資料３１－５

63th Meeting of the CIMAC EEC WG

Asia and Japan
Marine and Power Plant

Japanese Domestic CIMAC WG5
JICEF
20th November 2018

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TOPICS

- Chinese emission control areas
- Exhaust emission from engine of ship operation in China
- Taiwanese international Commercial ports Regulation
- Indonesia Implements Expanded B20 Program

Chinese emission control areas (1/3)

The Chinese government has implemented regulations limiting the sulphur content of fuel oils used onboard ships to 0.5% within the following Emission Control Areas (ECAs): The Pearl River Delta, the Bohai Rim and the Yangtze River Delta.
The Shanghai Maritime Safety Administration (MSA), the Jiangsu MSA and the Zhejiang MSA announced that, as of 1 October 2018, not only berthing ships but also navigating ships are required to use fuel oils which sulphur content does not exceed 0.5%.

1. Applicable ships
Ships voyaging, berthing and operating within the emission control areas excluding military ships,sports ships and fishery ships

2. Applicable date
On or after 1 October 2018

Chinese emission control areas (2/3)

The Yangtze River Delta

3. Contents of the regulation

(1) Shanghai MSA

The ships navigating, anchoring or operating in Shanghai Port should use fuel oils which sulphur content does not exceed 0.5%. In addition, all ships installed with devices of receiving shore power should use shore power if such facilities are available in Shanghai Port.

(2) Jiangsu MSA

The sea-going ships sailing into Suzhou Port or Nantong Port which are the core ports of Yangtze River Delta ECAs should use fuel oils which sulphur content does not exceed 0.5%.

In addition, ships installed with devices for receiving shore power should give priority to the use of shore power if such facilities are available in Suzhou Port and Nantong Port.

Moreover, between 29 October 2018 and 11 November 2018, ships installed with devices for receiving shore power should use shore power if such facilities are available in Suzhou Port,Wuxi Port, Nantong Port and Changzhou Port.

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Chinese emission control areas (3/3)

(3) Zhejiang MSA

The sea-going ships navigating to Ningbo-Zhoushan Port as destination should use fuel oils which sulphur content does not exceed 0.5% when operating within the Yangtze River Delta ECA. In addition, ships installed with devices for receiving shore power should give priority to the use of shore power if such facilities are available in Ningbo Zhoushan Port and Jiaxing Port: moreover, between 29 October 2018 and 11 November 2018, ships installed with devices for receiving shore power should in principle use shore power if such facilities are available in Jiaxing Port.

The URLs of official announcements from the Shanghai MSA, the Zhejiang MSA and the Jiangsu MSA are as follows. (Chinese only)

Shanghai MSA: http://www.shmsa.gov.cn/wgfw/73174.jhtml
Jiangsu MSA: http://www.js-msa.gov.cn/art/2018/9/7/art_2295_1684505.html
Zhejiang MSA:http:
//www.cnzjmsa.gov.cn/ZJ/zjmsa/tzgg/201809/t20180906_547862.html

TOPICS

- Chinese emission control areas
- **Exhaust emission from engine of ship operation in China**
- Taiwanese international Commercial ports Regulation
- Indonesia Implements Expanded B20 Program

Exhaust emission from engine of ship operation in China


指导性文件
GUIDANCE NOTES
GD05-2018

中国船级社

《船舶发动机排气污染物排放限值及测量方法（中国第一、二阶段）》
实施指南 Rev.1
2018

生效日期：2018年11月5日
北京

Limits and measurement methods for exhaust emission from marine engines (CHINA Ⅰ, Ⅱ)

A partial revised version has been published on 5th Nov. 2018

2.1.3 对于NG船机的CH4限值，暂不执行。但在排放试验时，应对CH4值进行测量并记录；

2.1.3
CH4 Limit of NG Marine engine, stop the execution for a while. However, CH4 measurement must be recorded.
Exhaust emission limits was not changed CHINA Ⅰ, Ⅱ.

