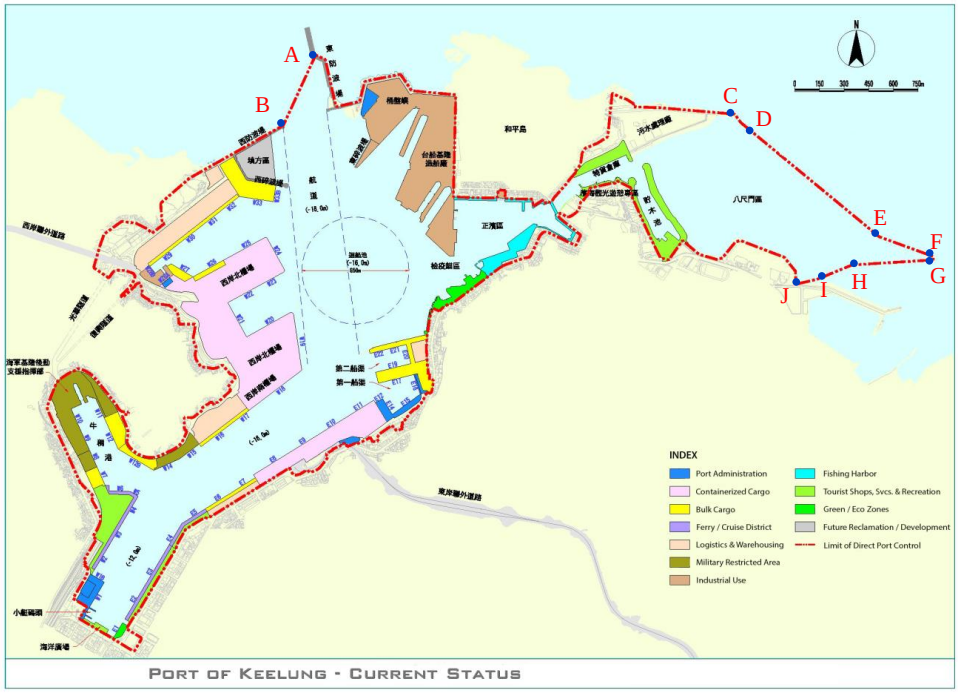
我國國際商港區域(水域經緯度座標及港區界線)

International commercial port area under the jurisdiction of the Republic of China (Taiwan) (Water latitude and longitude coordinates and port boundaries)

（一）基隆國際商港(Port of Keelung)



港區示意圖(Port area diagram)

水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	121° 45' 16.4012"	25° 09' 44.5799"
B	121° 45' 09.3468"	25° 09' 30.7209"

C	121˚ 46' 47.4016"	25˚ 09' 32.3934"
D	121˚ 46' 48.6691"	25˚ 09' 30.7416"
E	121˚ 47' 18.6017"	25˚ 09' 08.0159"
F	121˚ 47' 30.3659"	25˚ 09' 04.0412"
G	121˚ 47' 30.2752"	25˚ 09' 03.3830"
H	121˚ 47' 12.6378"	25˚ 09' 02.4719"
I	121˚ 47' 05.0567"	25˚ 08' 59.6954"
J	121˚ 47' 00.3948"	25˚ 08' 58.7433"

基隆港船舶航行指南

一、目的：為加強對船舶交通服務，促進船舶航行安全、保護海域環境、協助提供船舶訊息及必要之協助服務，特編訂基隆港船舶航行指南。

二、依據：商港法、國際商港港務管理規則。

三、地理位置與港區：(參考港區圖)

(一)地理位置：

基隆港位於25°09′42.5"N、121°44′57.5"E，為本省東北端三面環山、一面環海之天然港埠。基隆嶼位處港口東北角，距本港港外2.5浬，為最佳陸標之一， 和平島為港口東側最大島嶼，桶盤嶼為港口入口東側之低平島嶼；桶盤嶼上設有「船舶交通管制中心」，負責港口交通服務。環港碼頭長度九千餘公尺，其中八千餘公尺為營運碼頭，水深從9公尺到14.5公尺不等，港域範圍面積約五百七十二公頃(含陸上面積一百九十六公頃、海域面積三百七十六公頃)。本港每年九月至翌年五月多為東北風及北北東風，六至八月多為西南及南風，冬季以東北季風，夏季以西南季風較為強勁，每年七月至十月為颱風季，雨量冬季較多，霧日以春夏季(三月至七月) 較多，平均潮差約0.92公尺。

(二)港區劃分：

1、港　界：自西防波堤向東防波堤端延引一直線，並自計劃興建八尺門北防波堤端與計劃興建八尺門南防波堤端再延引一直線，在此兩端以內之水域及經勘劃核定之陸上地區範圍定為港區。

2、內　港：西十九號碼頭臨時燈桿(25°08′50.3"N、121°44′43"E)與安瀾燈桿(25°08′52.5N、121°44′56.5") 連接線以南水域為內港。

3、外　港：東(延伸)、西兩防波堤連接直線以內之水域，除內港、正濱區及八尺門區以外之水域均屬之。

4、正 濱 區：和平橋(不含)以西及自八尺門燈桿由正北順轉180度直線以東水域均屬之。

5、八尺門區：自計劃興建八尺門北防波堤端與計劃興建八尺門南防波堤端連一直線，線內至和平橋(含)以東水域均屬之。

(三)進、出港口之主航道：

自東防波堤燈桿(25°09′40"N、121°44′49.3"E)至安瀾燈桿(25°08′52.5"N、121°44′56.5"E)連接直線，直接與西防波堤燈桿(25°09′37.2"N、121°44′39.1"E)至西十九號碼頭臨時燈桿(25°08′50.3"N、121°44′43"N)連接直線，在上述兩直線以內水域為進、出港之主航道，其中線最淺水深為零潮位（基隆港潮標零點）下十五.五公尺，嚴禁船舶拋錨。主航道入口處(港口)寬二百七十五.六一公尺，西十九號碼頭臨時燈桿與安瀾燈桿間為內港港口，其寬度為三百五十五公尺。

(四)錨泊地及檢疫錨地：

1、自東碎波堤燈桿(25°09′30.6"N、121°44′55"E)至安瀾燈桿(25°08′52.5"N 121°44′56.5"E)連線以東之水域為檢疫錨地。

2、港外錨地

(1)西側錨區：進港航道以西至野柳半島以東之間水域。

(2)東側錨區：出港航道以東，基隆島至深澳港之間水域。

如來港商輪暫時無船席可靠，本港外海「西側錨泊區」內之G、B、C、F四點連線範圍，暫規劃為商輪等待進港「錨泊區」（如附圖），以便於船席空出後能迅速進港靠泊作業。

(五)禁止錨泊區：

1、西碎波堤燈塔，又名光華塔(25°09′26.3"N、121°44′40.1"E)至西十九號碼頭臨時燈桿(25°08′50.3"N、121°44′43"E)連接直線與岸線所含括之水域為「基隆港禁錨區」，任何船隻不得在該水域內錨泊。

2、港口外海分道航行進、出航道及分隔區內，禁止任何船舶錨泊或滯留。

3、以港口中心(25°09′39"N、121°44′45"E)為圓心，距離一千五百碼為半徑所含蓋之水域，佈設海底電纜，禁止拋錨或觸底拖帶。

四、船舶進、出港申請及港口管制：

(一)商船：

應先由所屬船公司或船舶代理公司港口代理行依照「商港法」第二十四、二十五條及「國際商港港務管理規則」第四、五及七條規定，向航政組辦妥船舶進、出港書面簽証手續，並依相關規定辦理船舶之船席調配。船舶完成進出港書面簽証手續後，當駛近距離本港二十浬水域時，應以ＶＨＦ十四頻道與「基隆港埠電台」聯絡，依規定完成報到手續；經繫船課排定碼頭並獲基隆港船舶交通管制中心許可通知後，始可依序進港。

(二)軍艦：

1、比照一般商輪申請，經船舶交通管制中心核准並排序後進、出港，如負有搜救、作戰、載運傷患等緊急任務時，船舶交通管制中心依港口交通狀況予以優先核准。

2、在船舶交通管制中心管制區內航行，應守值VHF十四頻道，以備緊急狀況時連繫。

(三)公務船：(含海巡署艦艇、關稅局艦艇、警巡艇、非公務船、本局港勤船、漁政船)

1、核對資料是否正確；是否依規定辦理簽證或完成免逐次簽證手續。

2、核准進、出港並排序。

(四)工作船：

1、核對資料是否正確；是否依規定辦理簽證或完成免逐次簽證手續。

2、拋泥船與拖駁拖曳長度大於五十公尺者，應備便VHF十四頻道，並與船舶交通管制中心保持隨呼隨應。

以上船舶進、出港口，當通過外防波堤中心之時間，為船舶進出港口記錄時間依據

五、船岸通信：

(一)本港船舶交通管制中心設有基隆港埠電台，港埠網無線電話頻道與功能如后：

1、ＶＨＦ十六頻道：一五六・八兆赫，為國際遇險、緊急、安全及呼叫頻道。

2、ＶＨＦ十四頻道：一五六・七兆赫，為港埠作業之工作頻道，可作為船舶報到及船岸聯絡之用。

3、ＶＨＦ十二頻道：一五六・六兆赫，為備用頻道，作為引水作業之用。

4、呼號：基隆港埠電台（Keelung Port Radio）。

(二)港勤網無線電話：

「船舶、港勤」兩網頻率：一四一・〇一〇、一四一・〇四〇MHZ及一四一・〇七〇、一四一・一〇〇MHZ，依「專用無線電信設置規則」船舶無線電台作業，為基隆港埠電台、引水人、拖船、交通船、工作船等之聯絡頻道，頻率、呼號與通話程序依照「國際無線電規則」及「基隆港無線電通話要點」相關規定辦理。

(三)船舶與船舶交通管制中心使用 VHF 頻道通話，所使用之語言以英語為主，國語為輔。

六、船舶航泊應注意事項與引水人作業規定：

(一)分道航行制：(參考錨區及航道圖)

1、各點位置：（以下各點位置均以中華民國海軍水道圖0353號測繪）

A-25°09′36"N 121°44′39"E	B-25°11′09"N 121°41′50"E
C-25°12′57"N 121°42′23"E	D-25°12′12"N 121°45′34"E
E-25°09′48"N 121°45′00"E	F-25°12′38"N 121°43′46"E
G-25°10′13"N 121°44′12"E	H-25°10′19"N 121°45′06"E
J-25°13′07"N 121°43′53"E	K-25°11′00"N 121°43′59"E
W-25°12′31"N 121°44′12"E	X-25°12′18"N 121°45′10"E
Y-25°10′24"N 121°44′42"E	Z-25°10′23"N 121°44′35"E

2、任何船舶駛近港口及駛離港口，均應本此進、出水道航行。

3、該兩進、出水道均為單向水道，在此兩水道航行之船舶，應本自身船舶性與前船保持安全距離。

4、該兩進、出水道內嚴禁任何船舶錨泊或滯留。

5、港口為單向航行，同一時間僅允許乙艘船隻通過。

6、經核准進港之船舶，應依據一九七二年國際海上避碰規則（一九八九年修正本）第二章第十條，分道通航制之第二款之第（三）節：使用分道通航之船舶，通常均由巷道之起（終）點進、出巷道，但如由任一側進、出時，應儘可能採取與該巷道一般通行方向成最小之角度進、出。及第三款：船舶應儘實際可能避免橫越航行巷道，如不得已而橫越時，應盡實際可能以與該巷道一般通行方向成垂直角度橫越之，並應注意避讓航道上之船舶。

(二)船舶報告：

下列船舶在基隆港船舶交通管制區域內航行、停泊與作業時，均需向船舶交通管制中心作動態報告：

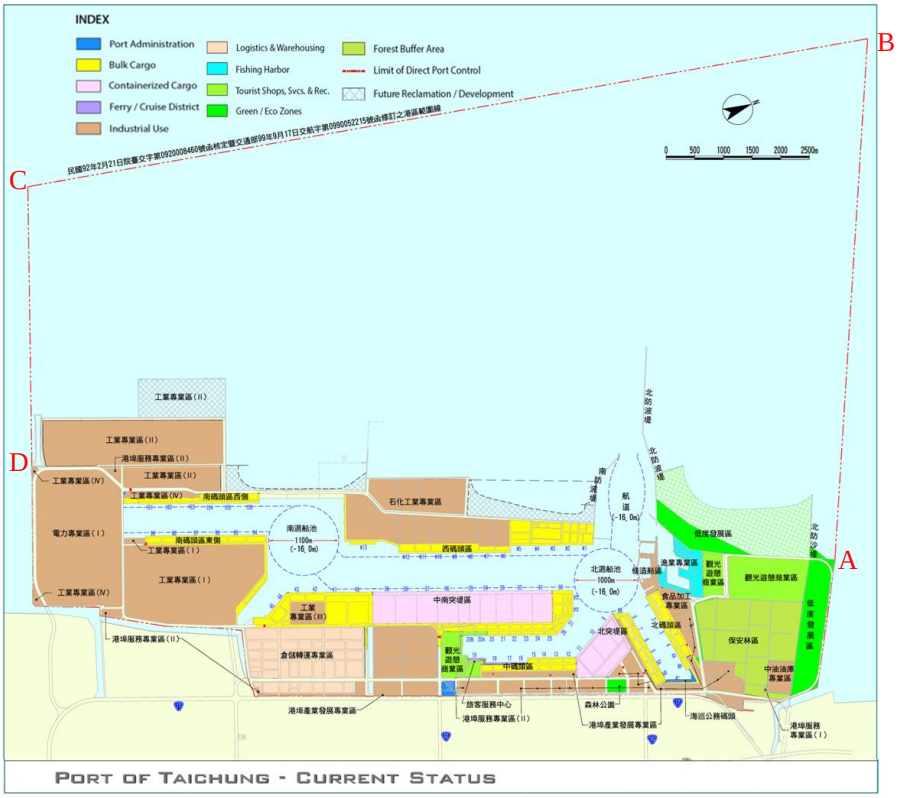
1、總噸位五百以上之動力船舶。

2、船長五十公尺以上之動力船舶。

3、從事拖曳或推頂之船舶，其結合總噸位五百或兩船結成一體時，船長大於五十公尺，或拖曳長度大於五十公尺者。

4、裝有特高頻無線電（VHF）之客船，不論其長度與總噸位為多少。

（二）臺中國際商港(Port of Taichung)



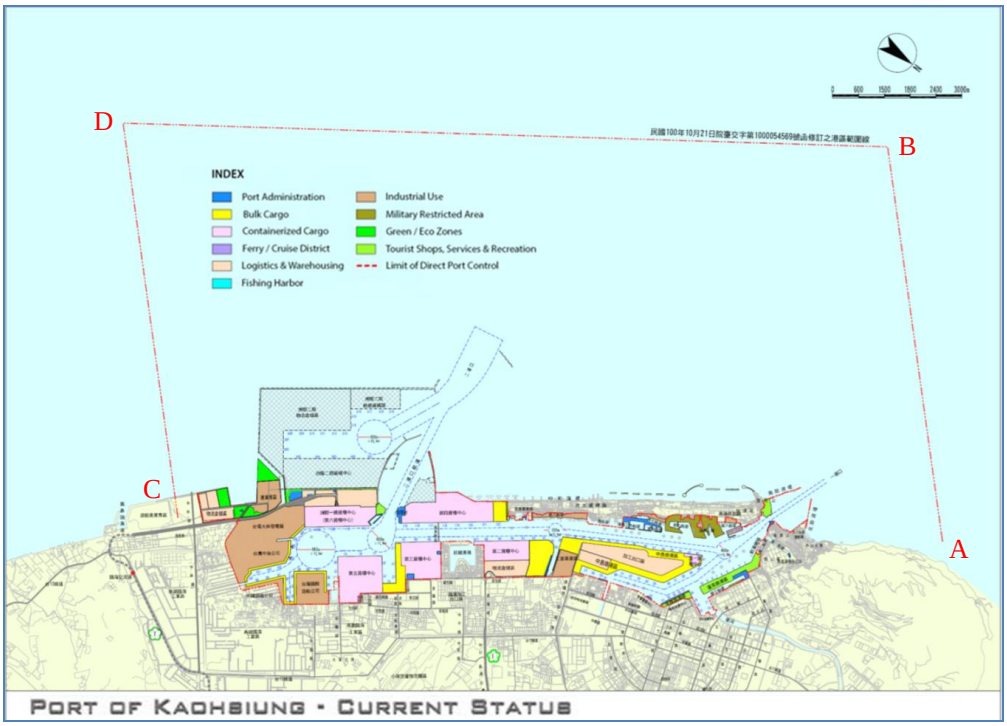
港區示意圖(Port area diagram)

水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	120° 31' 39.5149"	24° 18' 48.6039"
B	120° 27' 17.1124"	24° 20' 42.6775"
C	120° 25' 40.0928"	24° 13' 36.5680"
D	120° 28' 05.5805"	24° 12' 45.4794"

（三）高雄國際商港(Port of Kaohsiung)



港區示意圖（Port area diagram）

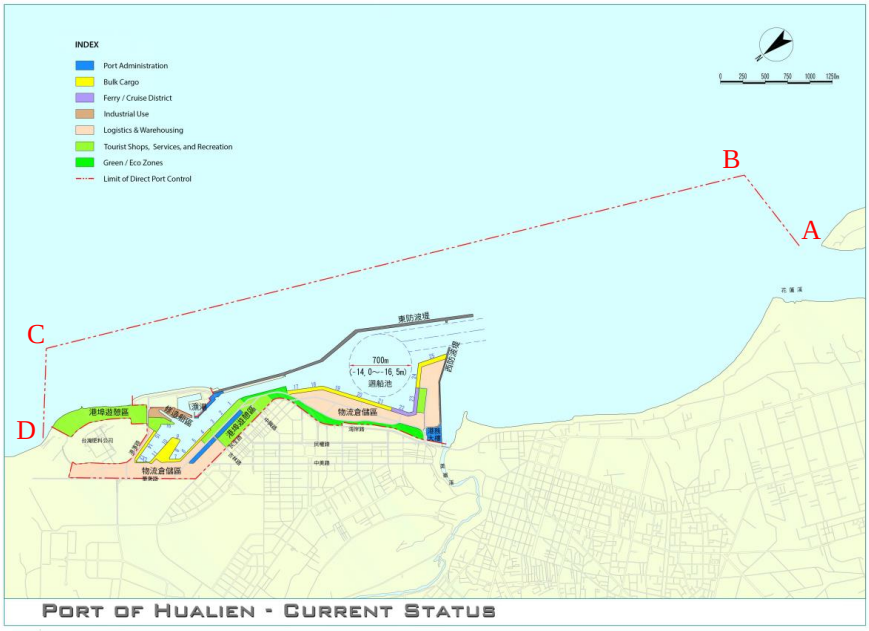
水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-

WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	120° 14' 46.9846"	22° 38' 53.6348"
B	120° 10' 57.4687"	22° 35' 18.3405"
C	120° 20' 48.9567"	22° 31' 03.6090"
D	120° 16' 59.5409"	22° 27' 28.4147"

（四）花蓮國際商港(Port of Hualien)



港區示意圖(Port area diagram)

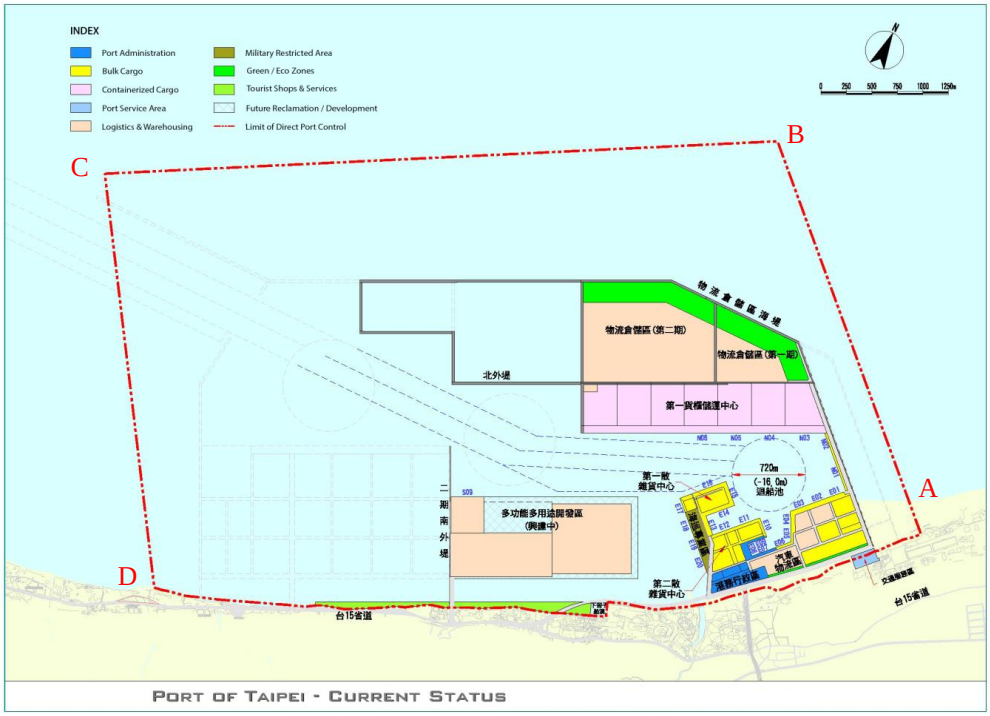
水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-

WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	121° 36' 42.33"	23° 56' 21.50"
B	121° 37' 17.65"	23° 56' 21.35"
C	121° 39' 14.40"	24° 00' 19.48"
D	121° 38' 47.45"	24° 00' 40.50"

（五）臺北國際商港(Port of Taipei)



港區示意圖(Port area diagram)

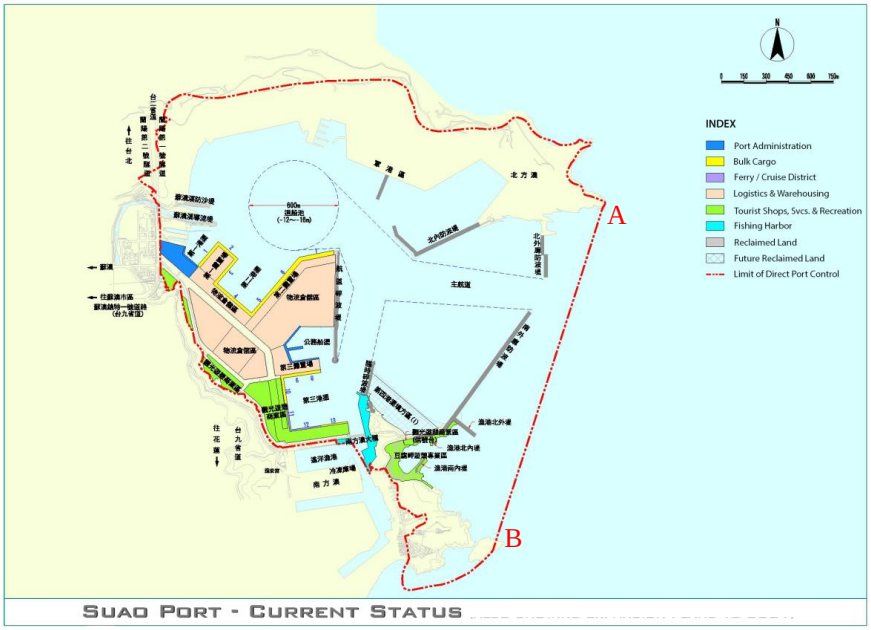
水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-

WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	121° 24' 20.9109"	25° 09' 40.3558"
B	121° 22' 35.9774"	25° 11' 13.1027"
C	121° 19' 08.7590"	25° 09' 30.5511"
D	121° 20' 27.4610"	25° 07' 38.4951"

（六）蘇澳國際商港(Port of Suao)



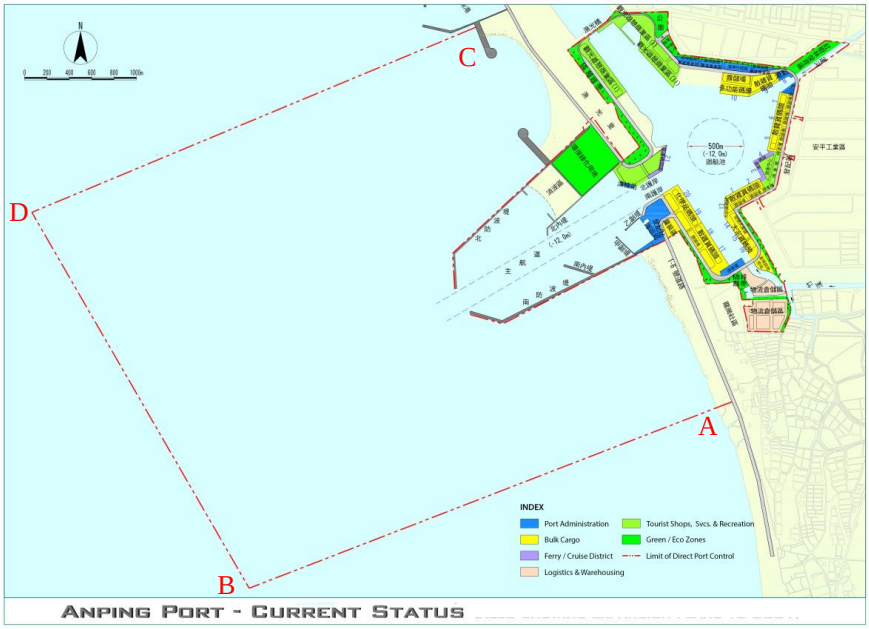
港區示意圖（Port area diagram）

水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	121° 53' 08.64"	24° 35' 58.18"
B	121° 52' 42.11"	24° 34' 44.08"

（七）安平國際商港(Port of Anping)



港區示意圖（Port area diagram）

水域經緯度座標及港區界線(WGS84 經緯度座標系統)

Water latitude and longitude coordinates and port boundaries-

WGS84 latitude/longitude coordinate system

點位 Point	東經 E East Longitude	北緯 N North Latitude
A	120˚ 10' 08.2"	22˚ 57' 09.1"
B	120˚ 08' 17.1"	22˚ 56' 28.7"
C	120˚ 08' 56.9"	22˚ 59' 01.0"
D	120˚ 06' 59.0"	22˚ 58' 14.7"

防止船舶污染國際公約 MARPOL
附則 VI　防止船舶空氣污染規則
REGULATIONS FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

第 I 章
總則

第 1 條

適用範圍

本附則規定適用於所有船舶，但本附則第 3、5、6、13、15、16、18、19、20、21、22 及 23 條另有明文規定者除外。

第 2 條

定義

就本附則而言：

1　**附則**係指經《1978 年議定書》和《1997 年議定書》修訂之《1973 年防止船舶污染國際公約(MARPOL)》附則 VI，附則可由本組織修訂，但此等修正案須依本公約第 16 條的規定予以通過並生效。

2　**相似建造階段**係指在該階段：

.1　可辨別某一具體船舶的建造開始；和

.2　船舶業已開始的裝配量至少爲 50 噸或爲全部結構材料估算品質的 1%，取較少者。

3　**周年日期**係指每年與《國際防止空氣污染證書》期滿之日對應的月和日。

4　**輔助控制裝置**係指船用柴油機上安裝的用於保護柴油機和/或其輔助設備不受可導致其損壞或故障的操作條件影響的或有助於柴油機起動的一個系統、功能或控制策略。輔助控制裝置也可以是業已滿意地表明爲非抑制裝置的策略或措施。

5　**連續進料**係指當焚燒爐在正常操作條件下，燃燒室工作溫度在 850℃和 1,200℃之間時，無需人工輔助將廢物送入燃燒室的過程。

6　**抑制裝置**係指爲啓動、調整、推遲或停止排放控制系統的任何部件或功能而對操作參數(例如：柴油機速度、溫度、進氣壓力或任何其他參數)進行測量、感應或反應的裝置，從而在正常操作遇到的工況下降低排放控制系統的有效性，但在適用的排放發證試驗程式中大量使用該裝置者除外。

7　**排放**係指從船舶上向空氣或海洋中釋放受本附則控制的任何物質。

8　**排放控制區**係指要求對船舶排放採取特殊強制措施以防止、減少和控制 NO_x、SO_x 或顆粒物質的排放或所有三類物質的排放造成空氣污染以及伴隨而來對人類健康和環境的不利影響的區域。排放控制區域應包括本附則第 13 和 14 條所列或所指定的區域。

9　**燃油**係指爲了船舶推進或運轉而交付船上的用於燃燒的任何燃料，包括蒸餾物和殘餘燃油。

10　**總噸位**係指按《1969 年船舶噸位丈量國際公約》或任何後續公約的附件 I 中的噸位丈量規定計算出的總噸位。

11　**裝置**係指與本附則第 12 條有關的在船上安裝的系統、設備(包括手提式滅火器)、絕緣體或其他材料，但不包括對以前安裝的系統、設備、絕緣體或其他材料的修理或重新充注、或者對手提滅火器的重新充注。

12　**安裝**係指安裝或擬安裝上船的船用柴油機，包括可移動式輔助船用柴油機，但其加油、冷卻或排氣系統須是船舶的組成部分。加油系統只有在永久固定在船上時才可視爲船舶的組成部分。本定義包括用於補充或增強船舶已裝動力容量並擬成爲船舶組成部分的船用柴油機。

13　**不合理排放控制策略**係指當船舶在正常使用條件下營運時將排放控制系統的有效性降至低於適用的排放試驗程式的預期水準的任何策略或措施。

14　**船用柴油機**係指本附則第 13 條所適用的以液體或雙燃料運轉的任何回復式內燃機，包括增壓/複式系統(如應用)。

15　**氮氧化物技術章程**係指 1997 年 MARPOL 大會決議第 2 案所通過的《船用柴油機氮氧化物排放控制技術章程》，由本組織修正，但這些修正案須按照本公約第 16 條的規定予以通過並生效。

16　**消耗臭氧物質**係指在應用或解釋本附則時有效的《1987 年消耗臭氧層物質蒙特利爾議定書》第 1 條第(4)款中所定義的並列於該議定書附件 A、B、C 或 E 中的受控物質。

在船上可能有的“消耗臭氧物質”包括但不限於下列各項：

海龍 1211　溴氯二氟甲烷

海龍 1301　溴三氟甲烷

海龍 2402　1,2-二溴-1,1,2,2-四氟乙烷(亦稱作海龍 114B2)

CFC-11 三氯氟甲烷

CFC-12 二氯二氟甲烷

CFC-1131,1,2-三氯-1,2,2-三氟乙烷

CFC-1141,2-二氯-1,1,2,2-四氟乙烷

CFC-115氯五氟乙烷

17　**船上焚燒**係指在船上焚燒該船正常營運期間產生的廢物或其他物質。

18　**船用焚燒爐**係指以焚燒爲主要目的而設計的船上設施。

19　**建造的船舶**係指已安放龍骨或處於相似建造階段的船舶。

20　**渣油**係指來自燃油或潤滑油分離器的渣油、來自主機或輔機的廢棄潤滑油、或來自艙底污水分離器、油過濾設備或滴油盤的廢油。

21　**液貨船**於本附則第 15 條係指在本公約附則 I 第 1 條中定義的油輪或附則 II 第 1 條中定義的化學品船。

22　**現成船**係指非新船。

23　**新船**係指

.1　2013 年 1 月 1 日以後簽約者；

.2　無造船契約，但於 2013 年 7 月 1 日以後安放龍骨的安放或有類似施工階段者。

.3　2015 年 7 月 1 日以後交船者。

24　**「重大改建」**係指在第 4 章之改建船舶：

.1　改變船舶載重噸，承載能力或柴油機功率之船舶;

.2　改變船舶種類之船舶;

.3　經政府同意延長船舶使用年限之船舶;

.4　無法符合本公約相關規定之新船，而必須改建之船舶

.5 改變船舶能源效率，包括任何修改，將會導致超過第 21 條適合所需 EEDI 值之船舶。

25 **散裝船**係指主要用於載運散裝乾貨之船舶，包括海上人命安全公約第 12 章第 1 條所定義的礦砂船等類型，但不包括兼用貨船(如 OBO)。

26 **液化氣體船**係指建造或使用於運送散裝液化氣體之貨船。

27 **液貨船**於本附則第 4 章係指在本公約附則 I 第 1 條中定義之油輪或附則 II 第 1 條中定義之化學品船或有毒液體船。

28 **貨櫃船**係指設計專用貨艙和甲板裝載貨櫃之船舶。

29 **雜貨船**係指載運普通貨物之船舶。該定義不包括專門的乾貨船，且不包括載運家畜、駁船、重負荷載體、遊艇及核燃料等船舶。

30 **冷凍貨船**係指設計專爲運送冷藏貨物貨艙之船舶。

31 **兼用貨船 (如 OBO)**是指設計裝載液體和乾散貨物兼用之船舶。

32 **客船**是指載運超過 12 名乘客之船舶。

33 **駛上駛下貨船(汽車船)**係指設計多甲板駛上駛下方式載運轎車和卡車之船舶。

34 **駛上駛下貨船**係指設計駛上駛下方式貨艙載運貨物之船舶。

35 **駛上駛下客貨船**係指設計駛上駛下方式貨艙載運貨物之客船。

36 **EEDI 達成指數(Attained EEDI)**係指單一船舶依第 4 章第 20 條規定所計算之 EEDI 值。

37 **EEDI 需求指數(Required EEDI)**係指指定之船舶種類和載重噸符合第 4 章第 21 條規定所允許之 EEDI 最大值。

第 3 條

例外和免除

一般規定

1 本附則的規定不適用於：

.1 任何爲保障船舶安全或海上救助人命所必需的排放；或

.2 任何因船舶或其設備損壞而造成的排放：

.2.1 但須在發生損壞或發現排放後，已採取了一切合理的預防措施防止排放或使排放減至最低限度；和

.2.2 如果船舶所有人或船長故意造成損壞，或明知損壞可能發生而草率行事，則不在此例。

爲減少和控制船舶排放技術研究而進行的試航

2 當事國主管機關可與其他主管機關適當合作，對爲開發減少和控制船舶排放技術及柴油機設計程式而進行試航的船舶，簽發對本附則具體規定的免除證書。只有當本附則或經修訂的《2008 年氮氧化物技術章程》中具體規定的應用會妨礙此類技術或程式的研發時，才能給予此種免除。應只向最少數量的必要的船舶簽發免除證書，同時還應滿足下列規定：

.1 對於每缸排量低於 30 升的船用柴油機，海上試航時間不應超過 18 個月。如需更多時間，授予免除證書的主管機關可對免除證書進行換新，再免除 18 個月；或

.2 對於每缸排量爲 30 升或以上的船用柴油機，船舶試航時間不應超過 5 年，並需要發證的主管機關在每次中期檢驗時進行進度評審。如試驗未能遵守免除條件或確定該技術或程式在減少和控制船舶排放方面產生有效結果的可能性不大，則基於該評審可撤銷該免除證書。如評審的主管機關確定開展某項技術或程式的試驗需要更多時間，則可對免除證書進行換新，增加期限不超過 5 年。

海底採礦活動產生的排放

3.1 按本公約第 2(3)(b)(ii)條規定，對海底礦物資源的勘探、開發和相關近海加工而直接產生的排放免除本附則的規定。此類排放包括：

.1 焚燒純粹和直接由海底礦物資源的勘探、開發和相關近海加工產生的物質而造成的排放，包括但不限於在完井和試驗作業期間烴類物質的明火燃燒和掘出物、泥漿和/或井湧液體的燃燒，以及意外情況引起的明火燃燒；

.2 鑽井液體和掘出物夾帶的氣體和揮發性化合物的釋放；

.3　只與海底礦物的加工、處理或貯藏直接相關的排放；和

.4　僅用於海底礦物資源的勘探、開發和相關近海加工的柴油機的排放。

3.2　經主管機關認可，本附則第 18 條的要求不適用於在現場生產並在現場用作燃料的烴類物質的使用。

第 4 條

等效

1　當事國主管機關可允許在船上安裝任何裝置、材料、設備或器具，或允許使用其他程式、替代燃油、或符合方法，以代替本附則所要求者，條件是這些裝置、材料、設備或器具或其他程式、替代燃油、或符合方法至少與本附則，包括第 13 和 14 條所述的任何標準，在減排方面所要求者同等有效。

2　允許以某種裝置、材料、設備或器具或其他程式、替代燃油、或符合方法來代替本附則所要求者的當事國主管機關應將其細節通知本組織，以便轉發各當事國，供其參考和採取適當行動(如有時)。

3　當事國主管機關應考慮到本組織針對本條的等效規定制訂的任何相關指南。

4　允許使用本條第 1 款所述等效者的當事國主管機關應致力於不損害或破壞本國和其他國家的環境、人類健康、財產或資源。

第 II 章
檢驗、發證和控制措施

第 5 條

檢驗

1　凡 400 總噸及以上的船舶以及所有固定和移動鑽井平臺和其他平臺，應確保符合第 3 章規定及完成下列檢驗規定：

.1　初次檢驗，在船舶投入營運前或首次簽發本附則第 6 條所要求的證書之前進行。該檢驗應確保其設備、系統、附件、佈置和材料完全符合第 3 章的適用規定；

.2　換證檢驗，按主管機關規定的間隔期限進行，但不得超過 5 年，本附則第 9.2、9.5、9.6 或 9.7 條適用者除外。換證檢驗應確保設備、系統、附件、佈置和材料完全符合第 3 章的適用要求;

.3　期中檢驗，在證書的第二個周年日之前或之後 3 個月內或第三個周年日之前或之後 3 個月內進行，並應取代本條文第 1.4 款規定的其中一次年度檢驗。中間檢驗應確保設備和佈置完全符合第 3 章的適用要求並處於良好的工作狀態。該中間檢驗應在按本附則第 6 條或第 7 條所簽發的 IAPP 證書上予以簽注；

.4　年度檢驗，在證書的每個周年日之前或之後 3 個月內進行，包括對本條文第 1.1 款所述的設備、系統、附件、佈置及材料的總體檢查，以確保其已按本條第 5 款的規定進行了保養並且繼續滿足船舶預定的營運要求。該年度檢驗應在按本附則第 6 或 7 條規定所簽發的 IAPP 證書上予以簽注；

.5　附加檢驗，在進行過本條文第 5 款規定的任何重大修理或換新後或按本條第 6 款規定的檢查結果進行修理後應根據情況進行全面或部分檢驗。該檢驗應確保已有效進行了必要的修理或換新，確保這種修理或換新所用的材料和工藝在各方面均屬合格，並確保該船在各方面均符合第 3 章的要求。

2　對未滿總噸位 400 的船舶，主管機關可制定相應措施，以確保其符合第 3 章的適用規定。

3　爲執行本附則規定而對船舶進行的檢驗，應由主管機關的官員進行。

.1 主管機關可以將這些檢驗委託給爲此目的而指定的驗船師或由其認可的組織辦理。這些組織應符合本組織通過的指南 1；

.2 應按修訂的《2008 年氮氧化物技術章程》對船用柴油機和設備進行是否符合本附則第 13 條規定的檢驗；

.3 如果指定的驗船師或認可的組織確定設備的狀況在實質上與證書所載內容不符，他們應確保採取糾正措施並及時通知主管機關。如未能採取此種糾正措施，主管機關應撤銷證書。如該船是在另一當事國的港口內，則還應立即通知該港口國的有關當局。在主管機關的官員、指定的驗船師或認可的組織通知該港口國的有關當局後，有關的港口國政府應向該官員、驗船師或組織提供履行本條規定的義務所必需的任何幫助；以及

.4 在所有情況下，有關主管機關均應保證檢驗的完整性和有效性，並承諾確保爲履行這一職責作出必要的安排。

4 船舶應依據 IMO 所訂準則，確保符合第 4 章規定及完成下列檢驗規定：

.1 初次檢驗，在新船投入營運前或首次簽發本附則第 4 章所要求的國際能源效率證書前進行。該 EEDI 達成指數應符合第 4 章規定，在船上應依第 22 條規定執行 SEEMP。

.2 一般性或部份檢驗，當船舶重大改裝後，EEDI 達成指數應重新計算，並符合第 21 條的規定，折減係數依改建後之船舶種類和載重噸區分，並依第 2.23 條規定以原船之龍骨安放日期或交船日期爲辦理階段。

.3 部分重大改建之船舶，在某些政府視爲新船，主管機關應決定調查 EEDI 達成指數的必要性。EEDI 達成指數應依第 21 條規定重新計算，其適用期限係採簽訂改建契約日期，若無契約情況下，則採改建開始日期。依據第 22 條規定所訂定之 SEEMP 亦應重新驗證。

.4 對於現成船，依據本條文第 1 款辦理之第一次期中檢驗或換證檢驗，應同時查核依據第 22 條規定所訂定之 SEEMP，係指第一次檢驗或 2013 年 1 月 1 日後之檢驗。

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[1] 參見 IMOA.739(18)決議案及 A.789(19)決議案。

.5 設備應保持符合本附則的各項規定，未經主管機關的專門認可，經過檢驗的設備、系統、附件、佈置或材料不得作任何變動。但允許以符合本附則規定的設備和附件直接替換此類設備和附件。

.6 當船舶發生事故或發現缺陷，對本附則所涉及的設備的有效性或完整性產生重大影響時，該船的船長或船東應儘早向負責簽發有關證書的主管機關、指定的驗船師或認可的組織報告。

第 6 條

證書的簽發或簽署

國際防止空氣污染證書

1 在按本附則第 5 條規定進行了初次或換證檢驗後，應爲下列簽發《國際防止空氣污染證書》：

.1 駛往其他當事國管轄範圍內的港口或近海裝卸站的所有 400 總噸及以上的船舶；以及

.2 駛往其他當事國主權或管轄下的水域的平臺和鑽井裝置。

2 主管機關應在附則 VI 生效後不遲於第一次計畫進塢時，按本規則第 1 款規定，爲生效之前建造的特定船舶簽發《國際防止空氣污染證書》，但在任何情況下均不得遲於該生效日之後 3 年。

3 此類證書應由主管機關或經其正式授權的任何個人或組織核發或簽署。在任何情況下，主管機關對證書負有全部責任。

國際能源效率證書

4 總噸位 400 以上之船舶在依據第 5.4 條規定取得國際能源效率證書前，不得駛往其他當事國管轄範圍內的港口或近海裝卸站。

5 此類證書應由主管機關或經其正式授權的任何個人或組織核發或簽署。在任何情況下，主管機關對證書負有全部責任。

第 7 條

由另一當事國政府簽發證書

1　當事國政府經主管機關的申請可對船舶進行檢驗，如確信符合本附則的規定，應對該船核發或授權核發《國際防止空氣污染證書》或國際能源效率證書，並在適當時按本附則的規定，爲該船簽署或授權簽署證書。

2　證書的副本和檢驗報告的副本應儘快送交提出申請的主管機關。

3　所發證書應聲明，該證書系根據主管機關的申請簽發，並應與按本附則第 6 條規定所簽發的證書具有同等效力和得到同樣的承認。

4　對於懸掛非當事國國旗的船舶，不得簽發《國際防止空氣污染證書》或國際能源效率證書。

第 8 條

證書格式

國際防止空氣污染證書

「國際防止空氣污染證書」應按與本附則附錄 I 所示樣本相一致的格式寫成，並應至少爲英文、法文或西班牙文。如同時使用發證國的官方語言，則在有爭議或分歧時，以該國官方文字記錄爲准。

國際能源效率證書

「國際能源效率證書」應按與本附則附錄 I 所示樣本相一致的格式寫成，並應至少爲英文、法文或西班牙文。如同時使用發證國的官方語言，則在有爭議或分歧時，以該國官方文字記錄爲准。

第 9 條

證書的期限和有效性

國際防止空氣污染證書

1　「國際防止空氣污染證書」應根據主管機關規定的期限簽發，但不得超過 5 年。

2　儘管有本條第 1 款的要求：

.1 如果換證檢驗在現有證書期滿之日前 3 個月內完成，則新證書應從換證檢驗完成之日起，至現有證書期滿之日後不超過 5 年的日期內有效；

.2 如果換證檢驗在現有證書期滿之日後完成，則新證書應從換證檢驗完成之日起，至現有證書期滿之日後不超過 5 年的日期內有效；以及

.3 如果換證檢驗在現有證書期滿之日的前 3 個月前完成，則新證書應從換證檢驗完成之日起不超過 5 年的日期內有效。

3 如果所發證書的有效期限少於 5 年，主管機關可將證書有效期自期滿日延長至本規則第 1 段中規定的最長期限，條件是在簽發 5 年期的證書時進行了本附則第 5.1.3 和 5.1.4 條所述的相應的檢驗。

4 如果換證檢驗已完成，而新證書在現有證書期滿之日前不能簽發或不能存放船上，主管機關授權的人員或組織可在現有證書上簽署，簽署後的證書自期滿日起不超過 5 個月的期限內應視爲繼續有效。

5 如果證書期滿時船舶不在應進行檢驗的港口，主管機關可延長該證書的有效期，但此項展期僅以能使該船完成其駛抵應進行檢驗的港口的航次爲限，並且僅在正當和合理的情況下才能如此辦理。證書的展期不得超過 3 個月。經展期的船舶在抵達應進行檢驗的港口後，不得因有此項展期而在未獲得新證書前駛離該港口。換證檢驗完成後，新證書的有效期應自現有證書展期前的期滿日起不超過 5 年。

6 發給短程航行船舶的證書未按本條前述之規定展期時，主管機關可給予自該證書所示的期滿之日起至多 1 個月的寬限期。換證檢驗完成後，新證書的有效期應自現有證書展期前的期滿日起不超過 5 年。

7 在特殊情況下，根據主管機關的決定，新證書無需按本條第 2.1.5 或 6 款的要求從現有證書的期滿之日起計算日期。在此特殊情況下，新證書的有效期應自換證檢驗完成之日起不超過 5 年。

8 如年度檢驗或中間檢驗在本附則第 5 條規定的期限之前完成，則：

.1 證書上所示的周年日應予以簽署修正，修正後的周年日應不多於檢驗完成之日起 3 個月；

.2 本附則第 5 條要求的其後的年度檢驗或中間檢驗應使用新的周年日按該條規定的間隔期完成；以及

.3 如進行一次或多次相應的年度檢驗或中間檢驗，以使本附則第 5 條規定的最大檢驗間隔期不被超過，則該期滿日可保持不變。

9 按本附則第 6 或第 7 條規定所簽發的證書，在下列任一情況下即應中止有效：

.1 如果相關檢驗未在本附則第 5.1 條規定的期限內完成；

.2 如果證書未按本附則第 5.1.3 或 5.1.4 條的規定予以簽署；以及

.3 船舶變更船旗國。只有當換發新證書的政府確信該船符合本附則第 5.4 條的要求時，才能簽發新的證書。如果變更船旗系在當事國之間進行，則在變更後的 3 個月內，前船旗國政府如收到申請，應儘快將變更船旗前該船所攜證書的副本以及相關的檢驗報告副本(如備有)送交該船新的主管機關。

