符號之船舶，可在駕駛台啟動一部主消防泵。
- 具有CR CAU符號之船舶，應可於消防控制站啟動應急消防泵。
- 消防總管隔離閥平時應保持常開，手輪無卡死，外觀無漏水。



註：貨船，若有一艙間失火會使所有消防泵失去作用，則應配備一部應急消防泵 (SOLAS II-2/10 2.2.3.1.2)

YES	NO	N/A
符合	不符合	無應急消防泵

CIC on Emergency Systems and Procedures					
Inspection Authority	IMO Number	Inspection Port			
Ship Name					
Date of Inspection					
QUESTIONS 1 TO 10 ANSWERED WITH A "NO" SHALL BE ACCOMPANIED BY A RELEVANT DEFICIENCY ON THE REPORT OF INSPECTION.					
No.	Question	Documentation	Yes	No	N/A
1	Is the damage control plan readily available on board?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating of Emergency system					
2	Is the public address system capable of broadcasting emergency announcements?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	For ships with water level detectors installed, is the system and alarm arrangements operational?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Is the steering gear system and its related emergency alarms operational?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Does the muster list specify details in accordance with the requirements of SOLAS 1996-1998 Amendment, Chapter III, Regulation 37?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Does the emergency source of electrical power supply to power correctly to essential equipment for safety in an emergency?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7a	Where the emergency source of electrical power is a generator, is it in correct operational condition?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7b	Where the emergency source of electrical power is an accumulator battery, are the batteries and its switchboard in good condition?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Is the emergency fire pump in full operational condition?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crew familiarization with emergency systems					
9	Where a fire drill and/or abandon ship drill was witnessed, was it found to be satisfactory?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	For the above checked emergency equipment, are the relevant crews familiar with the operation?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

強化PSC受檢應對機制

- 落實到港前自檢及平日計畫性維護。
- 到港前檢查表納入ISM程序並確實執行。 CR-21-003(Q)
- 受檢前務必加入「CR PSC應急群組」。
- 若自檢發現缺失無法立即改善，應向公司報告、安排維修、採用替代措施，申請船旗國特許，並於到港前通報當地PSC。

PSC檢查前
自行宣告已知之缺失
(以香港為例)

File No: _____

海

Declaration of Shipmaster

Date of inspection: _____

Name of Ship: _____

IMO Number: _____

The shipmaster declares that there is no deficiency of the ship under his command before commencement of Port State Control inspection on board.

Or the shipmaster declares before PSC inspection that: the following equipment is/are not in working condition:

.....

.....

.....

Signature of the shipmaster or authorized person: _____

Name: _____

Remarks:
Original and signed copy of this declaration is kept by PSCO.

強化PSC受檢應對機制(續)

- 受檢若發現缺失，原則應於30分鐘內排除，通知PSCO複檢。
- 受檢誠懇應對，勿與PSCO起衝突。有缺失當場儘速改善。
- 即使發現重大缺失，仍盡一切努力，請PSCO開立離港前改善(Code 17)，勿開立滯船(Code 30)。
- 船長在PSC檢查報告上簽名前，確認是否真的已無法挽回。

同樣都是離港前要改善，
但Code 17或Code 30後果大不同

Deficiencies

seq	code	nature of deficiency	convention	action taken	RO resp?	resp RO
1	02108	Emergency switch board 110 volts system, low insulation		17		
2	07115	Engine room fire damper number 1, Not operational.	S74-1/CII-2/R48 juncto R16	30	No	