Exhaust emission from engine of ship operation in China

National standard GB 15097-2016

表 2.1 船机排气污染物第一阶段排放限值

船机类型	单缸排量（SV）（L/缸）	额定净功率（P）（kW）	CO (g/kWh)	HC+NO_x (g/kWh)	$CH4^{①}$ (g/kWh)	PM (g/kWh)
第 1 类	SV<0.9	P≥37	5.0	7.5	1.5	0.40
	0.9≤SV<1.2		5.0	7.2	1.5	0.30
	1.2≤SV<5		5.0	7.2	1.5	0.20
第 2 类	5≤SV<15		5.0	7.8	1.5	0.27
	15≤SV<20	P<3300	5.0	8.7	1.6	0.50
		P≥3300	5.0	9.8	1.8	0.50
	20≤SV<25		5.0	9.8	1.8	0.50
	25≤SV<30		5.0	11.0	2.0	0.50

① 仅适用于 NG（含双燃料）船机。

Exhaust emission limits was not Changed
China 1

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Exhaust emission from engine of ship operation in China

National standard GB 15097-2016
China 2

表 2.2 船机排气污染物第二阶段排放限值

船机类型	单缸排量（SV）（L/缸）	额定净功率（P）（kW）	CO (g/kWh)	HC+NO_x (g/kWh)	$CH_4$① (g/kWh)	PM (g/kWh)
第1类	SV<0.9	P≥37	5.0	5.8	1.0	0.30
	0.9≤SV<1.2		5.0	5.8	1.0	0.14
	1.2≤SV<5		5.0	5.8	1.0	0.12
第2类	5≤SV<15	P<2000	5.0	6.2	1.2	0.14
		2000≤P<3700	5.0	7.8	1.5	0.14
		P≥3700	5.0	7.8	1.5	0.27
	15≤SV<20	2000≤P<3300	5.0	8.7	1.6	0.50
		P≥3300	5.0	9.8	1.8	0.50
	20≤SV<25	P<2000	5.0	9.8	1.8	0.27
		P≥2000	5.0	9.8	1.8	0.50
	25≤SV<30	P<2000	5.0	11.0	2.0	0.27
		P≥2000	5.0	11.0	2.0	0.50

① 仅适用于NG（含双燃料）船机。

Exhaust emission limits was not Changed
China 2

Exhaust emission from engine of ship operation in China

2.2.1 Type approval

Implementation date

CHINA Ⅰ	CHINA Ⅱ
1st July 2018	1st July 2021

GB15097-2016 will go into effect after 12 month from above table date, on the contract, Import, mounted on a ship and operation.

TOPICS

- Chinese emission control areas
- Exhaust emission from engine of ship operation in China
- **Taiwanese international Commercial ports Regulation**
- Indonesia Implements Expanded B20 Program

Regulation within Taiwanese international Commercial ports

All ocean-going ships intending to enter Taiwanese international commercial ports on or after 1 January 2019 will be required to use a fuel oil whose sulphur content does not exceed 0.5% by weight.
In addition, Taiwan International Ports Corporation Ltd. (TIPC) will provide reward to ocean-going ships using fuel oils whose sulphur contents are 0.5% or less which enter Taiwanese international commercial ports prior to 1 January 2019.

The URL for this regulation is as follows.
https://gazette.nat.gov.tw/egFront/detail.do?metaid=100466&log=detailLog

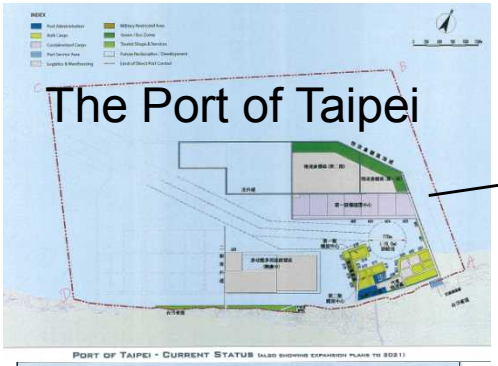
Regulation within Taiwanese international Commercial ports

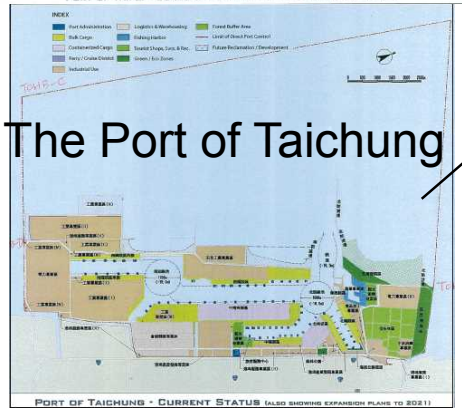
1. Applicable ships
Ocean-going ships intending to enter Taiwanese international commercial ports