國際能源效率證書

10 國際能源效率證書在符合第 11 款規定下，終生有效。

11 依據本附則所核發之國際能源效率證書，在下列情況下失效：

.1 船舶退出營運或發生重大改建後核發新證書。

.2 改變船籍。由新當事國政府依據第 4 章規定重新核發新證書。

第 10 條

關於操作要求的港口國控制

1 當船舶停靠在另一當事國所管轄的港口或近海裝卸站時，如有明顯理由確信該船船長或船員不熟悉船上主要的防止船舶造成空氣污染的程式，該船應接受該當事國正式授權的官員根據本附則進行的有關操作要求的檢查。

2 在本條第 1 款所述的情況下，該當事國應採取措施，確保該船在按本附則的要求調整至正常狀態前，不得開航。

3 本公約第 5 條規定的港口國管制程序適用於本條文。

4 本條的任何內容均不得解釋爲限制當事國在本公約明確規定的操作要求方面進行控制的權利和義務。

5　　依據本公約第 5 條及本附則第 4 章規定，港口國檢查在適當條件下，以核實查驗船上持有國際能源效率證書的有效性爲限。

第 11 條

違規調查和執行

1　各當事國應使用一切適當和可行的偵查和環境監測措施、適合的報告和證據積累程式，在偵查本附則規定的違章情況和實施本附則規定方面進行合作。

2　本附則適用的船舶在某一當事國的任何港口或近海裝卸站均可能受到由該國指定或授權的官員的檢查，以核實該船舶是否違反本附則的規定而排放了本附則所包括的任何物質。如果檢查表明該船違反了本附則的規定，應向主管機關提交一份報告以便採取適當的行動。

3　任何當事國應向該主管機關提供其船舶違反本附則規定排放任何本附則所包括的物質的證據(如有)。如可行，該當事國的主管當局應將所指控的違章情況通知該船船長。

4　在收到上述證據後，被通知的主管機關應著手調查此事，並可以要求其他當事國就被指控的違章情況提供進一步的或更有說服力的證據。如果該主管機關確信有充分的證據可以對被指控的違章行爲提出訴訟，應儘快根據法律提出，使這種訴訟按照法律儘快進行。該主管機關應立即將所採取的行動通報給報告此違章事件的當事國以及本組織。

5　如果收到任何當事國的調查請求，連同船舶違反本附則規定在任何地方排放了本附則所包括的任何物質的充分證據，則當事國也可對本附則適用的船舶在其進入該當事國管轄的港口或近海裝卸站時進行檢查。這種調查報告應送交提出請求的當事國以及主管機關，以便根據本公約規定採取適當行動。

6　在應用或解釋本附則時，有效的關於防止、減少和控制船舶造成海洋環境污染的國際法，包括有關實施和保護的法律，均適用於(在細節上作必要的修正)本附則所述的規範和標準。

第 III 章
船舶排放控制要求

第 12 條

臭氧消耗物質

1　本條不適用於無製冷劑充注接頭的永久密封設備或無含有消耗臭氧物質的可拆卸部件的永久密封設備。

2　根據第 3.1 條的規定，應禁止消耗臭氧物質的任何故意排放。故意排放包括在系統或設備的維護、檢修、修理或處置過程中發生的排放，但故意排放不包括與消耗臭氧物質的回收或再迴圈相關的微量釋放。由消耗臭氧物質洩漏引起的排放，無論此洩漏是否屬於故意，均可由各當事國進行管理。

3.1　在下列情況下，應禁止使用含氫化氯氟烴以外的消耗臭氧物質的裝置：

.1　在 2005 年 5 月 19 日或以後建造的船舶；或

.2　對於 2005 年 5 月 19 日以前建造的船舶，設備合同交付船上的日期爲 2005 年 5 月 19 日或以後，或者無合同交付日期，實際設備交付船上的日期爲 2005 年 5 月 19 日或以後。

3.2　在下列情況下，應禁止使用含氫化氯氟烴的裝置：

.1　在 2020 年 1 月 1 日或以後建造的船舶；或

.2　對於 2020 年 1 月 1 日以前建造的船舶，設備合同交付船上的日期爲 2020 年 1 月 1 日或以後，或者如果無合同交付日期，實際設備交付船上的日期爲 2020 年 1 月 1 日或以後。

4　本條所述的物質以及設備中含有的此類物質，當其從船上卸下時，應送到合適的接收設備中。

5　適用第 6.1 條的每艘船舶應保存含消耗臭氧物質的設備清單[2]。

6　適用第 6.1 條的回收系統包含消耗臭氧物質的每艘船舶應保存一份《消耗臭氧物質記錄簿》。經主管機關批准，該記錄簿可以是現有航海日誌或電子記錄系統的一部分。

7 《消耗臭氧物質記錄簿》中的物質應按其品質單位(kg)記錄，且在任何情況下都應及時記入下列內容：

.1 含消耗臭氧物質的設備的全部或部分重新充注；

.2 含消耗臭氧物質的設備的修理或維護；

.3 消耗臭氧物質向空氣的排放：

.3.1 故意排放；以及

.3.2 非故意排放；

.4 消耗臭氧物質向陸基接收設施的排放；以及

.5 向船舶供應消耗臭氧物質。

第 13 條

氮氧化物(NO_x)

適用範圍

1.1 本條應適用於：

.1 每一台安裝船上的輸出功率超過 130 kW 的船用柴油機；以及

.2 每一台經重大改裝的或 2000 年 1 月 1 日後建造的、輸出功率超過 130 kW 的船用柴油機，除非能證明，並使主管機關確信，該柴油機與其將替代的柴油機完全相同而不被本條第 1.1.1 段的規定所包括。

1.2 本條不適用於：

.1 僅用於應急情況使用的、或僅爲安裝船上的僅在應急情況下使用的任何裝置或設備提供動力的船用柴油機，或用於安裝救生艇上的僅在應急情況下使用的船用柴油機；以及

.2 安裝在僅航行於懸掛其國旗的該國主權或管轄範圍水域內的船舶上的船用柴油機，但此類柴油機應受到由該主管機關制定的 NO_X 控制替代方法的控制。

1.3 儘管有此款第 1.1 段的規定，主管機關可對 2005 年 5 月 19 日以前建造的船舶上安裝的任何船用柴油機或對在 2005 年 5 月 19 日以前經過重大改建的任何船用柴油機免除適用本條要求，只要安裝該柴油機的船舶僅在其船旗國的港口或近海裝卸站間航行。

重大改建

2.1 就本條而言，重大改建係指 2000 年 1 月 1 日或以後對尚未按本條第 3、4 或 5.1.1 款所述標準核准的船用柴油機的改變，即：

.1 柴油機由其他船用柴油機代替或新增安裝柴油機，或

.2 對柴油機進行了《2008 年氮氧化物技術章程》中定義的任何實質性改變，或

.3 與柴油機初始證書上的最大持續額定功率相比，柴油機的最大持續額定功率增加超過 10%。

2.2 如重大改裝涉及船用柴油機被非完全相同的柴油機替代，或涉及新增安裝柴油機，則應適用在替代或新增柴油機時當時有效的本條標準。僅對替代柴油機而言，如在 2016 年 1 月 1 日或以後其不能符合本條第 5.1.1 款所述標準(第 III 級)，則該替代柴油機應符合本條第 4 款所述標準(第 II 級)。本組織將制定指南就何時替代柴油機不能滿足本條第 5.1.1 段的標準給出衡准。

2.3 第 2.1.2 或 2.1.3 段所述的船用柴油機應符合下列標準：

.1 對於 2000 年 1 月 1 日以前建造的船舶，本條第 3 段所述標準應適用；以及

.2 對於 2000 年 1 月 1 日或以後建造的船舶，應適用其建造時已生效的標準。

第 I 級

3 本附則第 3 條適用的同時，對 2000 年 1 月 1 日或以後至 2011 年 1 月 1 日以前建造的船上安裝的船用柴油機，除非其氮氧化物排放量(按 NO_2 的排放總重量計算)在下列限值內，其中 n 爲柴油機額定轉速(每分鐘曲軸轉速)，否則應禁止使用：

.1 當 n 小於 130 rpm 時，17.0 g/kWh；

.2 當 n 等於或大於 130 rpm 但小於 2,000 rpm 時，$45 \cdot n^{(-0.2)}$ g/kWh；

.3 當 n 等於或大於 2,000 rpm 時，9.8 g/kWh。

第 II 級

4 在適用本附則第 3 條的同時，對 2011 年 1 月 1 日或以後建造的船上安裝的船用柴油機，除非其 NOx 排放量(按 NO_2 的排放總重量計算)在下列限值內，其中 n 爲柴油機額定轉速(每分鐘曲軸轉速)，否則應禁止使用：

.1 當 n 小於 130 rpm 時，14.4 g/kWh；

.2 當 n 等於或大於 130 rpm，但小於 2,000 rpm 時，44·n(-0.23) g/kWh；

.3 當 n 等於或大於 2,000 rpm 時，7.7 g/kWh。

第 III 級

5.1 在適用本附則第 3 條的同時，對 2016 年 1 月 1 日或以後建造的船上安裝的柴油機：

.1 除非該柴油機氮氧化物排放量(按 NO_2 的排放總重量計算)在下列限值內，其中 n 爲柴油機額定轉速(每分鐘曲軸轉速)，否則應禁止使用：

.1.1 當 n 小於 130 rpm 時，3.4 g/kWh；

.1.2 當 n 等於或大於 130 rpm，但小於 2,000 rpm 時，$9{\cdot}n^{(-0.2)}$ g/kWh；

.1.3 當 n 等於或大於 2,000 rpm 時，2.0 g/kWh。

.2 當船舶在本條第 6 款指定的排放控制區內航行時，應符合本段第 5.1.1 款所述標準；以及

.3 當船舶在本條第 6 款指定的排放控制區外航行時，應符合本條第 4 款所述標準。

5.2 取決於本條第 10 款所述評審，本條第 5.1.1 款所述標準不應適用於：

.1 按本公約附則 I 第 1.19 條定義的船長(L)小於 24 米，經特殊設計並僅用於娛樂目的的船上安裝的船用柴油機；或

.2 船上安裝的船用柴油機，其組合商標顯示柴油機推進功率小於 750 kW，經證明，主管機關確信該船因設計或構造限制而不能符合本條第 5.1.1 款所述標準。

排放控制區

6 就本條而言，排放控制區應爲本組織根據本附則附錄 III 所述衡准和程式指定的任何海域，包括任何港口區域。

2000 年 1 月 1 日以前建造的船舶上安裝的船用柴油機

7.1 儘管有本條第 1.1.1 款的規定，在 1990 年 1 月 1 日或以後但在 2000 年 1 月 1 日以前建造的船舶上安裝的、輸出功率超過 5,000 kW 且每缸排量在 90 升或以上的船用柴油機應符合本款第 7.4 段所述的排放限值，但該柴油機的認可方法應已通過當事國主管機關的核准，且進行核准的主管機關已將核准通知提交本組織。應通過下列之一證明符合該款：

.1 安裝核准的認可方法，如測量確定的使用認可方法檔中規定的檢驗程式，包括在認可方法存在的情況下船舶的《國際防止空氣污染證書》的適當注釋；或

.2 柴油機證書證明其在符合本條第 3、4 或 5.1.1 款中所述的限值範圍內運轉和柴油機證書關於船舶的《國際防止空氣污染證書》的適當注釋。

7.2 第 7.1 款應不遲於第 7.1 款中所述的通知交存之後 12 個月或以後進行的首次換證檢驗時適用。如應安裝認可方法的該船船東能夠證明，並使主管機關確信，儘管已盡最大努力但未能購得該認可方法，則應在該船購得該認可方法後的下一個年度檢驗前在船上安裝該認可方法。

7.3 對於在 1990 年 1 月 1 日或以後至 2000 年 1 月 1 日以前建造的船舶上安裝的輸出功率超過 5,000 kW、每缸排量在 90 升或以上的船用柴油機，其《國際防止空氣污染證書》應表明對於本條第 7.1 款中適用的船用柴油機已應用認可方法，或者已根據本條第 7.1.1 款應用了認可方法，或者按本條第 7.1.2 款已對柴油機發證，或者如第 7.2 款所述，該認可方法尚不存在或尚未商業存在。

7.4 在適用本附則第 3 條的同時，第 7.1 款所述的船用柴油機，除非其氮氧化物排放量(按 NO_2 的排放總重量計算)在下列限值內，其中 n 爲柴油機額定轉速(每分鐘曲軸轉速)，否則應禁止使用：

.1 當 n 小於 130 rpm 時，17.0 g/kWh；

.2 當 n 等於或大於 130 rpm，但小於 2,000 rpm 時，45·n(-0.2) g/kWh；

.3 當 n 等於或大於 2,000 r/min 時，9.8 g/kWh。

7.5 應按《2008 年 NOx 技術章程》第 7 章對認可方法發證，並應包括如下驗證：

.1 由適用認可方法的基本船用柴油機的設計方驗證：根據《2008 年氮氧化物技術章程》中相應的試驗迴圈進行的測量表明，認可方法的計算影響不會降低柴油機額定功率的 1.0%以上、不會增加燃油消耗量的 2.0%以上，也不會對柴油機的壽命或可靠性造成不利影響，和

.2 認可方法的成本不會過高，該成本通過比較爲達到本段第 7.4 款所述標準而使用認可方法減少的 NOx 量和購買和安裝該認可方法的費用予以確定[3]。

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[3] 根據下列成本效益公式計算，認可方法的成本不應超過 375 特別提款權/公噸氮氧化物。

$$C_e = \frac{\text{認可方法的成本} \cdot 10^6}{P(kW) \cdot 0.768 \cdot 6000(\text{小時}/\text{年}) \cdot 5(\text{年}) \cdot \Delta NO_x\,(g/kWh)}$$

發證

8 修訂的《2008 年氮氧化物技術章程》應適用於本條所述標準的發證、試驗和測量程式。

9 修訂的《2008 年氮氧化物技術章程》所述的確定氮氧化物的排放程式擬作爲柴油機正常運轉的典型情況。抑制裝置和不合理排放控制策略會有損於這一目的，因而不得允許。本條不應妨礙輔助控制裝置的使用，這些控制裝置用於保護柴油機和/或其輔助設備不受可導致其損壞或故障的操作條件的影響或有助於柴油機的起動。

評審

10 本組織應自 2012 年起並不遲於 2013 年完成對技術發展狀況的評審，以實施本條第 5.1.1 款所述的標準，並在證明必要時，調整該款所述的時間段。

第 14 條

硫氧化物(SO_X)和顆粒物質

一般要求

1 船上使用的任何燃油的硫含量不應超過下述限值：

.1 2012 年 1 月 1 日以前，4.50% m/m；

.2 在 2012 年 1 月 1 日及以後，3.50% m/m；以及

.3 在 2020 年 1 月 1 日及以後，0.50% m/m。

2 考慮到本組織制定的指南，對世界範圍內供船上使用的殘餘燃油的平均硫含量應作監測[4]。

排放控制區內的要求

3 就本條而言，排放控制區應包括：

.1 附則 I 第 1.11.2 條中定義的波羅的海區域，附則 V 第 5(1)(f)條定義的北海海域；以及

.2 由本組織根據本附則附錄 III 中所包含的標準和程式而指定的任何其他海域，包括港口區域。

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[4] MEPC.82(43)決議：《對世界範圍內船用殘餘燃油的平均硫含量監測指南》。

4　當船舶在排放控制區域航行時，船上使用的燃油的硫含量不應超過下述限值：

.1　2010 年 7 月 1 日以前，1.50% m/m；

.2　在 2010 年 7 月 1 日及以後，1.00% m/m；以及

.3　在 2015 年 1 月 1 日及以後，0.10% m/m。

5　本條第 1 款和第 4 款中所述的燃油硫含量應由供應商按本附則第 18 條要求以書面形式提供。

6　使用不同的燃油來符合本條第 4 款規定進入或離開本條第 3 款所述排放控制區域的船舶，應攜有一份書面程式表明燃油轉換如何完成，在其進入排放控制區域之前規定足夠的時間對燃油供給系統進行全面沖洗，以去除所有硫含量超過本條第 4 款所規定的適用硫含量的燃料。在燃油轉換作業進入排放控制區域以前完成或離開該區域後開始時，應將每一燃油艙中的低硫燃油的容積以及日期、時間及船舶位置記錄在主管機關規定的航海日誌中。

7　在按本條第 3.2 款規定指定排放控制區的本議定書修正案生效後緊接著的 12 個月內，對進入指定的排放控制區的船舶可免除本條第 4 和第 6 款的要求以及本條第 5 款中與本條第 4 款相關的要求。

評估條款

8　對本條第 1.3 款所述標準的評估應在 2018 年以前完成，以確定可用的燃油符合該款所述的燃油標準並應考慮下列因素：

.1　目前存在的符合本條第 1.3 款燃油在評審時的全球市場供應和需求評估；

.2　對燃油市場發展趨勢的任何分析；以及

.3　任何其他相關問題。

9　本組織應建立專家組，由具備燃油市場相關專業知識以及相關的海事、環保、科研和法律專業知識的專家代表組成，進行本條第 8 款所述的評估。專家組應準備相應的資料，供各當事國應做出的決定時參考。

10　根據專家組準備的資料，各當事國可決定船舶是否能符合本條第 1.3 款所述的日期。如果確定船舶無法符合，則該款所述標準應於 2025 年 1 月 1 日生效。

第 15 條

揮發性有機化合物(*VOCs*)

1　如在當事國管轄的港口或裝卸站對液貨船產生的揮發性有機化合物排放加以控制，應按照本條規定進行。

2　對液貨船揮發性有機化合物排放進行控制的當事國應向本組織提交一份通知書。該通知書應包括所需控制的液貨船的尺度、需要蒸氣釋放控制系統的貨物種類以及該控制的生效日期等資訊。該通知書應至少在生效日期之前 6 個月提交。

3　所有指定在港口或裝卸站對來自液貨船的揮發性有機化合物釋放進行控制的當事國，應保證在其指定的港口和裝卸站配備經該當事國根據本組織制定的蒸氣排放控制系統安全標準 [5] 認可的蒸氣排放控制系統，並確保該系統的安全操作和防止造成船舶的不當延誤。

4　本組織應將由當事國指定的港口和裝卸站清單散發給其他的當事國和本組織的成員國以供參考。

5　本條第 1 款適用的液貨船應配備由主管機關考慮到本組織制定的蒸氣排放收集系統安全標準 [5] 而認可的蒸氣排放收集系統，並應在這些貨物裝載過程中使用該系統。根據本條要求安裝了蒸氣排放控制系統的港口或裝卸站可以接納在本條第 2 款確定的生效日期之後的 3 年內沒有安裝蒸氣收集系統的液貨船。

6　載運原油的液貨船應在船上備有並實施經主管機關認可的揮發性有機化合物管理計畫。該計畫應參照本組織制定的指南編寫。該計畫應具體到各船並至少應：

.1　爲把裝載、海上航行和卸貨時的揮發性有機化合物排放降到最低提供書面程式；

.2　考慮到原油洗艙產生的額外揮發性有機化合物；

.3　指定負責實施該計畫的人員；以及

.4　對於國際航行船舶，用船長和高級船員的工作語言編寫，如船長和高級船員的工作語言不是英語、法語，或西班牙語，則應包括其中一種語言的譯文。

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[5]　MSC/Circ.585 號通函：《關於蒸氣排放控制系統標準》。

7　對氣體船而言，只有其裝載和圍護系統的類型能使非甲烷揮發性有機化合物安全保存在船上或安全運輸到岸上時才適合本條[6]。

第 16 條

船上焚燒

1　除本條第 4 款規定者之外，船上焚燒只允許在船上焚燒爐中進行。

2　應禁止在船上焚燒下列物質：

.1　附則 I、II 或 III 規定貨物的殘餘物或有關的被污染的包裝材料；

.2　多氯聯苯(PCB)；

.3　附則 V 定義的含有超過微量重金屬的垃圾；

.4　含有鹵素化合物的精煉石油產品；

.5　不是在船上產生的污泥和油渣；以及

.6　廢氣濾清系統的殘餘物。

3　應禁止在船上焚燒聚氯乙烯，但在已頒發國際海事組織型式認可證書[7]的船上焚燒爐內焚燒除外。

4　在船舶正常操作過程中產生的污泥和油渣的船上焚燒也可以在主機或者輔發電機或鍋爐內進行，但在那些情況下，不能在港口、碼頭和河口內進行。

5　本條的任何規定：

.1　不影響經修正的《1972 年防止傾倒廢物及其他物質污染海洋公約》及其 1996 年議定書的禁令或其他要求，也不

.2　不排除符合或超過本條要求的船上廢物熱處理裝置替代設計的開發、安裝和使用。

6.1　除本款第 6.2 段規定之外，2000 年 1 月 1 日或以後建造的船舶上的每一焚燒爐或 2000 年 1 月 1 日或以後安裝在船上的每一焚燒爐均應符合本附則附錄 IV 的要求。符合本段

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[6] MSC.30(61)號決議：《國際散裝運輸液化氣體船舶構造和設備規則》，第 5 章。

[7] 根據 MEPC.59(33)或 MEPC.76(40)決議簽署的型式認可證書。

要求的每一台焚燒爐應經主管機關根據本組織制定的船上焚燒爐標準技術條件[8]予以認可；或

6.2 主管機關可以允許任何在 2005 年 5 月 19 日以前安裝上船的焚燒爐免除本款第 6.1 段的適用要求，條件是該船僅航行於有權懸掛其國旗的該國主權或管轄的水域內。

7 按本條第 6.1 款要求安裝的的焚燒爐應持有一份製造廠的操作手冊，該手冊應隨焚燒爐裝置存放，並應規定如何在本附則的附錄 IV 的第 2 段所述的限制內操作焚燒爐。

8 對按本條第 6.1 款的要求安裝的焚燒爐的操作負責人員的應進行培訓，使其能執行本條第 7 款所要求的製造廠的操作手冊中提供的指導。

9 對於按本條第 6.1 款要求安裝的焚燒爐，在該爐進行操作的任何時候均應對燃燒室氣體出口溫度進行監測。如焚燒爐爲連續進料型，在燃燒室氣體出口溫度低於 850℃時不得將廢棄物送入該焚燒爐裝置。如焚燒爐爲分批裝料型，該裝置應設計成其燃燒室氣體出口的溫度在起動後 5 分鐘內達 600℃且隨後穩定在不低於 850℃。

第 17 條

接收設施

1 各當事國保證提供充分的設施以滿足：

.1 船舶使用其修理港用以接收從船上卸下的消耗臭氧物質的以及含有這些物質的設備的需要；

.2 船舶使用其港口、裝卸站或修理港用以接收經認可的廢氣濾清系統產生的廢氣清除殘餘物的需要；

而不對船舶造成不當延誤；以及

.3 在拆船廠中用以接收從船上卸下的消耗臭氧物質和含有這些物質的設備的需要。

1bis 開發中小島國家，可藉由區域性之佈置以滿足本規則第 1 條之規定，惟以該國家因環境特殊只能以此方式來滿足要求爲限。參予此項佈置之國家應參考 IMO 所制定之準則發展一區域性收受設備計畫並針對下列事項與 IMO 協商以便通告各公約會員國。