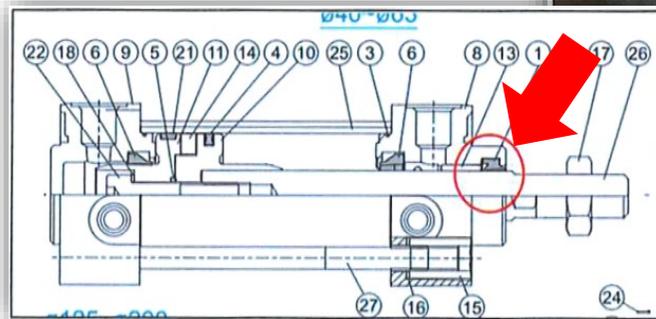
東京備忘錄之國輪缺失類別排序

從歷史中學習到的事

缺失類別	2018缺失數	2019缺失數	2020缺失數
Fire Safety(消防安全)	31	16	9
Living and Working Conditions (生活與工作條件)	10	15	8
Life Saving Appliances (救生設備)	13	32	6
Safety of Navigation (航行安全)	18	15	5
Water / Weathertight Conditions (水密/風雨密情況)	3	10	5
Emergency Systems (應急系統)	5	8	4
Pollution Prevention - MARPOL ANNEX IV (污水污染)	1	2	3
Propulsion and Auxiliary Machinery (推進及輔助機器)	14	8	2
Labour conditions (勞動條件)	5	7	3
Other (其他)	1	2	1

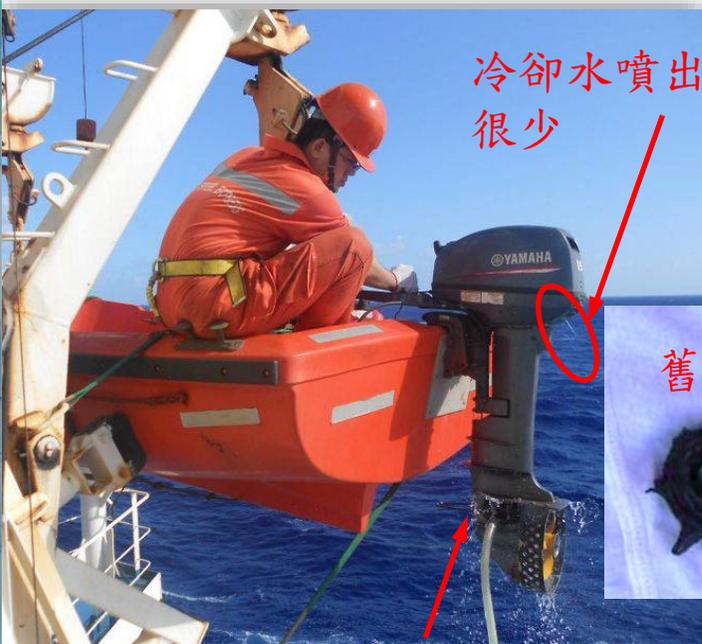
消防安全

- 某國輪遭滯船
- 缺失：機艙通風防火檔板無法做動
- 原因：氣動缸密封環老化，導致做動不順暢
- 當日檢查過程：
 - ▶ 14:30開始檢查
 - ▶ 15:30開立缺失，
PSCO限16:00前改善完畢，否則滯船
 - ▶ **16:20 PSCO通知已滯船**
 - ▶ 15:45~16:45進行修理
 - ▶ 16:50 通知PSCO已改善



救生設備

- 某國輪遭滯船
- 缺失：救難艇之舷外機冷卻水泵葉輪老化，無法打冷卻水



冷卻水噴出
很少



換新後



舊葉輪

新葉輪



2020.07.14 13:36

測試時
冷卻水進入

應有冷卻水噴出，
顯示冷卻功能正常

勞動條件

- 某國輪遭滯船
- 缺失1：同一船員有兩份不同的僱傭契約

- ▶ 一個船員不能有兩份不同的僱傭契約(SEA)
- ▶ 船員和船公司簽的SEA
- ▶ 船員和外國招募機構(SRPS)簽的SEA

除非完全相同，
否則不應有兩份

- 缺失2：未依僱傭契約每月給付船員全額工資

- ▶ SEA所載之工資(Basic monthly wage, Fix overtime, Allowance等)應清楚明列，並留存船員簽收單。簽收金額必須與SEA所載工資完全相同。
- ▶ 工資應達到集體談判協定(CBA)及國家所訂之最低標準。