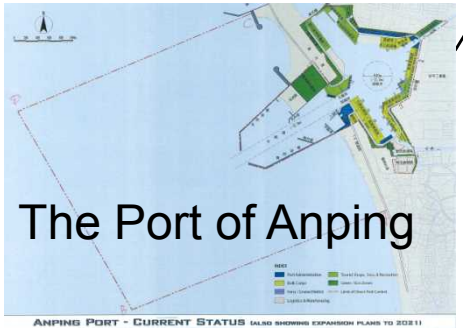
2. Applicable ports
The following seven international commercial ports are subject to this regulation: the Port of Keelung (基隆港), the Port of Taichung (臺中港), the Port of Kaohsiung (高雄港), the Port of Hualien (花蓮港), the Port of Taipei (臺北港), the Port of Suao (蘇澳港), and the Port of Anping (安平港).
The detail of the Port of Suao is as follows.
https://www.twport.com.tw/en/
Home > Port Layouts > Port of Suao

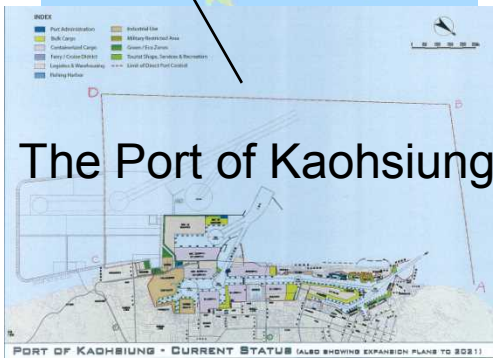
3. Regulation details
All ships entering Taiwanese international commercial ports are required to use the a fuel oil
whose sulphur content does not exceed 0.5% by weight, the regulations starting 2020 has been early enforced from 1 January 2019. In addition, alternative methods of complying with this regulation (e.g., the use of Exhaust Gas Cleaning System (EGCS), etc.) are permitted subject to Flag Administration approval.

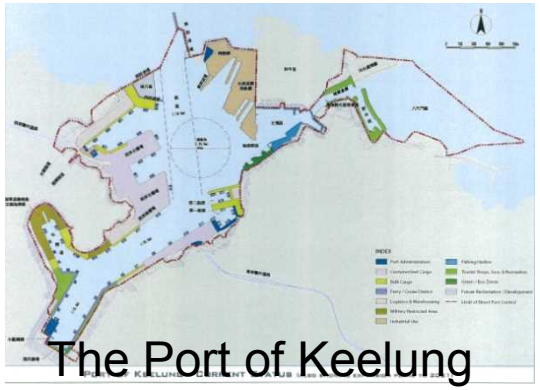
Regulation within Taiwanese international Commercial ports