[8] 參見 MEPC.76(40)決議：《船上焚燒爐標準技術條件》。

i. 此區域性收受設備計畫如何考量 IMO 所制定之準則

ii. 被指定爲區域性船舶廢棄物收受中心之規格

iii. 僅具備有限設備之港口的規格

2 如果當事國的港口或裝卸站－考慮到本組織將制定的指南－遠離，或缺乏管理和處理本條第 1 款所述的那些物質所必需的工業基礎設施，因而不能接收這些物質，則該當事國應將所有此類港口或裝卸站通知本組織，以使該資訊可轉發所有當事國，供其參考和採取任何相應的行動。已向本組織提供此類資訊的各當事國應同時將其可提供管理和處理這些物質的接收設備的港口和裝卸站通知本組織。

3 各當事國應將不具備本條規定的設施或設施被指認不足的一切情況通知本組織，以便轉發本組織各成員國。

第 18 條

燃油的供應和品質

燃油供應

1 每一當事國應採取一切合理措施促進符合本附則規定的燃油供應，並將其能提供合格燃油的港口和裝卸站通知本組織。

2.1 如當事國發現船舶不符合本附則規定的合格燃油的標準，該當事國主管當局有權要求船舶：

.1 提交爲達到符合標準而採取行動的記錄；以及

.2 提供其根據航次計畫購買合格燃油的證據，以及如不能按原計劃購得，已努力尋找該燃油的替代資源，並且儘管爲獲得合格燃油盡了最大努力，仍不能購得該燃油的證據。

2.2 不應要求船舶爲符合標準而偏離其擬定的航程或不當延誤航期。

2.3 如船舶提供了本款第 2.1 段規定的資訊，當事國應考慮所有相關情況和提供的證據，以確定應採取的適當行動，包括不採取控制措施。

2.4 未能購得合格燃油的船舶應通知其主管機關和相關目的港的主管當局。

2.5 如船舶已提供未能購得合格燃油的證據，當事國應通知本組織。

燃油品質

3　交付並作爲本附則適用的船上燃燒用的燃油應符合下列要求：

.1　除第 3.2 段規定之外：

.1.1　燃油應爲從石油精煉產生的烴的混合物，但並不排除少量用於改善某些方面性能的添加劑的混用；

.1.2　燃油應不含無機酸；以及

.1.3　燃油不應包含下列任何附加的物質或化學雜質：

.1.3.1　危害船舶安全或對機械性能有不利影響，或

.1.3.2　對人員有害，或

.1.3.3　總體上增加空氣污染。

.2　以石油精煉之外的方法得到的用於燃燒的燃油不應：

.2.1　超過本附則第 14 條中規定的硫含量；

.2.2　導致柴油機超過本附則第 13 條的第 3、4、5.1.1 和 7.4 款中規定的氮氧化物排放限值；

.2.3　含有無機酸；或

.2.4.1　危害船舶安全或對機械性能有不利影響，或

.2.4.2　對人員有害，或

.2.4.3　總體上增加空氣污染。

4　本條不適用於固態煤或核燃料。本條第 5、6、7.1、7.2、8.1、8.2、9.2、9.3 和 9.4 款不適用於氣體燃料例如液態天然氣、壓縮天然氣或液化石油氣。專門爲船上燃燒的目的而供應船上的氣體燃料的硫含量應由供應商作書面記錄。

5　對受本附則第 5 條和第 6 條約束的每一艘船舶，應以燃油交付單的方式對交付並作爲船上燃燒用的燃油的細節加以記錄，該交付單應至少包含本附則附錄 V 中規定的資料。

6　燃油交付單應存放於船上，在任何合理時間隨時可供檢查。它應在燃油交付船上之後保存 3 年。

7.1　當事國的主管當局可對停靠本國港口或近海裝卸站的適用本附則的任何船舶檢查燃油交付單，並可將每份交付單製成副本，也可要求船長或船舶負責人員證明該副本是

該燃油交付單的真實副本。主管當局還可通過與出具該交付單的港口協商核實每份交付單的內容。

7.2 主管當局根據本項規定對燃油交付單的檢查和製作正確無誤的副本應盡速進行，而不對船舶造成不當延誤。

8.1 燃油交付單應按本組織制定的指南[9]附有一份所供燃油的代表樣品。該樣品應由供應商代表和船長或負責加油作業的官員在完成加油作業後密封並簽字，並應由船方控制直到燃油被基本消耗掉，但無論如何其保存期自加油日期算起應不少於 12 個月。

8.2 如主管機關要求對代表樣品進行分析，則應按附錄 VI 所述的驗證程式確定燃油是否滿足本附則的要求。

9 當事國應保證其指定的合適的當局：

.1 保持一份當地燃油供應商的登記表；

.2 要求當地供應商提供本條要求的燃油交付單及樣品，並由燃油供應商以書面形式證明該燃油符合本附則第 14 和 18 條的要求；

.3 要求當地供應商保存一份燃油交付單的副本至少 3 年以供港口國必要時檢查和核實；

.4 採取適當措施，防止燃油供應商所供燃油與燃油交付單所述內容不符；

.5 將任何船舶收到發現不符合本附則第 14 或 18 條要求燃油的情況通知其主管機關；和

.6 將燃油供應商沒能按本附則第 14 或 18 條規定要求供油的一切情況通知本組織，以轉發各當事國。

10 關於由當事國進行的港口國檢查，當事國進一步承諾：

.1 將在當事國或非當事國管轄下出具的燃油交付單中交付不合格燃油的情況向其通報，並提供所有有關資料；以及

.2 確保採取適當的補救措施，使發現的不合格的燃油符合要求。

11　對總噸位 400 以上且從事定期營運並頻繁和定期停靠港口之船舶，主管機關在向相關各國申請和協商後可決定，對本條第 6 款的符合性可用一種替代方法予以證明，該方法應提供與符合本附則第 14 和 18 條類似的確定性。

第 IV 章
船舶能源效率規定

第 19 條

應用

1 本章規定適用於所有總噸位 400 以上之船舶。

2 本章規定不適用於：

.1 屬於當事國管轄權航行水域之船舶。但各締約國應確保透過採取適當的措施，保證此類船舶建造，在符合第 4 章規定下，是合理及可行的。

3 利用柴電推進、渦輪推進或混合動力推進系統之船舶，不適用於第 20 條和第 21 條之規定

4 符合本條第 1 款規定，但由當事國政府豁免第 20 條和第 21 條規定之船舶。

5 不適用本條文第 4 款規定之船舶：

.1 於 2017 年 1 月 1 日或以後簽訂建造契約；

.2 無建造契約時，於 2017 年 7 月 1 日或以後安放龍骨或處於類似建造階段；

.3 於 2019 年 7 月 1 日或以後交船；

.4 當新船或現有船在 2017 年 1 月 1 日或以後發生重大改建時。

6 當事國政府應將本條文第 4 款允許、暫停、撤銷或拒絕豁免之規定，向 IMO 報備，以便將該資訊轉達給議定書相關締約國周知。

第 20 條

EEDI 達成指數(Attained EEDI)

1 應計算 EEDI 達成指數之船舶：

.1 新船;

.2 重大改建的新船;

.3 經過重大改建，且因改建範圍過大而被主管機關視爲新造船的新船或現有船。

適用船型爲第 2.25 至 2.35 條文所定義之船舶。

2 EEDI 達成指數應依據國際海事組織所制訂之指南計算。

第 21 條

EEDI 需求指數 (Required EEDI)

1 **適用船舶**

.1 新船;

.2 重大改建的新船;

.3 經過重大改建，且因改建範圍過大而被主管機關視爲新造船的新船或現有船。

適用船型爲第 2.25 至 2.31 條文所定義之船舶。

Attained EEDI ≦ Required EEDI = (1-X/100) × 基線值

式中 X 爲表 1 所規定的相對於 EEDI 基線的 Required EEDI 的折減係數。

Table 1 不同階段 EEDI 相對於基線的減排量（百分比）

船型	總噸位	階段 0 2013.1.1- 2014.12.31	階段1 2015.1.1- 2019.12.31	階段2 2020.1.1- 2024.12.31	階段3 2025.1.1 以後
散裝船	20,000 DWT 及以上	0	10	20	30
	10,000-20,000DWT	n/a	0-10*	0-20*	0-30*
液化氣體船	10,000DWT 及以上	0	10	20	30
	2,000-10,000DWT	n/a	0-10*	0-20*	0-30*
液貨船	20,000DWT 及以上	0	10	20	30
	4,000-20,000DWT	n/a	0-10*	0-20*	0-30*
貨櫃船	15,000DWT 及以上	0	10	20	30
	10,000-15,000DWT	n/a	0-10*	0-20*	0-30*
雜貨船	15,000DWT 及以上	0	10	15	30
	3,000-15,000DWT	n/a	0-10*	0-15*	0-30*
冷凍貨船	5,000DWT 及以上	0	10	15	30
	3,000-5,000DWT	n/a	0-10*	0-15*	0-30*
兼用貨船（**OBO**）	20,000DWT 及以上	0	10	20	30
	4,000-20,000DWT	n/a	0-10*	0-20*	0-30*

表中：* 表示根據船舶尺度由小到大的折減係數這兩個值之間取線性插值。低的折減係數應用於小的船舶尺度。

n/a 表示不適用 required EEDI。

2 經重大改建的新船以及經特別重大改建的現成船，都要求重新計算 EEDI 達成指數。

3　　基線值計算方法 ：

基線值 = $a \times b^{-c}$

式中 a、b 和 c 爲表 2 所列參數。

Table 2 不同船型基線值公式參數確定

船型	a	b	c
散裝船	961.79	船舶載重噸	0.477
液化氣體船	1120.00	船舶載重噸	0.456
液貨船	1218.80	船舶載重噸	0.488
貨櫃船	174.22	船舶載重噸	0.201
雜貨船	107.48	船舶載重噸	0.216
冷凍貨船	227.01	船舶載重噸	0.244
兼用貨船（OBO）	1219.00	船舶載重噸	0.488

第 22 條

船舶能源效率管理計畫（SEEMP）

1　　每艘船舶應訂有具體的船舶能源效率管理計畫（SEEMP），並成爲船舶的安全管理體系（SMS）的一部分。

2　　SEEMP 應依據國際海事組織準則訂定。

第 23 條

爲提升船舶能源效率，應促進國際間技術合作和技術轉移。

附錄 I

國際防止空氣污染(IAPP)證書的格式
(第 8 條)

國際防止空氣污染證書

本證書系根據經 2008 年環保會 MEPC.176(58)號大會決議修正的對《經 1978 年議定書修訂的〈1973 年防止船舶污染國際公約〉》的 1997 年議定書(以下簡稱本公約)的規定，

經……國政府授權，
(國家全稱)

由……簽發。
(按本公約規定授權的適任組織或個人全稱)

船舶概要*

船名……..

船舶編號或呼號……..

船籍港……..

總噸位……..……

IMO 編號+……..…….

---

* 或者，船舶概況可在表格中橫向排列。

\+ 根據本組織 A.600(15)決議通過的《IMO 船舶編號體系》。

茲證明：

1　本船已按本公約附則 VI 第 5 條要求進行了檢驗；以及

2　檢驗查明設備、系統、附件、佈置和材料完全符合本公約附則 VI 的適用要求。

本證書基於的檢驗完成日期：……(年/月/日)

本證書的有效期至……..*，在此期間應按本公約附則 VI 第 5 條的要求接受檢驗。

簽發於……

(發證地點)

(年/月/日)：……　　……

(發證日期)　　(經授權發證的官員簽字)

(主管當局蓋章或鋼印)

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* 填入由主管機關按本公約附則 VI 第 9.1 條規定的失效日期。除非按本公約附則 VI 第 9.8 條另經修正，否則該日期的月、日與公約附則 VI 第 2.3 條定義的周年日相同。

年度/中間檢驗的簽注

茲證明業已按公約附則VI第5條的要求進行了檢驗，查明該船符合公約的有關規定：

年度檢驗： 簽字：.....……..

(經正式授權的官員簽字)

地點：.....…….

日期(日/月/年)：.....

（主管當局蓋章或鋼印）

年度/中間*檢驗： 簽字：.....……..

(經正式授權的官員簽字)

地點：.....…….

日期(日/月/年)：.....……

（主管當局蓋章或鋼印）

年度/中間*檢驗： 簽字：.....……..

(經正式授權的官員簽字)

地點：.....…….

日期(日/月/年)：.....……

（主管當局蓋章或鋼印）

年度檢驗： 簽字：.....……..

(經正式授權的官員簽字)

地點：.....…….

日期(日/月/年)：.....

（主管當局蓋章或鋼印）

按第 9.8.3 條進行的年度/中間檢驗

* 不適用者刪除。

茲證明業已按公約附則 VI 第 9.8.3 條的要求進行了年度/中間*檢驗蟒，查明該船符合公約的有關規定：

簽字：……

(經授權的官員簽字)

地點：……

日期(年/月/日)：……

(主管當局蓋章或鋼印)

在適用第 9.3 條情況下，有效期少於 5 年的證書展期簽注

該船符合公約的有關規定，本證書根據公約附則 VI 第 9.3 條應視爲有效，有效期限至(年/月/日)……...止。

簽字：……

(經授權的官員簽字)

地點：……

日期(年/月/日)：……

(主管當局蓋章或鋼印)

在已完成換證檢驗並適用第 9.4 條情況下的簽注

該船符合公約的有關規定，本證書根據公約附則 VI 第 9.4 條應視爲有效，有效期限至(年/月/日)……...止。

簽字：……

(經授權的官員簽字)

地點：……

日期(年/月/日)：……

(主管當局蓋章或鋼印)

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* 不適用者刪除。

在適用第 9.5 或 9.6 條情況下，將證書有效期展期至駛抵進行檢驗的港口或給予寬限期的簽注

本證書根據公約附則 VI 第 9.5 或 9.6 條*應視爲有效，有效期限至(年/月/日)……止。

簽字：……

(經授權的官員簽字)

地點：……

日期(年/月/日)：……

(主管當局蓋章或鋼印)

在適用第 9.8 條情況下，周年日提前的簽注

根據公約附則 VI 第 9.8 條，新的周年日爲(年/月/日)：……..

簽字：……

(經授權的官員簽字)

地點：……

日期(年/月/日)：……

(主管當局蓋章或鋼印)

根據公約附則 VI 第 9.8 條，新的周年日爲(年/月/日)：……..

簽字：……

(經授權的官員簽字)

地點：……

日期(年/月/日)：……

(主管當局蓋章或鋼印)

* 不適用者刪除。

國際防止空氣污染證書(IAPP 證書)的補充

結構和設備記錄

注：

1 本記錄應永久附於 IAPP 證書之後。IAPP 證書應隨時保存在船上。

2 記錄應至少使用英文、法文或西班牙文的其中一種語言。如還使用發證國的官方語言，則在發生爭執或不一致時，應以該官方語言爲准。

3 在方格內應填入(x)表示“是”和“適用”；或填入(－)表示“不”和“不適用”。

4 除非另有說明，本記錄中所提及的條款係指本公約附則 VI 的規定，決議或通函係指由國際海事組織通過的決議或通函。

1 船舶概況

1.1 船名……...…

1.2 IMO 編號……..

1.3 船舶安放龍骨或處於類似建造階段的日期……...

1.4 長度(L)#米……

#只有 2016 年 1 月 1 日或以後建造的專門設計和用於娛樂目的船舶，並且根據第 13.5.2.1 條，不適用第 13.5.1.1 條給出的氮氧化物排放限值時才填寫。

2 船舶排放的控制

2.1 消耗臭氧物質(第 *12* 條)

2.1.1 下列於 2005 年 5 月 19 日前安裝的含有消耗臭氧物質，但不含氫化氟烴的滅火系統、其他系統和設備可以繼續使用：

系統或設備	船上位置	物質

2.1.2 下列在 2020 年 1 月 1 日以前安裝的含有氫化氟烴(HCFCs)的系統可以繼續使用：

系統或設備	船上位置	物質

2.2 氮氧化物(NO_X)(第 *13* 條)

2.2.1 本船舶上安裝的下列柴油機，按照經修訂的《2008 年氮氧化物技術章程》的規定符合第 13 條要求的排放標準：

		柴油機 1#	柴油機 2#	柴油機 3#	柴油機 4#	柴油機 5#	柴油機 6#
製造廠和模型							
系列號							
使用							
輸出功率(kw)							
額定轉速(rpm)							
安裝日期(年/月/日)							
重要轉換日期(年/月/日)	按照第 13.2.2 條						
	按照第 13.2.3 條						
由第 13.1.1.2 條免除		☐	☐	☐	☐	☐	☐
第 I 級第 13.3 條		☐	☐	☐	☐	☐	☐
第 II 級第 13.4 條		☐	☐	☐	☐	☐	☐
第 II 級第 13.2.2 或 13.5.2 條		☐	☐	☐	☐	☐	☐
第 III 級第 13..5.1.1 條		☐	☐	☐	☐	☐	☐
存在的認可方法		☐	☐	☐	☐	☐	☐
沒有商業可獲得的認可方法		☐	☐	☐	☐	☐	☐
安裝的認可方法		☐	☐	☐	☐	☐	☐

2.3 硫氧化物(SO_X)和顆粒物質(第 *14* 條)

2.3.1 當船舶在第 14.3 條規定的排放控制區域內運營時，船舶使用：

.1 燃油交付單證明的含硫量不超過適用限值的燃油；
或…….. …… ☐

.2 列於第 2.6 條符合第 4.1 條認可的適當安排…… ☐

2.4 揮發性有機化合物(*VOCs*)(第 *15* 條)

2.4.1 本液貨船有 1 套按照 MSC/Circ.585 號通函安裝和認可的蒸氣收集系統…… ☐

2.4.2.1 對於裝載原油的液貨船，有認可的 VOC 處理計畫…….. ☐

2.4.2.2 VOC 處理計畫認可的參考：……..….

2.5 船上焚燒(第 *16* 條)

本船裝有 1 台焚燒爐：

.1 2000 年 1 月 1 日或以後安裝的，符合經修正的 MEPC.76(40)號決議……..... ☐

.2 2000 年 1 月 1 日前安裝的，符合：

.2.1 MEPC.59(33)號決議……..…… ☐

.2.2 MEPC.76(40)號決議……..…… ☐

2.6 等效(第 *14* 條)

船舶允許使用本附則要求的適合於船舶或其他程式、替換燃油或符合方法使用下列配件、物質、裝置或儀器：

系統或設備	**等效使用**	**批准參考**

茲證明本記錄在各方面均正確無誤。

簽發於……

(記錄簽發地點)

(年/月/日)：…… ……

(簽發日期) (正式授權簽發本記錄的官員簽字)

(主管當局蓋章或鋼印)

附錄 II

試驗迴圈和加權因數

(第 13 條)

在採用經修訂的《2008 年氮氧化物技術章程》中規定的試驗程式和計算方法核實船用柴油機是否符合本附則第 13 條規定的氮氧化物限值時，應使用下列試驗迴圈和加權因數。

.1 對於船舶主推進的恒速船用柴油機，包括柴油電力驅動應採用試驗迴圈 E2；

.2 對於可調螺距螺旋槳裝置應採用試驗迴圈 E2；

.3 對於按推進器定律運轉的主輔柴油機應採用試驗迴圈 E3；

.4 對於恒速輔柴油機應採用試驗迴圈 D2；以及

.5 對於除上述柴油機以外的變速、變載輔柴油機應採用試驗迴圈 C1。

恒速主推進機應用的試驗迴圈
(包括柴油電力驅動或可調螺距螺旋槳裝置)

試驗迴圈類型 E2	轉速	100%	100%	100%	100%
	功率	100%	75%	50%	25%
	加權因數	0.2	0.5	0.15	0.15

按推進器定律運轉的主輔柴油機應用的試驗迴圈

試驗迴圈類型 E3	轉速	100%	91%	80%	63%
	功率	100%	75%	50%	25%
	加權因數	0.2	0.5	0.15	0.15

恒速輔柴油機應用的試驗迴圈

試驗迴圈類型 D2	轉速	100%	100%	100%	100%	100%
	功率	100%	75%	50%	25%	10%
	加權因數	0.05	0.25	0.3	0.3	0.1

變速和變載輔柴油機應用的試驗迴圈

試驗迴圈類型 C1	轉速	額定				過渡			空轉
	扭轉	100%	75%	50%	10%	100%	75%	50%	0%
	加權因數	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

證明符合第 13 條的第 5.1.1 分段規定的柴油機，在每個模式點的具體排放不應超過適用的氮氧化物排放限值的 50%，下列除外：

.1 試驗迴圈 D2 中 10%模式點。

.2 試驗迴圈 C1 中 10%模式點。

.3 試驗迴圈 C1 中理想模式點。

附錄 III

指定排放控制區域的標準和程式
(第 13.6 條和第 14.3 條)

1 目的

1.1 本附錄目的是向各當事國提供制定和提交指定排放控制區域建議的標準和程式，並提出本組織評估此類建議時應考慮的因素。

1.2 從遠洋船舶排放的硫氧化物、氮氧化物和顆粒物質導致世界各城市和沿海地區空氣污染環境濃度的增加。空氣污染對公眾健康和環境產生的危害包括：早產兒死亡、心肺病、肺癌、慢性呼吸道疾病、酸化和富營養化。

1.3 如證實有防止、減少和控制船舶排放硫氧化物和顆粒物質或氮氧化物或所有 3 種排放類型(以下稱爲排放)的需要，本組織應考慮通過一個排放控制區域。

2 指定排放控制區的程式

2.1 指定氮氧化物或硫氧化物和顆粒物質或所有 3 種排放類型的排放控制區域，只能由各當事國向本組織提交建議。如果兩個或以上當事國對某一特定的區域有共同的利益，他們應起草一個互相協調的建議。

2.2 應根據本組織制定的規則和程式向本組織提交指定一個給定區域作爲排放控制區域的建議。

3 指定排放控制區的標準

3.1 建議應包括：

.1 一份所建議的適用區域的明確描述，連同一份標有該區域位置的參考海圖；

.2 所建議控制的類型或排放類型(即：硫氧化物和顆粒物質或氮氧化物或所有 3 種排放類型)；

.3 一份受到船舶排放威脅的人口和環境區域的說明；

.4 一份對在所建議的適用區域內航行的船舶排放造成空氣污染環境濃度的增加或對環境造成不利影響的評估。該評估應包括相關排放對人類健康和環境影響的說明，如對陸地生態和水生生態系統、自然生產力區域、瀕危棲息地、水質、人類健康以及具有重要文化科學價值區域(如有)的不利影響的說明。並應標明有關資料包括所用的方法的來源；

.5 在所建議的適用區域與受威脅人口和環境區域有關的氣象條件的相關資料，特別是主要風力分佈，或有關地形學、地質學、海洋學、形態學資料，或其他可能導致空氣污染環境濃度增加或對環境造成不利影響的條件的相關資料；

.6 所建議的排放控制區內船舶交通狀況，包括這種交通的格局和密度；

.7 一份由一個或多個提案國對陸基硫氧化物、氮氧化物和顆粒物質排放源影響受威脅人口和環境區域所採取的控制措施的說明，該措施的正確性操作應與附則 VI 第 13 和 14 條有關規定應採取的措施相一致；以及