**** EMPLOYMENT CONTRACT ****

SEAMAN

Name: _____ Give Name: _____

Position: _____ Medical certificate issued on: _____

Season and time of taking up position: _____ Port where Position taken up: _____

Nationality: _____ Passport No: _____ Seaman's book No: _____

EMPLOYER AND VESSEL

Ship/Company: _____

Address: _____ Official No: _____ Flag: _____

TERMS AND CONDITIONS OF CONTRACT

The owner and _____ both agreed that all the terms and conditions of this employment contract are exact the same as that of NCSU/SD/Collective General Agreement signed by mutual parties on _____

Period of employment 10 MONTHS	Basic monthly wage: US\$ _____	Wage: ALLOWANCE US\$ _____ LEAVE PAY US\$ _____
Hours of work: 8 HRS PER DAY	Fix overtime: US\$ _____	Total wage: US\$ _____
Other terms: _____		

應完全相同

Rank	NAME (same as on passport)	Passport No.	Basic Wages	FIX O.T.	Leave Pay+ Allowance	Days		SBP	SIGNATURE
						From	To		
A/B	1		614	384	80	1	31	US\$1,078.00	
A/B	2		614	384	80	1	31	US\$1,078.00	
CPNTR	3		686	429	90	1	31	US\$1,205.00	

電子檔證書列印之有效性

驗證網頁樣本如下：



- 為確保遠端檢驗後之簽署及發證達到零時差以避免個別 PSCO 之疑慮，本中心將申請國輪電子證書授權。(CR已獲巴拿馬授權簽發電子證書)
- 在未正式授權前，有關電子檔列印短證有效性之短期補救措施，已在證書加上 QR Code 驗證碼，供 PSCO 立即查詢證書之有效性。

QR Code 樣本圖片如下：



Scan to verify this electronic signature

CR100 ✕ E OSV, HLA, DPS-II, Helideck-I
CMS(CAU) ✕ NAV0
and Appliance ---
及 設 備
(m six months) Until Oct. 07, 2021
六 個 月) 至



H.S.Wang 中國驗船中心驗船師

相關措施提醒

- 船東所屬之高風險船舶由CR個別通知。
- 依據「110年度強化國輪管制檢查作業」會議紀錄，若國輪遭開列超過5項缺失(包含中國)，船東須申請臨時檢驗，CR驗船師將會同航務中心檢查員登輪確認缺失矯正及執行預防性加強檢驗，並視缺失內容決定是否執行船上SMC額外評鑑及公司DOC額外評鑑。

				Profile		Standard Risk Ship (SRS)	Low Risk Ship (LRS)
		<div style="border: 1px solid red; padding: 2px;">累計4點以上即為高風險船舶</div>		<div style="border: 1px solid red; padding: 2px;">High Risk Ship (HRS) (When sum of weighting points >=4)</div>			
		Criteria	Weighting points	Criteria	Criteria		
Type of Ship	Chemical tanker, Gas Carrier, Oil tanker, Bulk carrier, Passenger ship, Container ship		2	Neither LRS nor HRS	-		
Age of Ship	All types > 12y		1		-		
Flag	BGW-list ¹⁾	Black	1		White		
	IMO Audit ²⁾	-	-		Yes		
Recognized Organization	RO of Tokyo MOU ³⁾	-	-		Yes		
	Performance ⁴⁾	Low Very Low	1		High		
Company performance ⁵⁾	Low Very Low No inspection within previous 36 months		2		High		
Deficiencies	Number of deficiencies recorded in each inspection within previous 36 months	How many inspections were there which recorded over 5 deficiencies?	No. of inspections which recorded over 5 deficiencies	All inspections have 5 or less deficiencies (at least one inspection within previous 36 months)			
Detentions	Number of Detention within previous 36 months	3 or more detentions	1	No detention			

結語

- 國輪近年來於Tokyo MOU表現良好，佳績需要各方單位共同維護。
- 維持精進船舶的PSC受檢品質，此不僅提高航安，更能於PSC檢查制度中造成良性循環，對各單位都有益。



報告完畢