.8 與陸基控制相比，減少船舶排放的相對費用，和對從事國際貿易船舶的經濟影響。

3.2 排放控制區的地理界限將根據上述所列的有關標準，包括來自航行於所建議的區域內的船舶排放和沉積量，交通格局和密度以及風況予以確定。

4 本組織評估並通過排放控制區域的程式

4.1 本組織應審議由一個或多個當事國提交的每份建議。

4.2 在評估建議時，本組織應考慮每份建議中應包括的上述第 3 節中所述的標準。

4.3 排放控制區域應以本附則修正案的形式指定，並根據本公約第 16 條規定予以審議、通過和生效。

5 排放控制區域的管理

5.1 鼓勵擁有航行於這些區域的船舶的當事國向本組織提供任何有關該區域管理的情況。

附錄 IV

船上焚燒爐的型式認可和操作限制
(第 16 條)

1　第 16.6.1 條所述的每一台船上焚燒爐都應擁有 IMO 型式認可證書。爲獲取該證書，焚燒爐應按照第 16.6.1 條所述的認可標準進行設計和建造。每一型號均應在工廠或經認可的試驗設備接受規定的型式認可試驗，並由主管機關負責，在型式認可試驗中使用下列標準燃料/廢物，以確定焚燒爐的運轉是否在本附錄第 2 段所規定的限制之內。

殘油成分爲：	75%重燃油的殘油；
	5%廢潤滑油；以及
	20%乳化水。
固態廢物成分爲：	50%食物廢棄物；
	50%垃圾包括
	約　30%紙
	約　40%硬紙板
	約　10%破布
	約　20%塑膠
	混合物的濕度可達 50%及不燃固態物質可達 7%

2　第 16.6.1 條所述的焚燒爐應在下列限制內運轉：

燃燒室中的氧氣：	6－12%
煙氣中一氧化碳的最大平均值：	200 mg/MJ
煙灰數的最大平均值：	Bacharach 3 或 Ringelman 1 (20%渾濁度) (只有在非常短的時間內如起動時，才能接受更高的煙灰數)
灰渣中不燃成分：	最大 10%，按重量計
燃燒室煙氣出口的溫度範圍：	850℃－1200℃

附錄 V
燃油交付單中包括的資料
(第 18.5 條)

接受燃油的船舶名稱和 IMO 編號

港口

交付開始日期

船用燃油供應商名稱、地址和電話號碼

產品名稱

數量(公噸)

15℃時的密度，kg/m^{3*}

硫含量(% m/m)**

一份由燃油供應商代表簽署和證明的聲明，證明所供燃油符合本附則第 14.1 或 14.4 條以及第 18.3 條的規定。

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* 燃油應按 ISO 3675：1998 或 ISO 12185:1996 進行試驗。

** 燃油應按 ISO 8754：2003 進行試驗。

附錄 VI
《防汙公約》附則 VI 燃油樣品的燃油驗證程式
(第 18.8.2 條)

應使用下列程式判定船上交付和使用的燃油是否符合附則 VI 第 14 條要求的標準。

1 一般要求

1.1 應使用第 18 條第 8.1 款要求的代表性燃油樣品(“MARPOL”樣品)驗證供應上船的燃油硫含量。

1.2 主管機關應通過其主管當局管理驗證程式。

1.3 負責本附錄所述驗證程式的實驗室應就其進行試驗的方法獲得完全認可*。

2 驗證程式步驟 1

2.1 主管當局應將 MARPOL 樣品交付實驗室。

2.2 實驗室應：

.1 將密封號和樣品標籤的詳細資訊記入試驗記錄；

.2 確認 MARPOL 樣品上的封印未受損；以及

.3 拒絕任何封印受損的 MARPOL 樣品。

2.3 如 MARPOL 樣品的封印未受損，實驗室應繼續驗證程式並應：

.1 確保 MARPOL 樣品完全均勻；

.2 從 MARPOL 樣品中取出兩份小樣；以及

.3 重新密封 MARPOL 樣品並在試驗記錄中記入重新密封的詳細資訊。

2.4 應按附錄 V 規定的試驗方法對兩份小樣依次進行試驗。就本驗證程式而言，該試驗分析結果應分爲“A”和“B”。

.1 如結果“A”和“B”在試驗方法的可重複性(r)範圍內，則結果應視爲有效；和

.2 如結果“A”和“B”不在試驗方法的可重複性(r)範圍內，則兩個結果均應放棄，並應由實驗室重新提取兩份小樣進行分析。提取了新小樣後，樣品瓶應按上述第 2.3.3 段重新密封。

2.5 如試驗結果“A”和“B”有效，應計算這兩個結果的平均值“X”。

.1 如結果“X”等於或低於附則 VI 要求的適用限值，則燃油應視爲符合要求。

.2 如結果“X”高於附則 VI 要求的適用限值，則應進行驗證程式步驟 2；但如結果“X”超出規定限制 0.59 R(R 爲試驗方法的複現性)，則燃油應視爲不合格，且不必進一步試驗。

3 驗證程式步驟 2

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* 按 ISO 17025 或等效標準認可。

3.1 如按上述第 2.5.2 段需進行驗證程式步驟 2，主管當局應將 MARPOL 樣品送至另一個經認可的實驗室。

3.2 實驗室收到 MARPOL 樣品後應：

.1 按第 2.3.3 段規定的將樣品標籤和密封號的詳細資訊記入試驗記錄；

.2 從 MARPOL 樣品中取出兩份小樣；以及

.3 重新密封 MARPOL 樣品並在試驗記錄中記入重新密封的詳細資訊。

3.3 應按附錄 V 規定的試驗方法對兩份小樣依次進行試驗。就本驗證程式而言，該試驗分析結果應分爲“C”和“D”：

.1 如結果“C”和“D”在試驗方法的可重複性(r)範圍內，則結果應視爲有效。

.2 如結果“C”和“D”不在試驗方法的可重複性(r)範圍內，則兩個結果均應放棄，並應由實驗室重新提取兩份小樣進行分析。提取了新小樣後，樣品瓶應按上述第 3.2.3 段重新密封。

3.4 如試驗結果“C”和“D”有效，且結果“A”、“B”、“C”和“D”在試驗方法的複現性(R)範圍內，實驗室應計算這些結果的平均值“Y”：

.1 如結果“Y”等於或低於附則 VI 要求的適用限值，則燃油應視爲符合要求。

.2 如結果“Y”高於附則 VI 要求的適用限值，則燃油不符合附則 VI 要求的標準。

3.5 如結果“A”、“B”、“C”和“D”不在試驗方法的複現性(R)範圍內，主管機關可放棄所有試驗結果，並酌情決定是否重複整個試驗過程。

3.6 驗證程式中獲得的結果爲最終結果。

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附錄 VII
排放管制區域
(第 13.6 條及第 14.3 條)

1. 按規則13.6與14.3所指定之排放管制海域之邊界(波羅的海與北海海域除外)均列於本附件。
2. 北美海域係由下列所述組成

.1 該海域位於離美國與加拿大之太平洋海岸，由下列座標之大地線所圍者：

位置	緯度	經度
1	32º 32´ 10〃 N.	117º 06´ 11〃 W.
2	32º 32´ 04〃 N.	117º 07´ 29〃 W.
3	32º 31´ 39〃 N.	117º 14´ 20〃 W.
4	32º 33´ 13〃 N.	117º 15´ 50〃 W.
5	32º 34´ 21〃 N.	117º 22´ 01〃 W.
6	32º 35´ 23〃 N.	117º 27´ 53〃 W.
7	32º 37´ 38〃 N.	117º 49´ 34〃 W.
8	31º 07´ 59〃 N.	118º 36´ 21〃 W.
9	30º 33´ 25〃 N.	121º 47´ 29〃 W.
10	31º 46´ 11〃 N.	123º 17´ 22〃 W.
11	32º 21´ 58〃 N.	123º 50´ 44〃 W.
12	32º 56´ 39〃 N.	124º 11´ 47〃 W.
13	33º 40´ 12〃 N.	124º 27´ 15〃 W.
14	34º 31´ 28〃 N.	125º 16´ 52〃 W.
15	35º 14´ 38〃 N.	125º 43´ 23〃 W.
16	35º 43´ 60〃 N.	126º 18´ 53〃 W.
17	36º 16´ 25〃 N.	126º 45´ 30〃 W.
18	37º 01´ 35〃 N.	127º 07´ 18〃 W.
19	37º 45´ 39〃 N.	127º 38´ 02〃 W.
20	38º 25´ 08〃 N.	127º 52´ 60〃 W.
21	39º 25´ 05〃 N.	128º 31´ 23〃 W.
22	40º 18´ 47〃 N.	128º 45´ 46〃 W.
23	41º 13´ 39〃 N.	128º 40´ 22〃 W.
24	42º 12´ 49〃 N.	129º 00´ 38〃 W.
25	42º 47´ 34〃 N.	129º 05´ 42〃 W.
26	43º 26´ 22〃 N.	129º 01´ 26〃 W.
27	44º 24´ 43〃 N.	128º 41´ 23〃 W.
28	45º 30´ 43〃 N.	128º 40´ 02〃 W.
29	46º 11´ 01〃 N.	128º 49´ 01〃 W.
30	46º 33´ 55〃 N.	129º 04´ 29〃 W.
31	47º 39´ 55〃 N.	131º 15´ 41〃 W.
32	48º 32´ 32〃 N.	132º 41´ 00〃 W.
33	48º 57´ 47〃 N.	133º 14´ 47〃 W.
34	49º 22´ 39〃 N.	134º 15´ 51〃 W.
35	50º 01´ 52〃 N.	135º 19´ 01〃 W.
36	51º 03´ 18〃 N.	136º 45´ 45〃 W.
37	51º 54´ 04〃 N.	137º 41´ 54〃 W.
38	52º 45´ 12〃 N.	138º 20´ 14〃 W.
39	53º 29´ 20〃 N.	138º 40´ 36〃 W.
40	53º 40´ 39〃 N.	138º 48´ 53〃 W.
41	54º 13´ 45〃 N.	139º 32´ 38〃 W.
42	54º 39´ 25〃 N.	139º 56´ 19〃 W.
43	55º 20´ 18〃 N.	140º 55´ 45〃 W.
44	56º 07´ 12〃 N.	141º 36´ 18〃 W.
45	56º 28´ 32〃 N.	142º 17´ 19〃 W.
46	56º 37´ 19〃 N.	142º 48´ 57〃 W.
47	58º 51´ 04〃 N.	153º 15´ 03〃 W.

.2　該海域位置離美國、加拿大與法屬聖波埃爾密克隆島之大西洋海岸及美國墨西哥灣海岸，由下列座標之大地線所圍者：

位置	緯度	經度
1	60° 00′ 00″ N.	64° 09′ 36″ W.
2	60° 00′ 00″ N.	56° 43′ 00″ W.
3	58° 54′ 01″ N.	55° 38′ 05″ W.
4	57° 50′ 52″ N.	55° 03′ 47″ W.
5	57° 35′ 13″ N.	54° 00′ 59″ W.
6	57° 14′ 20″ N.	53° 07′ 58″ W.
7	56° 48′ 09″ N.	52° 23′ 29″ W.
8	56° 18′ 13″ N.	51° 49′ 42″ W.
9	54° 23′ 21″ N.	50° 17′ 44″ W.
10	53° 44′ 54″ N.	50° 07′ 17″ W.
11	53° 04′ 59″ N.	50° 10′ 05″ W.
12	52° 20′ 06″ N.	49° 57′ 09″ W.
13	51° 34′ 20″ N.	48° 52′ 45″ W.
14	50° 40′ 15″ N.	48° 16′ 04″ W.
15	50° 02′ 28″ N.	48° 07′ 03″ W.
16	49° 24′ 03″ N.	48° 09′ 35″ W.
17	48° 39′ 22″ N.	47° 55′ 17″ W.
18	47° 24′ 25″ N.	47° 46′ 56″ W.
19	46° 35′ 12″ N.	48° 00′ 54″ W.
20	45° 19′ 45″ N.	48° 43′ 28″ W.
21	44° 43′ 38″ N.	49° 16′ 50″ W.
22	44° 16′ 38″ N.	49° 51′ 23″ W.
23	43° 53′ 15″ N.	50° 34′ 01″ W.
24	43° 36′ 06″ N.	51° 20′ 41″ W.
25	43° 23′ 59″ N.	52° 17′ 22″ W.
26	43° 19′ 50″ N.	53° 20′ 13″ W.
27	43° 21′ 14″ N.	54° 09′ 20″ W.
28	43° 29′ 41″ N.	55° 07′ 41″ W.
29	42° 40′ 12″ N.	55° 31′ 44″ W.
30	41° 58′ 19″ N.	56° 09′ 34″ W.
31	41° 20′ 21″ N.	57° 05′ 13″ W.
32	40° 55′ 34″ N.	58° 02′ 55″ W.
33	40° 41′ 38″ N.	59° 05′ 18″ W.
34	40° 38′ 33″ N.	60° 12′ 20″ W.
35	40° 45′ 46″ N.	61° 14′ 03″ W.
36	41° 04′ 52″ N.	62° 17′ 49″ W.
37	40° 36′ 55″ N.	63° 10′ 49″ W.
38	40° 17′ 32″ N.	64° 08′ 37″ W.
39	40° 07′ 46″ N.	64° 59′ 31″ W.
40	40° 05′ 44″ N.	65° 53′ 07″ W.
41	39° 58′ 05″ N.	65° 59′ 51″ W.
42	39° 28′ 24″ N.	66° 21′ 14″ W.
43	39° 01′ 54″ N.	66° 48′ 33″ W.
44	38° 39′ 16″ N.	67° 20′ 59″ W.
45	38° 19′ 20″ N.	68° 02′ 01″ W.
46	38° 05′ 29″ N.	68° 46′ 55″ W.
47	37° 58′ 14″ N.	69° 34′ 07″ W.
48	37° 57′ 47″ N.	70° 24′ 09″ W.
49	37° 52′ 46″ N.	70° 37′ 50″ W.
50	37° 18′ 37″ N.	71° 08′ 33″ W.
51	36° 32′ 25″ N.	71° 33′ 59″ W.
52	35° 34′ 58″ N.	71° 26′ 02″ W.
53	34° 33′ 10″ N.	71° 37′ 04″ W.
54	33° 54′ 49″ N.	71° 52′ 35″ W.
55	33° 19′ 23″ N.	72° 17′ 12″ W.
56	32° 45′ 31″ N.	72° 54′ 05″ W.
57	31° 55′ 13″ N.	74° 12′ 02″ W.
58	31° 27′ 14″ N.	75° 15′ 20″ W.
59	31° 03′ 16″ N.	75° 51′ 18″ W.
60	30° 45′ 42″ N.	76° 31′ 38″ W.

61	30° 12′ 48″ N.	77° 18′ 29″ W.
62	29° 25′ 17″ N.	76° 56′ 42″ W.
63	28° 36′ 59″ N.	76° 47′ 60″ W.
64	28° 17′ 13″ N.	76° 40′ 10″ W.
65	28° 17′ 12″ N.	79° 11′ 23″ W.
66	27° 52′ 56″ N.	79° 28′ 35″ W.
67	27° 26′ 01″ N.	79° 31′ 38″ W.
68	27° 16′ 13″ N.	79° 34′ 18″ W.
69	27° 11′ 54″ N.	79° 34′ 56″ W.
70	27° 05′ 59″ N.	79° 35′ 19″ W.
71	27° 00′ 28″ N.	79° 35′ 17″ W.
72	26° 55′ 16″ N.	79° 34′ 39″ W.
73	26° 53′ 58″ N.	79° 34′ 27″ W.
74	26° 45′ 46″ N.	79° 32′ 41″ W.
75	26° 44′ 30″ N.	79° 32′ 23″ W.
76	26° 43′ 40″ N.	79° 32′ 20″ W.
77	26° 41′ 12″ N.	79° 32′ 01″ W.
78	26° 38′ 13″ N.	79° 31′ 32″ W.
79	26° 36′ 30″ N.	79° 31′ 06″ W.
80	26° 35′ 21″ N.	79° 30′ 50″ W.
81	26° 34′ 51″ N.	79° 30′ 46″ W.
82	26° 34′ 11″ N.	79° 30′ 38″ W.
83	26° 31′ 12″ N.	79° 30′ 15″ W.
84	26° 29′ 05″ N.	79° 29′ 53″ W.
85	26° 25′ 31″ N.	79° 29′ 58″ W.
86	26° 23′ 29″ N.	79° 29′ 55″ W.
87	26° 23′ 21″ N.	79° 29′ 54″ W.
88	26° 18′ 57″ N.	79° 31′ 55″ W.
89	26° 15′ 26″ N.	79° 33′ 17″ W.
90	26° 15′ 13″ N.	79° 33′ 23″ W.
91	26° 08′ 09″ N.	79° 35′ 53″ W.
92	26° 07′ 47″ N.	79° 36′ 09″ W.
93	26° 06′ 59″ N.	79° 36′ 35″ W.
94	26° 02′ 52″ N.	79° 38′ 22″ W.
95	25° 59′ 30″ N.	79° 40′ 03″ W.
96	25° 59′ 16″ N.	79° 40′ 08″ W.
97	25° 57′ 48″ N.	79° 40′ 38″ W.
98	25° 56′ 18″ N.	79° 41′ 06″ W.
99	25° 54′ 04″ N.	79° 41′ 38″ W.
100	25° 53′ 24″ N.	79° 41′ 46″ W.
101	25° 51′ 54″ N.	79° 41′ 59″ W
102	25° 49′ 33″ N.	79° 42′ 16″ W.
103	25° 48′ 24″ N.	79° 42′ 23″ W.
104	25° 48′ 20″ N.	79° 42′ 24″ W.
105	25° 46′ 26″ N.	79° 42′ 44″ W.
106	25° 46′ 16″ N.	79° 42′ 45″ W.
107	25° 43′ 40″ N.	79° 42′ 59″ W.
108	25° 42′ 31″ N.	79° 42′ 48″ W.
109	25° 40′ 37″ N.	79° 42′ 27″ W.
110	25° 37′ 24″ N.	79° 42′ 27″ W.
111	25° 37′ 08″ N.	79° 42′ 27″ W.
112	25° 31′ 03″ N.	79° 42′ 12″ W.
113	25° 27′ 59″ N.	79° 42′ 11″ W.
114	25° 24′ 04″ N.	79° 42′ 12″ W.
115	25° 22′ 21″ N.	79° 42′ 20″ W.
116	25° 21′ 29″ N.	79° 42′ 08″ W.
117	25° 16′ 52″ N.	79° 41′ 24″ W.
118	25° 15′ 57″ N.	79° 41′ 31″ W.
119	25° 10′ 39″ N.	79° 41′ 31″ W.
120	25° 09′ 51″ N.	79° 41′ 36″ W.
121	25° 09′ 03″ N.	79° 41′ 45″ W.
122	25° 03′ 55″ N.	79° 42′ 29″ W.
123	25° 02′ 60″ N.	79° 42′ 56″ W.
124	25° 00′ 30″ N.	79° 44′ 05″ W.

125	24° 59′ 03″ N.	79° 44′ 48″ W.
126	24° 55′ 28″ N.	79° 45′ 57″ W.
127	24° 44′ 18″ N.	79° 49′ 24″ W.
128	24° 43′ 04″ N.	79° 49′ 38″ W.
129	24° 42′ 36″ N.	79° 50′ 50″ W.
130	24° 41′ 47″ N.	79° 52′ 57″ W.
131	24° 38′ 32″ N.	79° 59′ 58″ W.
132	24° 36′ 27″ N.	80° 03′ 51″ W.
133	24° 33′ 18″ N.	80° 12′ 43″ W.
134	24° 33′ 05″ N.	80° 13′ 21″ W.
135	24° 32′ 13″ N.	80° 15′ 16″ W.
136	24° 31′ 27″ N.	80° 16′ 55″ W.
137	24° 30′ 57″ N.	80° 17′ 47″ W.
138	24° 30′ 14″ N.	80° 19′ 21″ W.
139	24° 30′ 06″ N.	80° 19′ 44″ W.
140	24° 29′ 38″ N.	80° 21′ 05″ W.
141	24° 28′ 18″ N.	80° 24′ 35″ W.
142	24° 28′ 06″ N.	80° 25′ 10″ W.
143	24° 27′ 23″ N.	80° 27′ 20″ W.
144	24° 26′ 30″ N.	80° 29′ 30″ W.
145	24° 25′ 07″ N.	80° 32′ 22″ W.
146	24° 23′ 30″ N.	80° 36′ 09″ W.
147	24° 22′ 33″ N.	80° 38′ 56″ W.
148	24° 22′ 07″ N.	80° 39′ 51″ W.
149	24° 19′ 31″ N.	80° 45′ 21″ W.
150	24° 19′ 16″ N.	80° 45′ 47″ W.
151	24° 18′ 38″ N.	80° 46′ 49″ W.
152	24° 18′ 35″ N.	80° 46′ 54″ W.
153	24° 09′ 51″ N.	80° 59′ 47″ W.
154	24° 09′ 48″ N.	80° 59′ 51″ W.
155	24° 08′ 58″ N.	81° 01′ 07″ W.
156	24° 08′ 30″ N.	81° 01′ 51″ W.
157	24° 08′ 26″ N.	81° 01′ 57″ W.
158	24° 07′ 28″ N.	81° 03′ 06″ W.
159	24° 02′ 20″ N.	81° 09′ 05″ W.
160	23° 59′ 60″ N.	81° 11′ 16″ W.
161	23° 55′ 32″ N.	81° 12′ 55″ W.
162	23° 53′ 52″ N.	81° 19′ 43″ W.
163	23° 50′ 52″ N.	81° 29′ 59″ W.
164	23° 50′ 02″ N.	81° 39′ 59″ W.
165	23° 49′ 05″ N.	81° 49′ 59″ W.
166	23° 49′ 05″ N.	82° 00′ 11″ W.
167	23° 49′ 42″ N.	82° 09′ 59″ W.
168	23° 51′ 14″ N.	82° 24′ 59″ W.
169	23° 51′ 14″ N.	82° 39′ 59″ W.
170	23° 49′ 42″ N.	82° 48′ 53″ W.
171	23° 49′ 32″ N.	82° 51′ 11″ W.
172	23° 49′ 24″ N.	82° 59′ 59″ W.
173	23° 49′ 52″ N.	83° 14′ 59″ W.
174	23° 51′ 22″ N.	83° 25′ 49″ W.
175	23° 52′ 27″ N.	83° 33′ 01″ W.
176	23° 54′ 04″ N.	83° 41′ 35″ W.
177	23° 55′ 47″ N.	83° 48′ 11″ W.
178	23° 58′ 38″ N.	83° 59′ 59″ W.
179	24° 09′ 37″ N.	84° 29′ 27″ W.
180	24° 13′ 20″ N.	84° 38′ 39″ W.
181	24° 16′ 41″ N.	84° 46′ 07″ W.
182	24° 23′ 30″ N.	84° 59′ 59″ W.
183	24° 26′ 37″ N.	85° 06′ 19″ W.
184	24° 38′ 57″ N.	85° 31′ 54″ W.
185	24° 44′ 17″ N.	85° 43′ 11″ W.
186	24° 53′ 57″ N.	85° 59′ 59″ W.
187	25° 10′ 44″ N.	86° 30′ 07″ W.
188	25° 43′ 15″ N.	86° 21′ 14″ W.

189	26° 13′ 13″ N.	86° 06′ 45″ W.
190	26° 27′ 22″ N.	86° 13′ 15″ W.
191	26° 33′ 46″ N.	86° 37′ 07″ W.
192	26° 01′ 24″ N.	87° 29′ 35″ W.
193	25° 42′ 25″ N.	88° 33′ 00″ W.
194	25° 46′ 54″ N.	90° 29′ 41″ W.
195	25° 44′ 39″ N.	90° 47′ 05″ W.
196	25° 51′ 43″ N.	91° 52′ 50″ W.
197	26° 17′ 44″ N.	93° 03′ 59″ W.
198	25° 59′ 55″ N.	93° 33′ 52″ W.
199	26° 00′ 32″ N.	95° 39′ 27″ W.
200	26° 00′ 33″ N.	96° 48′ 30″ W.
201	25° 58′ 32″ N.	96° 55′ 28″ W.
202	25° 58′ 15″ N.	96° 58′ 41″ W.
203	25° 57′ 58″ N.	97° 01′ 54″ W.
204	25° 57′ 41″ N.	97° 05′ 08″ W.
205	25° 57′ 24″ N.	97° 08′ 21″ W.
206	25° 57′ 24″ N.	97° 08′ 47″ W

.3 該海域位於離夏威夷八個島嶼，由下列座標之大地線圍者；

位置	緯度	經度
1	22° 32′ 54″ N.	153° 00′ 33″ W.
2	23° 06′ 05″ N.	153° 28′ 36″ W.
3	23° 32′ 11″ N.	154° 02′ 12″ W.
4	23° 51′ 47″ N.	154° 36′ 48″ W.
5	24° 21′ 49″ N.	155° 51′ 13″ W.
6	24° 41′ 47″ N.	156° 27′ 27″ W.
7	24° 57′ 33″ N.	157° 22′ 17″ W.
8	25° 13′ 41″ N.	157° 54′ 13″ W.
9	25° 25′ 31″ N.	158° 30′ 36″ W.
10	25° 31′ 19″ N.	159° 09′ 47″ W.
11	25° 30′ 31″ N.	159° 54′ 21″ W.
12	25° 21′ 53″ N.	160° 39′ 53″ W.
13	25° 00′ 06″ N.	161° 38′ 33″ W.
14	24° 40′ 49″ N.	162° 13′ 13″ W.
15	24° 15′ 53″ N.	162° 43′ 08″ W.
16	23° 40′ 50″ N.	163° 13′ 00″ W.
17	23° 03′ 20″ N.	163° 32′ 58″ W.
18	22° 20′ 09″ N.	163° 44′ 41″ W.
19	21° 36′ 45″ N.	163° 46′ 03″ W.
20	20° 55′ 26″ N.	163° 37′ 44″ W.
21	20° 13′ 34″ N.	163° 19′ 13″ W.
22	19° 39′ 03″ N.	162° 53′ 48″ W.
23	19° 09′ 43″ N.	162° 20′ 35″ W.
24	18° 39′ 16″ N.	161° 19′ 14″ W.
25	18° 30′ 31″ N.	160° 38′ 30″ W.
26	18° 29′ 31″ N.	159° 56′ 17″ W.
27	18° 10′ 41″ N.	159° 14′ 08″ W.
28	17° 31′ 17″ N.	158° 56′ 55″ W.
29	16° 54′ 06″ N.	158° 30′ 29″ W.
30	16° 25′ 49″ N.	157° 59′ 25″ W.
31	15° 59′ 57″ N.	157° 17′ 35″ W.
32	15° 40′ 37″ N.	156° 21′ 06″ W.
33	15° 37′ 36″ N.	155° 22′ 16″ W.
34	15° 43′ 46″ N.	154° 46′ 37″ W.
35	15° 55′ 32″ N.	154° 13′ 05″ W.
36	16° 46′ 27″ N.	152° 49′ 11″ W.
37	17° 33′ 42″ N.	152° 00′ 32″ W.
38	18° 30′ 16″ N.	151° 30′ 24″ W.
39	19° 02′ 47″ N.	151° 22′ 17″ W.
40	19° 34′ 46″ N.	151° 19′ 47″ W.
41	20° 07′ 42″ N.	151° 22′ 58″ W.

42	20° 38′ 43″ N.	151° 31′ 36″ W.
43	21° 29′ 09″ N.	151° 59′ 50″ W.
44	22° 06′ 58″ N.	152° 31′ 25″ W.
45	22° 32′ 54″ N.	153° 00′ 33″ W.

3. 美國加勒比海海域包括下列範圍：

.1 該海域位於離波多黎哥聯邦及美屬威京群島之大西洋與加勒比海海岸，由下列座標之大地線圍者：

位置	緯度	經度
1	17° 18′ 37″ N.	67° 32′ 14″ W.
2	19° 11′ 14″ N.	67° 26′ 45″ W.
3	19° 30′ 28″ N.	65° 16′ 48″ W.
4	19° 12′ 25″ N.	65° 6′ 8″ W.
5	18° 45′ 13″ N.	65° 0′ 22″ W.
6	18° 41′ 14″ N.	64° 59′ 33″ W.
7	18° 29′ 22″ N.	64° 53′ 51″ W.
8	18° 27′ 35″ N.	64° 53′ 22″ W.
9	18° 25′ 21″ N.	64° 52′ 39″ W.
10	18° 24′ 30″ N.	64° 52′ 19″ W.
11	18° 23′ 51″ N.	64° 51′ 50″ W.
12	18° 23′ 42″ N.	64° 51′ 23″ W.
13	18° 23′ 36″ N.	64° 50′ 17″ W.
14	18° 23′ 48″ N.	64° 49′ 41″ W.
15	18° 24′ 11″ N.	64° 49′ 0″ W.
16	18° 24′ 28″ N.	64° 47′ 57″ W.
17	18° 24′ 18″ N.	64° 47′ 1″ W.
18	18° 23′ 13″ N.	64° 46′ 37″ W.
19	18° 22′ 37″ N.	64° 45′ 20″ W.
20	18° 22′ 39″ N.	64° 44′ 42″ W.
21	18° 22′ 42″ N.	64° 44′ 36″ W.
22	18° 22′ 37″ N.	64° 44′ 24″ W.
23	18° 22′ 39″ N.	64° 43′ 42″ W.
24	18° 22′ 30″ N.	64° 43′ 36″ W.
25	18° 22′ 25″ N.	64° 42′ 58″ W.
26	18° 22′ 26″ N.	64° 42′ 28″ W.
27	18° 22′ 15″ N.	64° 42′ 3″ W.
28	18° 22′ 22″ N.	64° 38′ 23″ W.
29	18° 21′ 57″ N.	64° 40′ 60″ W.
30	18° 21′ 51″ N.	64° 40′ 15″ W.
31	18° 21′ 22″ N.	64° 38′ 16″ W.
32	18° 20′ 39″ N.	64° 38′ 33″ W.
33	18° 19′ 15″ N.	64° 38′ 14″ W.
34	18° 19′ 7″ N.	64° 38′ 16″ W.
35	18° 17′ 23″ N.	64° 39′ 38″ W.
36	18° 16′ 43″ N.	64° 39′ 41″ W.
37	18° 11′ 33″ N.	64° 38′ 58″ W.
38	18° 3′ 2″ N.	64° 38′ 3″ W.
39	18° 2′ 56″ N.	64° 29′ 35″ W.
40	18° 2′ 51″ N.	64° 27′ 2″ W.
41	18° 2′ 30″ N.	64° 21′ 8″ W.
42	18° 2′ 31″ N.	64° 20′ 8″ W.
43	18° 2′ 3″ N.	64° 15′ 57″ W.
44	18° 0′ 12″ N.	64° 2′ 29″ W.
45	17° 59′ 58″ N.	64° 1′ 4″ W.
46	17° 58′ 47″ N.	63° 57′ 1″ W.
47	17° 57′ 51″ N.	63° 53′ 54″ W.
48	17° 56′ 38″ N.	63° 53′ 21″ W.
49	17° 39′ 40″ N.	63° 54′ 53″ W.
50	17° 37′ 8″ N.	63° 55′ 10″ W.
51	17° 30′ 21″ N.	63° 55′ 56″ W.
52	17° 11′ 36″ N.	63° 57′ 57″ W.
53	17° 4′ 60″ N.	63° 58′ 41″ W.

54	16° 59′ 49″ N.	63° 59′ 18″ W.
55	17° 18′ 37″ N.	67° 32′ 14″ W.

附錄 VIII
國際能源效率(IEE)證書的格式

國際能源效率證書

本證書系根據經 MEPC.203(62)決議案修正的對《經 1978 年議定書修訂的〈1973 年防止船舶污染國際公約〉》的 1997 年議定書(以下簡稱本公約)的規定，

經……國政府授權

(國家全稱)

由……簽發。

(按本公約規定授權的適任組織或個人全稱)

船舶概要*

船名……..

船舶編號或呼號……..

船籍港……..

總噸位……..……

IMO 編號

+……..……

---

* 或者，船舶概況可在表格中橫向排列。

+ 根據本組織 A.600(15)決議通過的《IMO 船舶編號體系》。

茲證明：

1　　本船已按本公約附則 VI 第 5.4 條要求進行了檢驗；以及

2　　檢驗顯示船舶符合第 20 條、第 21 條及第 22 條之可適用要求。

本證書基於的檢驗完成日期：……(年/月/日)

簽發於……

(發證地點)

(年/月/日)：……　　……

(發證日期)　　(經授權發證的官員簽字)

(主管當局蓋章或鋼印)

國際能源效率證書附頁
(IEE 證書)

有關能源效率構造紀錄

注：

1 本紀錄應永久附於 IEE 證書之後。IEE 證書應隨時保存在船上。

2 紀錄應至少使用英文、法文或西班牙文的其中一種語言。如還使用發證國的官方語言，則在發生爭執或不一致時，應以該官方語言爲準。

3 在方格內應填入(x)表示“是”和“適用”；或填入(－)表示“不”和“不適用”。

4 除非另有說明，本紀錄中所提及的條款係指本公約附則 VI 的規定，決議或通函係指由國際海事組織通過的決議或通函。

1 船舶概要

1.1 船名……..….

1.2 IMO 編號……..

1.3 簽約建造日期…….. ……

1.4 總噸位……...

1.5 載重量……...

1.6 船舶類型*……

2 推進系統

2.1 柴油推進…….. ……... ☐

2.2 柴油-電力推進…… …… ☐

2.3 透平機推進……... ……... …… ☐

2.4 混合推進…….. ….....…… ☐

2.5 非任何上述之推進系統…… ……... ☐

3 EEDI 達成指數

3.1 依據規則 20.1 之 EEDI 達成指數之計算係以 EEDI 技術卷所記載之資料爲根基，該卷亦顯示出計算 EEDI 達成指數之過程。

EEDI 達成指數爲：_____克二氧化碳/噸-浬

3.2 EEDI 達成指數未予以計算係因：

3.2.1 由於本船按規則 2.23 之定義屬非新船，依規則 20.1 而予以豁免。……☐

3.2.2 推進系統之類型依規則 19.3 予以豁免…… ☐

3.2.3 依規則 19.4 本船主管官署展延免除符合規則 20 之要求…… ☐

3.2.4 船舶類型依規則 20.1 予以豁免…… ☐

4 EEDI 需求指數

4.1 EEDI 需求指數爲_____克二氧化碳/噸-浬

4.2 不適用 EEDI 需求指數係因：

4.2.1 由於本船按規則 2.23 之定義屬非新船，依規則 21.1 予以豁免…… ☐

4.2.2 推進系統之類型依規則 19.3 予以豁免…… ☐

4.2.3 依規則 19.4 本船主管官署展延免除符合規則 21 之要求…… ☐

4.2.4 船舶類型依規則 21.1 予以豁免…… ☐

4.2.5 船舶大小低於規則 21.2 表一所列之門檻值…… ☐

5 船舶能源效率管理計畫

5.1 本船備有符合規則 22 之一份船舶能源效率管理計畫（SEEMP）. ☐

6 EEDI 技術卷

6.1 本 IEE 證書與符合規則 20.1 之 EEDI 技術卷併存…… ☐

6.2 EEDI 技術卷識別/查證文號

6.3 EEDI 技術卷查證日期

茲證明本紀錄在各方面均正確無誤。

簽發於……

(紀錄簽發地點)

(年/月/日)：…… ……

(簽發日期) (正式授權簽發本紀錄的官員簽字)

(主管當局蓋章或鋼印)

ANNEX 13

RESOLUTION MEPC.176(58)

Adopted on 10 October 2008

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

(Revised MARPOL Annex VI)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (herein after referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships is added to the 1973 Convention (hereinafter referred to as "Annex VI"),

HAVING CONSIDERED the draft amendments to MARPOL Annex VI,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 January 2010, unless prior to that date, not less than one-third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 July 2010 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex; and

6. INVITES the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to MARPOL Annex VI to the attention of shipowners, ship operators, shipbuilders, marine diesel engine manufacturers, marine fuel suppliers and any other interested groups.

ANNEX

REVISED MARPOL ANNEX VI

Regulations for the Prevention of Air Pollution from Ships

CHAPTER I

GENERAL

Regulation 1
Application

The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 16 and 18 of this Annex.

Regulation 2
Definitions

For the purpose of this Annex:

1 *Annex* means Annex VI to the International Convention for the Prevention of Pollution from Ships 1973 (MARPOL), as modified by the Protocol of 1978 relating thereto, and as modified by the Protocol of 1997, as amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention.

2 *A similar stage of construction* means the stage at which:

.1 construction identifiable with a specific ship begins; and

.2 assembly of that ship has commenced comprising at least 50 tons or one per cent of the estimated mass of all structural material, whichever is less.

3 *Anniversary date* means the day and the month of each year which will correspond to the date of expiry of the International Air Pollution Prevention Certificate.

4 *Auxiliary control device* means a system, function, or control strategy installed on a marine diesel engine that is used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure, or that is used to facilitate the starting of the engine. An auxiliary control device may also be a strategy or measure that has been satisfactorily demonstrated not to be a defeat device.

5 *Continuous feeding* is defined as the process whereby waste is fed into a combustion chamber without human assistance while the incinerator is in normal operating conditions with the combustion chamber operative temperature between 850°C and 1,200°C.

6 *Defeat device* means a device which measures, senses, or responds to operating variables (*e.g.*, engine speed, temperature, intake pressure or any other parameter) for the purpose of activating, modulating, delaying or deactivating the operation of any component or the function of the emission control system such that the effectiveness of the emission control system is reduced under conditions encountered during normal operation, unless the use of such a device is substantially included in the applied emission certification test procedures.

7 *Emission* means any release of substances, subject to control by this Annex, from ships into the atmosphere or sea.

8 *Emission Control Area* means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NO_x or SO_x and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas shall include those listed in, or designated under, regulations 13 and 14 of this Annex.

9 *Fuel oil* means any fuel delivered to and intended for combustion purposes for propulsion or operation on board a ship, including distillate and residual fuels.

10 *Gross tonnage* means the gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex I to the International Convention on Tonnage Measurements of Ships, 1969 or any successor Convention.

11 *Installations* in relation to regulation 12 of this Annex means the installation of systems, equipment including portable fire-extinguishing units, insulation, or other material on a ship, but excludes the repair or recharge of previously installed systems, equipment, insulation, or other material, or the recharge of portable fire-extinguishing units.

12 *Installed* means a marine diesel engine that is or is intended to be fitted on a ship, including a portable auxiliary marine diesel engine, only if its fuelling, cooling, or exhaust system is an integral part of the ship. A fuelling system is considered integral to the ship only if it is permanently affixed to the ship. This definition includes a marine diesel engine that is used to supplement or augment the installed power capacity of the ship and is intended to be an integral part of the ship.

13 *Irrational emission control strategy* means any strategy or measure that, when the ship is operated under normal conditions of use, reduces the effectiveness of an emission control system to a level below that expected on the applicable emission test procedures.

14 *Marine diesel engine* means any reciprocating internal combustion engine operating on liquid or dual fuel, to which regulation 13 of this Annex applies, including booster/compound systems if applied.

15 *NO_x Technical Code* means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by resolution 2 of the 1997 MARPOL Conference, as amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention.

16 *Ozone depleting substances* means controlled substances defined in paragraph (4) of article 1 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A, B, C or E to the said Protocol in force at the time of application or interpretation of this Annex.

Ozone depleting substances that may be found on board ship include, but are not limited to:

Halon 1211 Bromochlorodifluoromethane

Halon 1301 Bromotrifluoromethane

Halon 2402 1, 2-Dibromo -1, 1, 2, 2-tetraflouroethane (also known as Halon 114B2)

CFC-11 Trichlorofluoromethane

CFC-12 Dichlorodifluoromethane

CFC-113 1, 1, 2 – Trichloro – 1, 2, 2 – trifluoroethane

CFC-114 1, 2 – Dichloro –1, 1, 2, 2 – tetrafluoroethane

CFC-115 Chloropentafluoroethane

17 *Shipboard incineration* means the incineration of wastes or other matter on board a ship, if such wastes or other matter were generated during the normal operation of that ship.

18 *Shipboard incinerator* means a shipboard facility designed for the primary purpose of incineration.

19 *Ships constructed* means ships the keels of which are laid or which are at a similar stage of construction.

20 *Sludge oil* means sludge from the fuel oil or lubricating oil separators, waste lubricating oil from main or auxiliary machinery, or waste oil from bilge water separators, oil filtering equipment or drip trays.

21 *Tanker* means an oil tanker as defined in regulation 1 of Annex I or a chemical tanker as defined in regulation 1 of Annex II of the present Convention.

Regulation 3
Exceptions and Exemptions

General

1 Regulations of this Annex shall not apply to:

.1 any emission necessary for the purpose of securing the safety of a ship or saving life at sea; or

.2 any emission resulting from damage to a ship or its equipment:

.2.1 provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the emission for the purpose of preventing or minimizing the emission; and

.2.2 except if the owner or the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result.

Trials for Ship Emission Reduction and Control Technology Research

2 The Administration of a Party may, in co-operation with other Administrations as appropriate, issue an exemption from specific provisions of this Annex for a ship to conduct trials for the development of ship emission reduction and control technologies and engine design programmes. Such an exemption shall only be provided if the applications of specific provisions of the Annex or the revised NO_x Technical Code 2008 could impede research into the development of such technologies or programmes. A permit for such an exemption shall only be provided to the minimum number of ships necessary and be subject to the following provisions:

.1 for marine diesel engines with a per cylinder displacement up to 30 litres, the duration of the sea trial shall not exceed 18 months. If additional time is required, a permitting Administration or Administrations may permit a renewal for one additional 18-month period*;* or

.2 for marine diesel engines with a per cylinder displacement at or above 30 litres, the duration of the ship trial shall not exceed 5 years and shall require a progress review by the permitting Administration or Administrations at each intermediate survey. A permit may be withdrawn based on this review if the testing has not adhered to the conditions of the permit or if it is determined that the technology or programme is not likely to produce effective results in the reduction and control of ship emissions. If the reviewing Administration or Administrations determine that additional time is required to conduct a test of a particular technology or programme, a permit may be renewed for an additional time period not to exceed five years.

Emissions from Sea-bed Mineral Activities

3.1 Emissions directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources are, consistent with article 2(3)(b)(ii) of the present Convention, exempt from the provisions of this Annex. Such emissions include the following:

.1 emissions resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of sea-bed mineral resources, including but not limited to the flaring of hydrocarbons and the burning of cuttings, muds, and/or stimulation fluids during well completion and testing operations, and flaring arising from upset conditions;

.2 the release of gases and volatile compounds entrained in drilling fluids and cuttings;

.3 emissions associated solely and directly with the treatment, handling, or storage of sea-bed minerals; and

.4 emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of sea-bed mineral resources.

3.2 The requirements of regulation 18 of this Annex shall not apply to the use of hydrocarbons which are produced and subsequently used on site as fuel, when approved by the Administration.

Regulation 4
Equivalents

1 The Administration of a Party may allow any fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex if such fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods are at least as effective in terms of emissions reductions as that required by this Annex, including any of the standards set forth in regulations 13 and 14.

2 The Administration of a Party which allows a fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex shall communicate to the Organization for circulation to the Parties particulars thereof, for their information and appropriate action, if any.

3 The Administration of a Party should take into account any relevant guidelines developed by the Organization pertaining to the equivalents provided for in this regulation.

4 The Administration of a Party which allows the use of an equivalent as set forth in paragraph 1 of this regulation shall endeavour not to impair or damage its environment, human health, property, or resources or those of other States.

CHAPTER II

SURVEY, CERTIFICATION AND MEANS OF CONTROL

Regulation 5
Surveys

1 Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall be subject to the surveys specified below:

.1 An initial survey before the ship is put into service or before the certificate required under regulation 6 of this Annex is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of this Annex;

.2 A renewal survey at intervals specified by the Administration, but not exceeding five years, except where regulation 9.2, 9.5, 9.6 or 9.7 of this Annex is applicable. The renewal survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of this Annex;

.3 An intermediate survey within three months before or after the second anniversary date or within three months before or after the third anniversary date of the certificate which shall take the place of one of the annual surveys specified in paragraph 1.4 of this regulation. The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of this Annex and are in good working order. Such intermediate surveys shall be endorsed on the certificate issued under regulation 6 or 7 of this Annex;

.4 An annual survey within three months before or after each anniversary date of the certificate, including a general inspection of the equipment, systems, fittings, arrangements and material referred to in paragraph 1.1 of this regulation to ensure that they have been maintained in accordance with paragraph 4 of this regulation and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the certificate issued under regulation 6 or 7 of this Annex; and

.5 An additional survey either general or partial, according to the circumstances, shall be made whenever any important repairs or renewals are made as prescribed in paragraph 4 of this regulation or after a repair resulting from investigations prescribed in paragraph 5 of this regulation. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory and that the ship complies in all respects with the requirements of this Annex.

2 In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of this Annex are complied with.

3 Surveys of ships as regards the enforcement of the provisions of this Annex shall be carried out by officers of the Administration.

.1 The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. Such organizations shall comply with the guidelines adopted by the Organization;[1]

.2 The survey of marine diesel engines and equipment for compliance with regulation 13 of this Annex shall be conducted in accordance with the revised NO_x Technical Code 2008;

.3 When a nominated surveyor or recognized organization determines that the condition of the equipment does not correspond substantially with the particulars of the certificate, they shall ensure that corrective action is taken and shall in due course notify the Administration. If such corrective action is not taken, the certificate shall be withdrawn by the Administration. If the ship is in a port of another Party, the appropriate authorities of the port State shall also be notified immediately. When an officer of the Administration, a nominated surveyor or recognized organization has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such officer, surveyor or organization any necessary assistance to carry out their obligations under this regulation; and

.4 In every case, the Administration concerned shall fully guarantee the completeness and efficiency of the survey and shall undertake to ensure the necessary arrangements to satisfy this obligation.

4 The equipment shall be maintained to conform with the provisions of this Annex and no changes shall be made in the equipment, systems, fittings, arrangements, or material covered by the survey, without the express approval of the Administration. The direct replacement of such equipment and fittings with equipment and fittings that conform with the provisions of this Annex is permitted.

5 Whenever an accident occurs to a ship or a defect is discovered which substantially affects the efficiency or completeness of its equipment covered by this Annex, the master or owner of the ship shall report at the earliest opportunity to the Administration, a nominated surveyor, or recognized organization responsible for issuing the relevant certificate.

Regulation 6
Issue or endorsement of a Certificate

1 An International Air Pollution Prevention Certificate shall be issued, after an initial or renewal survey in accordance with the provisions of regulation 5 of this Annex, to:

[1] Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

.1 any ship of 400 gross tonnage and above engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties; and

.2 platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties.

2 A ship constructed before the date of entry into force of Annex VI for such ship's Administration shall be issued with an International Air Pollution Prevention Certificate in accordance with paragraph 1 of this regulation no later than the first scheduled dry-docking after the date of such entry into force, but in no case later than three years after this date.

3 Such certificate shall be issued or endorsed either by the Administration or by any person or organization duly authorized by it. In every case, the Administration assumes full responsibility for the certificate.

Regulation 7
Issue of a Certificate by another Party

1 A Party may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this Annex are complied with, shall issue or authorize the issuance of an International Air Pollution Prevention Certificate to the ship, and where appropriate, endorse or authorize the endorsement of that certificate on the ship, in accordance with this Annex.

2 A copy of the certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

3 A certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as a certificate issued under regulation 6 of this Annex.

4 No International Air Pollution Prevention Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

Regulation 8
Form of Certificate

The International Air Pollution Prevention Certificate shall be drawn up in a form corresponding to the model given in appendix I to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

Regulation 9
Duration and Validity of Certificate

1 An International Air Pollution Prevention Certificate shall be issued for a period specified by the Administration, which shall not exceed five years.

2 Notwithstanding the requirements of paragraph 1 of this regulation:

.1 when the renewal survey is completed within three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate;

.2 when the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate; and

.3 when the renewal survey is completed more than three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of completion of the renewal survey.

3 If a certificate is issued for a period of less than five years, the Administration may extend the validity of the certificate beyond the expiry date to the maximum period specified in paragraph 1 of this regulation, provided that the surveys referred to in regulations 5.1.3 and 5.1.4 of this Annex applicable when a certificate is issued for a period of five years are carried out as appropriate.

4 If a renewal survey has been completed and a new certificate cannot be issued or placed on board the ship before the expiry date of the existing certificate, the person or organization authorized by the Administration may endorse the existing certificate and such a certificate shall be accepted as valid for a further period which shall not exceed five months from the expiry date.

5 If a ship, at the time when a certificate expires, is not in a port in which it is to be surveyed, the Administration may extend the period of validity of the certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. No certificate shall be extended for a period longer than three months, and a ship to which an extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new certificate. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

6 A certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

7 In special circumstances, as determined by the Administration, a new certificate need not be dated from the date of expiry of the existing certificate as required by paragraph 2.1, 5 or 6 of this regulation. In these special circumstances, the new certificate shall be valid to a date not exceeding five years from the date of completion of the renewal survey.

8 If an annual or intermediate survey is completed before the period specified in regulation 5 of this Annex, then:

.1 the anniversary date shown on the certificate shall be amended by endorsement to a date which shall not be more than three months later than the date on which the survey was completed;

.2 the subsequent annual or intermediate survey required by regulation 5 of this Annex shall be completed at the intervals prescribed by that regulation using the new anniversary date; and

.3 the expiry date may remain unchanged provided one or more annual or intermediate surveys, as appropriate, are carried out so that the maximum intervals between the surveys prescribed by regulation 5 of this Annex are not exceeded.

9 A certificate issued under regulation 6 or 7 of this Annex shall cease to be valid in any of the following cases:

.1 if the relevant surveys are not completed within the periods specified under regulation 5.1 of this Annex;

.2 if the certificate is not endorsed in accordance with regulation 5.1.3 or 5.1.4 of this Annex; and

.3 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of regulation 5.4 of this Annex. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports.

Regulation 10
Port State Control on Operational Requirements

1 A ship, when in a port or an offshore terminal under the jurisdiction of another Party, is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of air pollution from ships.

2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as to ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.

3 Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

Regulation 11
Detection of Violations and Enforcement

1 Parties shall co-operate in the detection of violations and the enforcement of the provisions of this Annex, using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence.

2 A ship to which this Annex applies may, in any port or offshore terminal of a Party, be subject to inspection by officers appointed or authorized by that Party for the purpose of verifying whether the ship has emitted any of the substances covered by this Annex in violation of the provision of this Annex. If an inspection indicates a violation of this Annex, a report shall be forwarded to the Administration for any appropriate action.

3 Any Party shall furnish to the Administration evidence, if any, that the ship has emitted any of the substances covered by this Annex in violation of the provisions of this Annex. If it is practicable to do so, the competent authority of the former Party shall notify the master of the ship of the alleged violation.

4 Upon receiving such evidence, the Administration so informed shall investigate the matter, and may request the other Party to furnish further or better evidence of the alleged contravention. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken in accordance with its law as soon as possible. The Administration shall promptly inform the Party which has reported the alleged violation, as well as the Organization, of the action taken.

5 A Party may also inspect a ship to which this Annex applies when it enters the ports or offshore terminals under its jurisdiction, if a request for an investigation is received from any Party together with sufficient evidence that the ship has emitted any of the substances covered by the Annex in any place in violation of this Annex. The report of such investigation shall be sent to the Party requesting it and to the Administration so that the appropriate action may be taken under the present Convention.

6 The international law concerning the prevention, reduction, and control of pollution of the marine environment from ships, including that law relating to enforcement and safeguards, in force at the time of application or interpretation of this Annex, applies, *mutatis mutandis*, to the rules and standards set forth in this Annex.

CHAPTER III

REQUIREMENTS FOR CONTROL OF EMISSIONS FROM SHIPS

Regulation 12
Ozone Depleting Substances

1 This regulation does not apply to permanently sealed equipment where there are no refrigerant charging connections or potentially removable components containing ozone depleting substances.

2 Subject to the provisions of regulation 3.1, any deliberate emissions of ozone depleting substances shall be prohibited. Deliberate emissions include emissions occurring in the course of maintaining, servicing, repairing or disposing of systems or equipment, except that deliberate emissions do not include minimal releases associated with the recapture or recycling of an ozone depleting substance. Emissions arising from leaks of an ozone depleting substance, whether or not the leaks are deliberate, may be regulated by Parties.

3.1 Installations which contain ozone depleting substances, other than hydro-chlorofluorocarbons, shall be prohibited:

.1 on ships constructed on or after 19 May 2005; or

.2 in the case of ships constructed before 19 May 2005, which have a contractual delivery date of the equipment to the ship on or after 19 May 2005 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 19 May 2005.

3.2 Installations which contain hydro-chlorofluorocarbons shall be prohibited:

.1 on ships constructed on or after 1 January 2020; or

.2 in the case of ships constructed before 1 January 2020, which have a contractual delivery date of the equipment to the ship on or after 1 January 2020 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 1 January 2020.

4 The substances referred to in this regulation, and equipment containing such substances, shall be delivered to appropriate reception facilities when removed from ships.

5 Each ship subject to regulation 6.1 shall maintain a list of equipment containing ozone depleting substances.[2]

6 Each ship subject to regulation 6.1 which has rechargeable systems that contain ozone depleting substances shall maintain an Ozone Depleting Substances Record Book. This Record Book may form part of an existing log-book or electronic recording system as approved by the Administration.

[2] See Appendix I, Supplement to International Air Pollution Prevention Certificate (IAPP Certificate), section 2.1.

7 Entries in the Ozone Depleting Substances Record Book shall be recorded in terms of mass (kg) of substance and shall be completed without delay on each occasion, in respect of the following:

.1 recharge, full or partial, of equipment containing ozone depleting substances;

.2 repair or maintenance of equipment containing ozone depleting substances;

.3 discharge of ozone depleting substances to the atmosphere:

.3.1 deliberate; and

.3.2 non-deliberate;

.4 discharge of ozone depleting substances to land-based reception facilities; and

.5 supply of ozone depleting substances to the ship.

Regulation 13
Nitrogen Oxides (NO_x)

Application

1.1 This regulation shall apply to:

.1 each marine diesel engine with a power output of more than 130 kW installed on a ship; and

.2 each marine diesel engine with a power output of more than 130 kW which undergoes a major conversion on or after 1 January 2000 except when demonstrated to the satisfaction of the Administration that such engine is an identical replacement to the engine which it is replacing and is otherwise not covered under paragraph 1.1.1 of this regulation.

1.2 This regulation does not apply to:

.1 a marine diesel engine intended to be used solely for emergencies, or solely to power any device or equipment intended to be used solely for emergencies on the ship on which it is installed, or a marine diesel engine installed in lifeboats intended to be used solely for emergencies; and

.2 a marine diesel engine installed on a ship solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly, provided that such engine is subject to an alternative NO_x control measure established by the Administration.

1.3 Notwithstanding the provisions of subparagraph 1.1 of this paragraph, the Administration may provide an exclusion from the application of this regulation for any marine diesel engine which is installed on a ship constructed, or for any marine diesel engine which undergoes a major conversion, before 19 May 2005, provided that the ship on which the engine is installed is solely engaged in voyages to ports or offshore terminals within the State the flag of which the ship is entitled to fly.

Major Conversion

2.1 For the purpose of this regulation, *major conversion* means a modification on or after 1 January 2000 of a marine diesel engine that has not already been certified to the standards set forth in paragraph 3, 4, or 5.1.1 of this regulation where:

.1 the engine is replaced by a marine diesel engine or an additional marine diesel engine is installed, or

.2 any substantial modification, as defined in the revised NO_x Technical Code 2008, is made to the engine, or

.3 the maximum continuous rating of the engine is increased by more than 10% compared to the maximum continuous rating of the original certification of the engine.

2.2 For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine or the installation of an additional marine diesel engine, the standards in this regulation in force at the time of the replacement or addition of the engine shall apply. On or after 1 January 2016, in the case of replacement engines only, if it is not possible for such a replacement engine to meet the standards set forth in paragraph 5.1.1 of this regulation (Tier III), then that replacement engine shall meet the standards set forth in paragraph 4 of this regulation (Tier II). Guidelines are to be developed by the Organization to set forth the criteria of when it is not possible for a replacement engine to meet the standards in subparagraph 5.1.1 of this regulation.

2.3 A marine diesel engine referred to in paragraph 2.1.2 or 2.1.3 shall meet the following standards:

.1 for ships constructed prior to 1 January 2000, the standards set forth in paragraph 3 of this regulation shall apply; and

.2 for ships constructed on or after 1 January 2000, the standards in force at the time the ship was constructed shall apply.

Tier I

3 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2000 and prior to 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1 17.0 g/kWh when n is less than 130 rpm;

.2 $45 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

.3 9.8 g/kWh when n is 2,000 rpm or more.

Tier II

4 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1 14.4 g/kWh when n is less than 130 rpm;

.2 $44 \cdot n^{(-0.23)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

.3 7.7 g/kWh when n is 2,000 rpm or more.

Tier III

5.1 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2016:

.1 is prohibited except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1.1 3.4 g/kWh when n is less than 130 rpm;

.1.2 $9 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm; and

.1.3 2.0 g/kWh when n is 2,000 rpm or more;

.2 is subject to the standards set forth in subparagraph 5.1.1 of this paragraph when the ship is operating in an Emission Control Area designated under paragraph 6 of this regulation; and

.3 is subject to the standards set forth in paragraph 4 of this regulation when the ship is operating outside of an Emission Control Area designated under paragraph 6 of this regulation.

5.2 Subject to the review set forth in paragraph 10 of this regulation, the standards set forth in paragraph 5.1.1 of this regulation shall not apply to:

.1 a marine diesel engine installed on a ship with a length (L), as defined in regulation 1.19 of Annex I to the present Convention, less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes; or

.2 a marine diesel engine installed on a ship with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated, to the satisfaction of the Administration, that the ship cannot comply with the standards set forth in paragraph 5.1.1 of this regulation because of design or construction limitations of the ship.

Emission Control Area

6 For the purpose of this regulation, an Emission Control Area shall be any sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in appendix III to this Annex.

Marine Diesel Engines Installed on a Ship Constructed Prior to 1 January 2000

7.1 Notwithstanding paragraph 1.1.1 of this regulation, a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 shall comply with the emission limits set forth in subparagraph 7.4 of this paragraph, provided that an Approved Method for that engine has been certified by an Administration of a Party and notification of such certification has been submitted to the Organization by the certifying Administration. Compliance with this paragraph shall be demonstrated through one of the following:

.1 installation of the certified Approved Method, as confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship's International Air Pollution Prevention Certificate of the presence of the Approved Method; or

.2 certification of the engine confirming that it operates within the limits set forth in paragraph 3, 4, or 5.1.1 of this regulation and an appropriate notation of the engine certification on the ship's International Air Pollution Prevention Certificate.

7.2 Subparagraph 7.1 shall apply no later than the first renewal survey that occurs 12 months or more after deposit of the notification in subparagraph 7.1. If a shipowner of a ship on which an Approved Method is to be installed can demonstrate to the satisfaction of the Administration that the Approved Method was not commercially available despite best efforts to obtain it, then that Approved Method shall be installed on the ship no later than the next annual survey of that ship which falls after the Approved Method is commercially available.

7.3 With regard to a ship with a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000, the International Air Pollution Prevention Certificate shall, for a marine diesel engine to which paragraph 7.1 of this regulation applies, indicate that either an Approved Method has been applied pursuant to paragraph 7.1.1 of this regulation or the engine has been certified pursuant to paragraph 7.1.2 of this regulation or that an Approved Method does not yet exist or is not yet commercially available as described in subparagraph 7.2 of this regulation.

7.4 Subject to regulation 3 of this Annex, the operation of a marine diesel engine described in subparagraph 7.1 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1 17.0 g/kWh when n is less than 130 rpm;

.2 $45 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm; and

.3 9.8 g/kWh when n is 2,000 rpm or more.

7.5 Certification of an Approved Method shall be in accordance with chapter 7 of the revised NO_x Technical Code 2008 and shall include verification:

.1 by the designer of the base marine diesel engine to which the Approved Method applies that the calculated effect of the Approved Method will not decrease engine rating by more than 1.0%, increase fuel consumption by more than 2.0% as measured according to the appropriate test cycle set forth in the revised NO_x Technical Code 2008, or adversely affect engine durability or reliability; and

.2 that the cost of the Approved Method is not excessive, which is determined by a comparison of the amount of NO_x reduced by the Approved Method to achieve the standard set forth in subparagraph 7.4 of this paragraph and the cost of purchasing and installing such Approved Method.[3]

Certification

8 The revised NO_x Technical Code 2008 shall be applied in the certification, testing, and measurement procedures for the standards set forth in this regulation.

9 The procedures for determining NO_x emissions set out in the revised NO_x Technical Code 2008 are intended to be representative of the normal operation of the engine. Defeat devices and irrational emission control strategies undermine this intention and shall not be allowed. This regulation shall not prevent the use of auxiliary control devices that are used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure or that are used to facilitate the starting of the engine.

Review

10 Beginning in 2012 and completed no later than 2013, the Organization shall review the status of the technological developments to implement the standards set forth in paragraph 5.1.1 of this regulation and shall, if proven necessary, adjust the time periods set forth in that subparagraph.

Regulation 14
Sulphur Oxides (SO_x) and Particulate Matter

General Requirements

1 The sulphur content of any fuel oil used on board ships shall not exceed the following limits:

.1 4.50% m/m prior to 1 January 2012;

[3] The cost of an Approved Method shall not exceed 375 Special Drawing Rights/metric ton NO_x calculated in accordance with the Cost-Effectiveness formula below:

$$Ce = \frac{\text{Cost of Approved Method} \cdot 10^6}{P(kW) \cdot 0.768 \cdot 6000(\text{hours/year}) \cdot 5\ (\text{years}) \cdot \Delta\ NO_x(g/kWh)}$$

.2 3.50% m/m on and after 1 January 2012; and

.3 0.50% m/m on and after 1 January 2020.

2 The worldwide average sulphur content of residual fuel oil supplied for use on board ships shall be monitored taking into account guidelines developed by the Organization.[4]

Requirements within Emission Control Areas

3 For the purpose of this regulation, Emission Control Areas shall include:

.1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I, the North Sea as defined in regulation 5(1)(f) of Annex V; and

.2 any other sea area, including port areas, designated by the Organization in accordance with criteria and procedures set forth in appendix III to this Annex.

4 While ships are operating within an Emission Control Area, the sulphur content of fuel oil used on board ships shall not exceed the following limits:

.1 1.50% m/m prior to 1 July 2010;

.2 1.00% m/m on and after 1 July 2010; and

.3 0.10% m/m on and after 1 January 2015.

5 The sulphur content of fuel oil referred to in paragraph 1 and paragraph 4 of this regulation shall be documented by its supplier as required by regulation 18 of this Annex.

6 Those ships using separate fuel oils to comply with paragraph 4 of this regulation and entering or leaving an Emission Control Area set forth in paragraph 3 of this regulation shall carry a written procedure showing how the fuel oil change-over is to be done, allowing sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable sulphur content specified in paragraph 4 of this regulation prior to entry into an Emission Control Area. The volume of low sulphur fuel oils in each tank as well as the date, time, and position of the ship when any fuel-oil-change-over operation is completed prior to the entry into an Emission Control Area or commenced after exit from such an area, shall be recorded in such log-book as prescribed by the Administration.

7 During the first twelve months immediately following an amendment designating a specific Emission Control Area under paragraph 3.2 of this regulation, ships operating in that Emission Control Area are exempt from the requirements in paragraphs 4 and 6 of this regulation and from the requirements of paragraph 5 of this regulation insofar as they relate to paragraph 4 of this regulation.

[4] MEPC.82(43), "Guidelines for Monitoring the World-wide Average Sulphur Content of Residual Fuel Oils Supplied for Use On Board Ships".

Review Provision

8 A review of the standard set forth in subparagraph 1.3 of this regulation shall be completed by 2018 to determine the availability of fuel oil to comply with the fuel oil standard set forth in that paragraph and shall take into account the following elements:

.1 the global market supply and demand for fuel oil to comply with paragraph 1.3 of this regulation that exist at the time that the review is conducted;

.2 an analysis of the trends in fuel oil markets; and

.3 any other relevant issue.

9 The Organization shall establish a group of experts, comprising of representatives with the appropriate expertise in the fuel oil market and appropriate maritime, environmental, scientific, and legal expertise, to conduct the review referred to in paragraph 8 of this regulation. The group of experts shall develop the appropriate information to inform the decision to be taken by the Parties.

10 The Parties, based on the information developed by the group of experts, may decide whether it is possible for ships to comply with the date in paragraph 1.3 of this regulation. If a decision is taken that it is not possible for ships to comply, then the standard in that subparagraph shall become effective on 1 January 2025.

Regulation 15
Volatile Organic Compounds (VOCs)

1 If the emissions of VOCs from a tanker are to be regulated in a port or ports or a terminal or terminals under the jurisdiction of a Party, they shall be regulated in accordance with the provisions of this regulation.

2 A Party regulating tankers for VOC emissions shall submit a notification to the Organization. This notification shall include information on the size of tankers to be controlled, the cargoes requiring vapour emission control systems, and the effective date of such control. The notification shall be submitted at least six months before the effective date.

3 A Party which designates ports or terminals at which VOCs emissions from tankers are to be regulated shall ensure that vapour emission control systems, approved by that Party taking into account the safety standards for such systems developed by the Organization[5], are provided in any designated port and terminal and are operated safely and in a manner so as to avoid undue delay to a ship.

4 The Organization shall circulate a list of the ports and terminals designated by Parties to other Parties and Member States of the Organization for their information.

5 A tanker to which paragraph 1 of this regulation applies shall be provided with a vapour emission collection system approved by the Administration taking into account the safety standards for such systems developed by the Organization[5], and shall use this system during the

[5] MSC/Circ.585, Standards for vapour emission control systems.

loading of relevant cargoes. A port or terminal which has installed vapour emission control systems in accordance with this regulation may accept tankers which are not fitted with vapour collection systems for a period of three years after the effective date identified in paragraph 2 of this regulation.

6 A tanker carrying crude oil shall have on board and implement a VOC Management Plan approved by the Administration. Such a plan shall be prepared taking into account the guidelines developed by the Organization. The plan shall be specific to each ship and shall at least:

.1 provide written procedures for minimizing VOC emissions during the loading, sea passage and discharge of cargo;

.2 give consideration to the additional VOC generated by crude oil washing;

.3 identify a person responsible for implementing the plan; and

.4 for ships on international voyages, be written in the working language of the master and officers and, if the working language of the master and officers is not English, French, or Spanish, include a translation into one of these languages.

7 This regulation shall also apply to gas carriers only if the type of loading and containment systems allow safe retention of non-methane VOCs on board or their safe return ashore.[6]

Regulation 16
Shipboard Incineration

1 Except as provided in paragraph 4 of this regulation, shipboard incineration shall be allowed only in a shipboard incinerator.

2 Shipboard incineration of the following substances shall be prohibited:

.1 residues of cargoes subject to Annex I, II or III or related contaminated packing materials;

.2 polychlorinated biphenyls (PCBs);

.3 garbage, as defined by Annex V, containing more than traces of heavy metals;

.4 refined petroleum products containing halogen compounds;

.5 sewage sludge and sludge oil either of which are not generated on board the ship; and

.6 exhaust gas cleaning system residues.

[6] MSC.30(61), "International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk", chapter 5.

3 Shipboard incineration of polyvinyl chlorides (PVCs) shall be prohibited, except in shipboard incinerator for which an IMO Type Approval Certificates[7] has been issued.

4 Shipboard incineration of sewage sludge and sludge oil generated during normal operation of a ship may also take place in the main or auxiliary power plant or boilers, but in those cases, shall not take place inside ports, harbours and estuaries.

5 Nothing in this regulation neither:

.1 affects the prohibition in, or other requirements of, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as amended, and the 1996 Protocol thereto, nor

.2 precludes the development, installation and operation of alternative design shipboard thermal waste treatment devices that meet or exceed the requirements of this regulation.

6.1 Except as provided in subparagraph 6.2 of this paragraph, each incinerator on a ship constructed on or after 1 January 2000 or incinerator which is installed on board a ship on or after 1 January 2000 shall meet the requirements contained in appendix IV to this Annex. Each incinerator subject to this subparagraph shall be approved by the Administration taking into account the standard specification for shipboard incinerators developed by the Organization[8]; or

6.2 The Administration may allow exclusion from the application of subparagraph 6.1 of this paragraph to any incinerator which is installed on board a ship before 19 May 2005, provided that the ship is solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly.

7 Incinerators installed in accordance with the requirements of paragraph 6.1 of this regulation shall be provided with a manufacturer's operating manual which is to be retained with the unit and which shall specify how to operate the incinerator within the limits described in paragraph 2 of appendix IV of this Annex.

8 Personnel responsible for the operation of an incinerator installed in accordance with the requirements of paragraph 6.1 of this regulation shall be trained to implement the guidance provided in the manufacturer's operating manual as required by paragraph 7 of this regulation.

9 For incinerators installed in accordance with the requirements of paragraph 6.1 of this regulation the combustion chamber gas outlet temperature shall be monitored at all times the unit is in operation. Where that incinerator is of the continuous-feed type, waste shall not be fed into the unit when the combustion chamber gas outlet temperature is below 850°C. Where that incinerator is of the batch-loaded type, the unit shall be designed so that the combustion chamber gas outlet temperature shall reach 600°C within five minutes after start-up and will thereafter stabilize at a temperature not less than 850°C.

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[7] Type Approval Certificates issued in accordance with resolution MEPC.59(33) or MEPC.76(40).

[8] Refer to resolution MEPC.76(40), Standard specification for shipboard incinerators.

Regulation 17
Reception Facilities

1 Each Party undertakes to ensure the provision of facilities adequate to meet the:

.1 needs of ships using its repair ports for the reception of ozone depleting substances and equipment containing such substances when removed from ships;

.2 needs of ships using its ports, terminals or repair ports for the reception of exhaust gas cleaning residues from an exhaust gas cleaning system,

without causing undue delay to ships; and

.3 needs in ship-breaking facilities for the reception of ozone depleting substances and equipment containing such substances when removed from ships.

2 If a particular port or terminal of a Party is – taking into account the guidelines to be developed by the Organization – remotely located from, or lacking in, the industrial infrastructure necessary to manage and process those substances referred to in paragraph 1 of this regulation and therefore cannot accept such substances, then the Party shall inform the Organization of any such port or terminal so that this information may be circulated to all Parties and Member States of the Organization for their information and any appropriate action. Each Party that has provided the Organization with such information shall also notify the Organization of its ports and terminals where reception facilities are available to manage and process such substances.

3 Each Party shall notify the Organization for transmission to the Members of the Organization of all cases where the facilities provided under this regulation are unavailable or alleged to be inadequate.

Regulation 18
Fuel Oil Availability and Quality

Fuel Oil Availability

1 Each Party shall take all reasonable steps to promote the availability of fuel oils which comply with this Annex and inform the Organization of the availability of compliant fuel oils in its ports and terminals.

2.1 If a ship is found by a Party not to be in compliance with the standards for compliant fuel oils set forth in this Annex, the competent authority of the Party is entitled to require the ship to:

.1 present a record of the actions taken to attempt to achieve compliance; and

.2 provide evidence that it attempted to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase.

2.2 The ship should not be required to deviate from its intended voyage or to delay unduly the voyage in order to achieve compliance.

2.3 If a ship provides the information set forth in subparagraph 2.1 of this paragraph, a Party shall take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

2.4 A ship shall notify its Administration and the competent authority of the relevant port of destination when it cannot purchase compliant fuel oil.

2.5 A Party shall notify the Organization when a ship has presented evidence of the non-availability of compliant fuel oil.

Fuel Oil Quality

3 Fuel oil for combustion purposes delivered to and used on board ships to which this Annex applies shall meet the following requirements:

.1 except as provided in subparagraph 3.2:

.1.1 the fuel oil shall be blends of hydrocarbons derived from petroleum refining. This shall not preclude the incorporation of small amounts of additives intended to improve some aspects of performance;

.1.2 the fuel oil shall be free from inorganic acid; and

.1.3 the fuel oil shall not include any added substance or chemical waste which:

.1.3.1 jeopardizes the safety of ships or adversely affects the performance of the machinery, or

.1.3.2 is harmful to personnel, or

.1.3.3 contributes overall to additional air pollution.

.2 fuel oil for combustion purposes derived by methods other than petroleum refining shall not:

.2.1 exceed the applicable sulphur content set forth in regulation 14 of this Annex;

.2.2 cause an engine to exceed the applicable NO_x emission limit set forth in paragraphs 3, 4, 5.1.1 and 7.4 of regulation 13;

.2.3 contain inorganic acid; or

.2.4.1 jeopardize the safety of ships or adversely affect the performance of the machinery, or

.2.4.2 be harmful to personnel, or

.2.4.3 contribute overall to additional air pollution.

4 This regulation does not apply to coal in its solid form or nuclear fuels. Paragraphs 5, 6, 7.1, 7.2, 8.1, 8.2, 9.2, 9.3, and 9.4 of this regulation do not apply to gas fuels such as Liquified Natural Gas, Compressed Natural Gas or Liquified Petroleum Gas. The sulphur content of gas fuels delivered to a ship specifically for combustion purposes on board that ship shall be documented by the supplier.

5 For each ship subject to regulations 5 and 6 of this Annex, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note which shall contain at least the information specified in appendix V to this Annex.

6 The bunker delivery note shall be kept on board the ship in such a place as to be readily available for inspection at all reasonable times. It shall be retained for a period of three years after the fuel oil has been delivered on board.

7.1 The competent authority of a Party may inspect the bunker delivery notes on board any ship to which this Annex applies while the ship is in its port or offshore terminal, may make a copy of each delivery note, and may require the master or person in charge of the ship to certify that each copy is a true copy of such bunker delivery note. The competent authority may also verify the contents of each note through consultations with the port where the note was issued.

7.2 The inspection of the bunker delivery notes and the taking of certified copies by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

8.1 The bunker delivery note shall be accompanied by a representative sample of the fuel oil delivered taking into account guidelines developed by the Organization.[9] The sample is to be sealed and signed by the supplier's representative and the master or officer in charge of the bunker operation on completion of bunkering operations and retained under the ship's control until the fuel oil is substantially consumed, but in any case for a period of not less than 12 months from the time of delivery.

8.2 If an Administration requires the representative sample to be analysed, it shall be done in accordance with the verification procedure set forth in appendix VI to determine whether the fuel oil meets the requirements of this Annex.

9 Parties undertake to ensure that appropriate authorities designated by them:

.1 maintain a register of local suppliers of fuel oil;

.2 require local suppliers to provide the bunker delivery note and sample as required by this regulation, certified by the fuel oil supplier that the fuel oil meets the requirements of regulations 14 and 18 of this Annex;

[9] Refer to MEPC.96(47), "Guidelines for the Sampling of Fuel Oil for Determination of Compliance with Annex VI of MARPOL 73/78".

.3 require local suppliers to retain a copy of the bunker delivery note for at least three years for inspection and verification by the port State as necessary;

.4 take action as appropriate against fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note;

.5 inform the Administration of any ship receiving fuel oil found to be non-compliant with the requirements of regulation 14 or 18 of this Annex; and

.6 inform the Organization for transmission to Parties and Member States of the Organization of all cases where fuel oil suppliers have failed to meet the requirements specified in regulations 14 or 18 of this Annex.

10 In connection with port State inspections carried out by Parties, the Parties further undertake to:

.1 inform the Party or non-Party under whose jurisdiction a bunker delivery note was issued of cases of delivery of noncompliant fuel oil, giving all relevant information; and

.2 ensure that remedial action as appropriate is taken to bring noncompliant fuel oil discovered into compliance.

11 For every ship of 400 gross tonnage and above on scheduled services with frequent and regular port calls, an Administration may decide after application and consultation with affected States that compliance with paragraph 6 of this regulation may be documented in an alternative manner which gives similar certainty of compliance with regulations 14 and 18 of this Annex.

APPENDIX I

Form of International Air Pollution Prevention (IAPP) Certificate
(Regulation 8)

INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.xx(58) in 2008, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....
(full designation of the country)

by .....
(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship[*]

Name of ship……..

Distinctive number or letters……..

Port of registry……

Gross tonnage…….

IMO Number[+] ……

[*] Alternatively, the particulars of the ship may be placed horizontally in boxes.

[+] In accordance with IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5 of Annex VI of the Convention; and

2 That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of Annex VI of the Convention.

Completion date of survey on which this Certificate is based: …….... (dd/mm/yyyy)

This Certificate is valid until .....[*] subject to surveys in accordance with regulation 5 of Annex VI of the Convention.

Issued at .....
(Place of issue of certificate)

(dd/mm/yyyy): ....
(Date of issue) *(Signature of authorized official issuing the certificate)*

(Seal or stamp of the authority, as appropriate)

[*] Insert the date of expiry as specified by the Administration in accordance with regulation 9.1 of Annex VI of the Convention. The day and the month of this date correspond to the anniversary date as defined in regulation 2.3 of Annex VI of the Convention, unless amended in accordance with regulation 9.8 of Annex VI of the Convention.

Endorsement for annual and intermediate surveys

THIS IS TO CERTIFY that at a survey required by regulation 5 of Annex VI of the Convention the ship was found to comply with the relevant provisions of that Annex:

Annual survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate* survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate* survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Annual survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

Annual/intermediate survey in accordance with regulation 9.8.3

THIS IS TO CERTIFY that, at an annual/intermediate* survey in accordance with regulation 9.8.3 of Annex VI of the Convention, the ship was found to comply with the relevant provisions of that Annex:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Endorsement to extend the certificate if valid for less than 5 years where regulation 9.3 applies

The ship complies with the relevant provisions of the Annex, and this certificate shall, in accordance with regulation 9.3 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy): ……..

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Endorsement where the renewal survey has been completed and regulation 9.4 applies

The ship complies with the relevant provisions of the Annex, and this certificate shall, in accordance with regulation 9.4 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy): ……..

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation 9.5 or 9.6 applies

This certificate shall, in accordance with regulation 9.5 or 9.6* of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy):…….

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Endorsement for advancement of anniversary date where regulation 9.8 applies

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy): …..……

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy): ……..……..……

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

SUPPLEMENT TO
INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE
(IAPP CERTIFICATE)

RECORD OF CONSTRUCTION AND EQUIPMENT

Notes:	
1	This Record shall be permanently attached to the IAPP Certificate. The IAPP Certificate shall be available on board the ship at all times.
2	The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
3	Entries in boxes shall be made by inserting either a cross (x) for the answer "yes" and "applicable" or a (-) for the answers "no" and "not applicable" as appropriate.
4	Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship .....

1.2 IMO number .....

1.3 Date on which keel was laid or ship was at a similar stage of construction .....

1.4 Length (L) # metres .....

Completed only in respect of ships constructed on or after 1 January 2016, which are specially designed, and used solely, for recreational purposes and to which, in accordance with regulation 13.5.2.1, the NO_x emission limit as given by regulation 13.5.1.1 will not apply.

2 Control of emissions from ships

2.1 *Ozone depleting substances (regulation 12)*

2.1.1 The following fire-extinguishing systems, other systems and equipment containing ozone depleting substances, other than hydro-chlorofluorocarbons, installed before 19 May 2005 may continue in service:

System or equipment	Location on board	Substance

2.1.2 The following systems containing hydro-chlorofluorocarbons (HCFCs) installed before 1 January 2020 may continue in service:

System or equipment	Location on board	Substance

2.2 *Nitrogen oxides (NO_x) (regulation 13)*

2.2.1 The following marine diesel engines installed on this ship comply with the applicable emission limit of regulation 13 in accordance with the revised NO_x Technical Code 2008:

		Engine #1	Engine #2	Engine #3	Engine #4	Engine #5	Engine #6
Manufacturer and model							
Serial number							
Use							
Power output (kW)							
Rated speed (RPM)							
Date of installation (dd/mm/yyyy)							
Date of major conversion (dd/mm/yyyy)	According to Reg. 13.2.2						
	According to Reg. 13.2.3						
Exempted by regulation 13.1.1.2		☐	☐	☐	☐	☐	☐
Tier I Reg.13.3		☐	☐	☐	☐	☐	☐
Tier II Reg.13.4		☐	☐	☐	☐	☐	☐
Tier II Reg. 13.2.2 or 13.5.2		☐	☐	☐	☐	☐	☐
Tier III Reg.13.5.1.1		☐	☐	☐	☐	☐	☐
Approved Method exists		☐	☐	☐	☐	☐	☐
Approved Method not commercially available		☐	☐	☐	☐	☐	☐
Approved Method installed		☐	☐	☐	☐	☐	☐

2.3 *Sulphur oxides (SO_x) and particulate matter (regulation 14)*

2.3.1 When the ship operates within an Emission Control Area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content that does not exceed the applicable limit value as documented by bunker delivery notes; or…… ☐

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6 ..... ☐

2.4 *Volatile organic compounds (VOCs) (regulation 15)*

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585. ……. ☐

2.4.2.1 For a tanker carrying crude oil, there is an approved VOC Management Plan …….. ☐

2.4.2.2 VOC Management Plan approval reference: .....

2.5 *Shipboard incineration (regulation 16)*

The ship has an incinerator:

.1 installed on or after 1 January 2000 which complies with resolution MEPC.76(40) as amended ……. ☐

.2 installed before 1 January 2000 which complies with:

.2.1 resolution MEPC.59(33) ……... ☐

.2.2 resolution MEPC.76(40) …….. ☐

2.6 *Equivalents (regulation 4)*

The ship has been allowed to use the following fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex:

System or equipment	Equivalent used	Approval reference

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

(dd/mm/yyyy): ....
(Date of issue) *(Signature of duly authorized official issuing the Record)*

(Seal or stamp of the authority, as appropriate)

APPENDIX II

TEST CYCLES AND WEIGHTING FACTORS
(Regulation 13)

The following test cycles and weighing factors shall be applied for verification of compliance of marine diesel engines with the applicable NO_x limit in accordance with regulation 13 of this Annex using the test procedure and calculation method as specified in the revised NO_x Technical Code 2008.

.1 For constant-speed marine engines for ship main propulsion, including diesel-electric drive, test cycle E2 shall be applied;

.2 For controllable-pitch propeller sets test cycle E2 shall be applied;

.3 For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied;

.4 For constant-speed auxiliary engines test cycle D2 shall be applied; and

.5 For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

Test cycle for *constant speed main propulsion* application
(including diesel-electric drive and all controllable-pitch propeller installations)

Test cycle type E2	Speed	100%	100%	100%	100%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *propeller-law-operated main* and *propeller-law-operated auxiliary engine* application

Test cycle type E3	Speed	100%	91%	80%	63%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *constant-speed auxiliary engine* application

Test cycle type D2	Speed	100%	100%	100%	100%	100%
	Power	100%	75%	50%	25%	10%
	Weighting factor	0.05	0.25	0.3	0.3	0.1

Test cycle for *variable-speed and load auxiliary engine* application

	Speed	Rated				Intermediate			Idle
Test cycle type C1	Torque	100%	75%	50%	10%	100%	75%	50%	0%
	Weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

In the case of an engine to be certified in accordance with subparagraph 5.1.1 of regulation 13, the specific emission at each individual mode point shall not exceed the applicable NO_x emission limit value by more than 50% except as follows:

.1 The 10% mode point in the D2 test cycle.

.2 The 10% mode point in the C1 test cycle.

.3 The idle mode point in the C1 test cycle.

APPENDIX III

CRITERIA AND PROCEDURES FOR DESIGNATION OF EMISSION CONTROL AREAS (Regulation 13.6 and regulation 14.3)

1 OBJECTIVES

1.1 The purpose of this appendix is to provide the criteria and procedures to Parties for the formulation and submission of proposals for the designation of Emission Control Areas and to set forth the factors to be considered in the assessment of such proposals by the Organization.

1.2 Emissions of NO_x, SO_x and particulate matter from ocean-going ships contribute to ambient concentrations of air pollution in cities and coastal areas around the world. Adverse public health and environmental effects associated with air pollution include premature mortality, cardiopulmonary disease, lung cancer, chronic respiratory ailments, acidification and eutrophication.

1.3 An Emission Control Area should be considered for adoption by the Organization if supported by a demonstrated need to prevent, reduce, and control emissions of NO_x or SO_x and particulate matter or all three types of emissions (hereinafter emissions) from ships.

2 PROCESS FOR THE DESIGNATION OF EMISSION CONTROL AREAS

2.1 A proposal to the Organization for designation of an Emission Control Area for NO_x or SO_x and particulate matter or all three types of emissions may be submitted only by Parties. Where two or more Parties have a common interest in a particular area, they should formulate a coordinated proposal.

2.2 A proposal to designate a given area as an Emission Control Area should be submitted to the Organization in accordance with the rules and procedures established by the Organization.

3 CRITERIA FOR DESIGNATION OF AN EMISSION CONTROL AREA

3.1 The proposal shall include:

.1 a clear delineation of the proposed area of application, along with a reference chart on which the area is marked;

.2 the type or types of emission(s) that is or are being proposed for control (i.e. NO_x or SO_x and particulate matter or all three types of emissions);

.3 a description of the human populations and environmental areas at risk from the impacts of ship emissions;

.4 an assessment that emissions from ships operating in the proposed area of application are contributing to ambient concentrations of air pollution or to adverse environmental impacts. Such assessment shall include a description of the impacts of the relevant emissions on human health and the environment, such

as adverse impacts to terrestrial and aquatic ecosystems, areas of natural productivity, critical habitats, water quality, human health, and areas of cultural and scientific significance, if applicable. The sources of relevant data including methodologies used shall be identified;

.5 relevant information pertaining to the meteorological conditions in the proposed area of application to the human populations and environmental areas at risk, in particular prevailing wind patterns, or to topographical, geological, oceanographic, morphological, or other conditions that contribute to ambient concentrations of air pollution or adverse environmental impacts;

.6 the nature of the ship traffic in the proposed Emission Control Area, including the patterns and density of such traffic;

.7 a description of the control measures taken by the proposing Party or Parties addressing land-based sources of NO_x, SO_x and particulate matter emissions affecting the human populations and environmental areas at risk that are in place and operating concurrent with the consideration of measures to be adopted in relation to provisions of regulations 13 and 14 of Annex VI; and

.8 the relative costs of reducing emissions from ships when compared with land-based controls, and the economic impacts on shipping engaged in international trade.

3.2 The geographical limits of an Emission Control Area will be based on the relevant criteria outlined above, including emissions and deposition from ships navigating in the proposed area, traffic patterns and density, and wind conditions.

4 PROCEDURES FOR THE ASSESSMENT AND ADOPTION OF EMISSION CONTROL AREAS BY THE ORGANIZATION

4.1 The Organization shall consider each proposal submitted to it by a Party or Parties.

4.2 In assessing the proposal, the Organization shall take into account the criteria which are to be included in each proposal for adoption as set forth in section 3 above.

4.3 An Emission Control Area shall be designated by means of an amendment to this Annex, considered, adopted and brought into force in accordance with article 16 of the present Convention.

5 OPERATION OF EMISSION CONTROL AREAS

5.1 Parties which have ships navigating in the area are encouraged to bring to the Organization any concerns regarding the operation of the area.

APPENDIX IV

TYPE APPROVAL AND OPERATING LIMITS FOR SHIPBOARD INCINERATORS (Regulation 16)

1 Ships incinerators described in regulation 16.6.1 on board shall possess an IMO type approval certificate for each incinerator. In order to obtain such certificate, the incinerator shall be designed and built to an approved standard as described in regulation 16.6.1. Each model shall be subject to a specified type approval test operation at the factory or an approved test facility, and under the responsibility of the Administration, using the following standard fuel/waste specification for the type approval test for determining whether the incinerator operates within the limits specified in paragraph 2 of this appendix:

Sludge Oil Consisting of:	75% Sludge oil from HFO; 5% waste lubricating oil; and 20% emulsified water.
Solid waste consisting of:	50% food waste; 50% rubbish containing; approx. 30% paper, " 40% cardboard, " 10% rags, " 20% plastic The mixture will have up to 50% moisture and 7% incombustible solids.

2 Incinerators described in regulation 16.6.1 shall operate within the following limits:

O_2 in combustion chamber:	6 – 12%
CO in flue gas maximum average:	200 mg/MJ
Soot number maximum average:	Bacharach 3 or Ringelman 1 (20% opacity) (A higher soot number is acceptable only during very short periods such as starting up)
Unburned components in ash residues:	Maximum 10% by Weight
Combustion chamber flue gas outlet temperature range:	850 – 1200^{o}C

APPENDIX V

INFORMATION TO BE INCLUDED IN THE BUNKER DELIVERY NOTE (Regulation 18.5)

Name and IMO Number of receiving ship

Port

Date of commencement of delivery

Name, address, and telephone number of marine fuel oil supplier

Product name(s)

Quantity in metric tons

Density at 15°C, kg/m³*

Sulphur content (%m/m)**

A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with the applicable subparagraph of regulation 14.1 or 14.4 and regulation 18.3 of this Annex.

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* Fuel oil shall be tested in accordance with ISO 3675:1998 or ISO 12185:1996.

** Fuel oil shall be tested in accordance with ISO 8754:2003.

APPENDIX VI

**FUEL VERIFICATION PROCEDURE FOR MARPOL ANNEX VI
FUEL OIL SAMPLES
(Regulation 18.8.2)**

The following procedure shall be used to determine whether the fuel oil delivered to and used on board ships is compliant with the sulphur limits required by regulation 14 of Annex VI.

1 General Requirements

1.1 The representative fuel oil sample, which is required by paragraph 8.1 of regulation 18 (the "MARPOL sample") shall be used to verify the sulphur content of the fuel oil supplied to a ship.

1.2 An Administration, through its competent authority, shall manage the verification procedure.

1.3 The laboratories responsible for the verification procedure set forth in this appendix shall be fully accredited* for the purpose of conducting the tests.

2 Verification Procedure Stage 1

2.1 The MARPOL sample shall be delivered by the competent authority to the laboratory.

2.2 The laboratory shall:

.1 record the details of the seal number and the sample label on the test record;

.2 confirm that the condition of the seal on the MARPOL sample has not been broken; and

.3 reject any MARPOL sample where the seal has been broken.

2.3 If the seal of the MARPOL sample has not been broken, the laboratory shall proceed with the verification procedure and shall:

.1 ensure that the MARPOL sample is thoroughly homogenized;

.2 draw two sub-samples from the MARPOL sample; and

.3 reseal the MARPOL sample and record the new reseal details on the test record.

* Accreditation is in accordance with ISO 17025 or an equivalent standard.

2.4 The two sub-samples shall be tested in succession, in accordance with the specified test method referred to in appendix V. For the purposes of this verification procedure, the results of the test analysis shall be referred to as "A" and "B":

.1 If the results of "A" and "B" are within the repeatability (r) of the test method, the results shall be considered valid.

.2 If the results of "A" and "B" are not within the repeatability (r) of the test method, both results shall be rejected and two new sub-samples should be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 2.3.3 above after the new sub-samples have been taken.

2.5 If the test results of "A" and "B" are valid, an average of these two results should be calculated thus giving the result referred to as "X":

.1 If the result of "X" is equal to or falls below the applicable limit required by Annex VI, the fuel oil shall be deemed to meet the requirements.

.2 If the result of "X" is greater than the applicable limit required by Annex VI, Verification Procedure Stage 2 should be conducted; however, if the result of "X" is greater than the specification limit by 0.59R (where R is the reproducibility of the test method), the fuel oil shall be considered non-compliant and no further testing is necessary.

3 Verification Procedure Stage 2

3.1 If Stage 2 of the verification procedure is necessary in accordance with paragraph 2.5.2 above, the competent authority shall send the MARPOL sample to a second accredited laboratory.

3.2 Upon receiving the MARPOL sample, the laboratory shall:

.1 record the details of the reseal number applied in accordance with 2.3.3 and the sample label on the test record;

.2 draw two sub-samples from the MARPOL sample; and

.3 reseal the MARPOL sample and record the new reseal details on the test record.

3.3 The two sub-samples shall be tested in succession, in accordance with the test method specified in appendix V. For the purposes of this verification procedure, the results of the test analysis shall be referred to as "C" and "D":

.1 If the results of "C" and "D" are within the repeatability (r) of the test method, the results shall be considered valid.

.2 If the results of "C" and "D" are not within the repeatability (r) of the test method, both results shall be rejected and two new sub-samples shall be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 3.2.3 after the new sub-samples have been taken.

3.4 If the test results of "C" and "D" are valid, and the results of "A", "B", "C", and "D" are within the reproducibility (R) of the test method then the laboratory shall average the results, which is referred to as "Y":

.1 If the result of "Y" is equal to or falls below the applicable limit required by Annex VI, the fuel oil shall be deemed to meet the requirements.

.2 If the result of "Y" is greater than the applicable limit required by Annex VI, then the fuel oil fails to meet the standards required by Annex VI.

3.5 If the result of "A", "B", "C" and "D" are not within the reproducibility (R) of the test method then the Administration may discard all of the test results and, at its discretion, repeat the entire testing process.

3.6 The results obtained from the verification procedure are final.

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