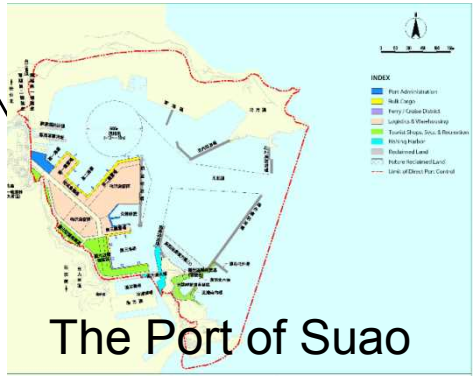


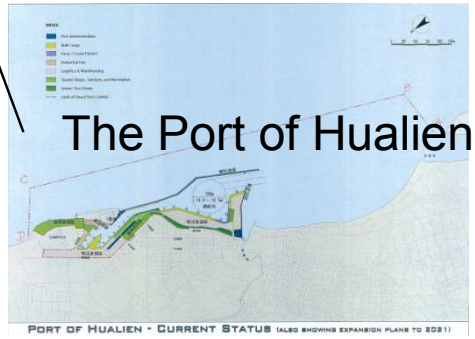












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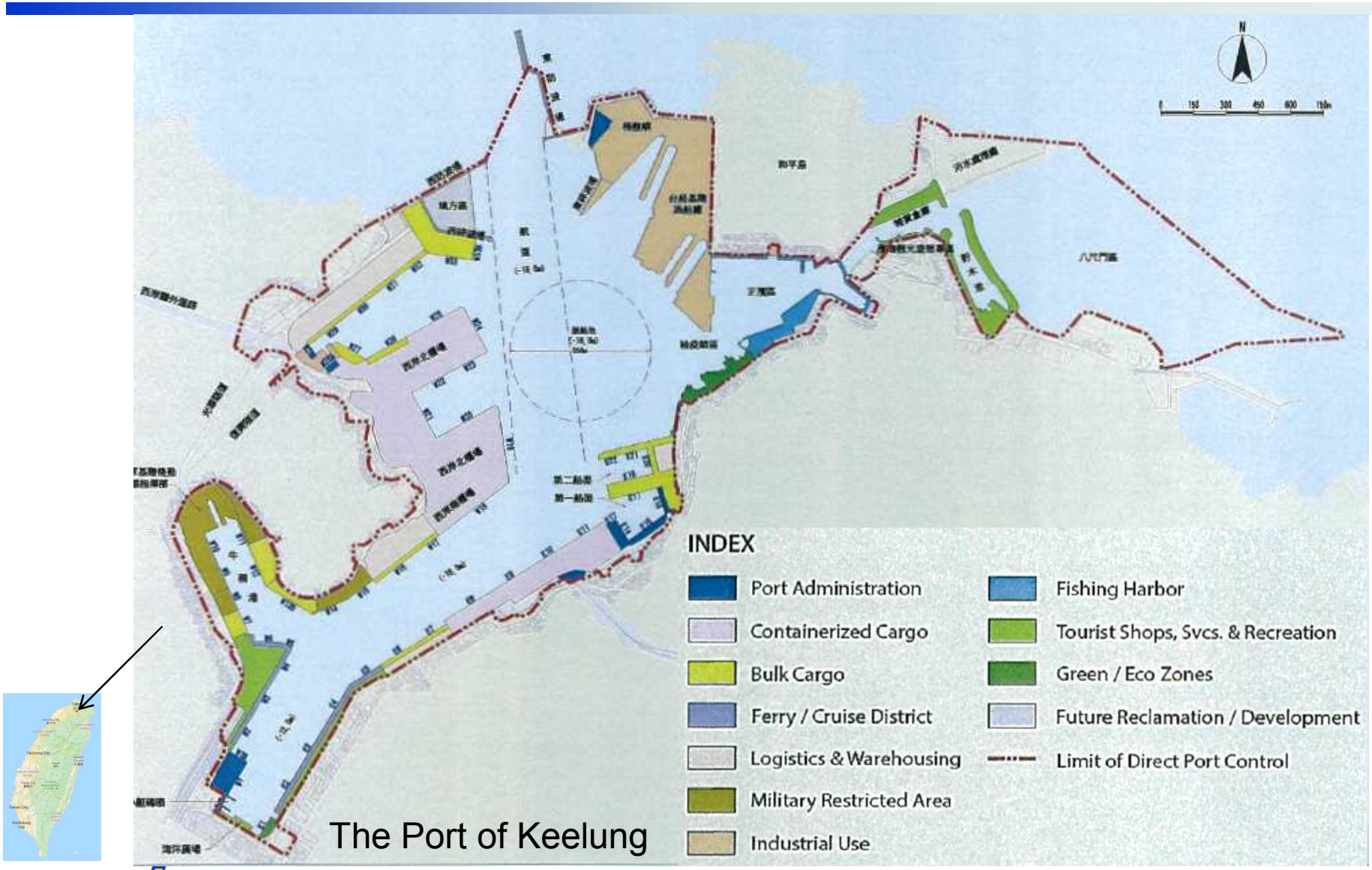
Regulation within Taiwanese international Commercial ports



The Port of Keelung

Regulation within Taiwanese international Commercial ports

4. Reward
(1) Period
From 23 July 2018 to 31 December 2018
(Reward will continue to be given until the total amount budgeted (45,000,000 NTD) is reached.)

(2) Applicable ships
Ocean-going ships using fuel oils whose sulphur contents are 0.5% or less intending to enter Taiwanese international commercial ports. Since the purpose of the reward is to provide an incentive for ocean-going ships to use fuel oils whose sulphur contents are 0.5% or less while operating within Taiwanese international commercial ports, ships installed with EGCS or alternative means are not eligible to receive reward.

(3) Application process
(i) The ship or its authorized agent is to apply for the reward as a “ship using an appropriate low-sulphur fuel for port entry” to the Maritime Transport Network (MTNet) of the Marine Port and Bureau (MPB) no later than 24 hours prior to entering any Taiwanese international commercial port.
(ii) The ship starts using low sulphur fuel prior entering any Taiwanese international commercial port and recording the timing of fuel switching in the Oil Record Book.

Regulation within Taiwanese international Commercial ports

(iii) After arrival, the ship or its agent is to submit the following four documents before 5:00 pm on the 20th day of the following month. The documents should be sent to the respective offices of each port as listed in Annex 2 of attachment 3, either as hard copies by regular mail or as electronic data by email.
(a) Low sulphur fuel reward application form (Annex 1 of attachment 3)
(b) A photocopy of the Oil Record Book: the timing of low sulphur fuel switching should be marked, highlighted.
(c) A photocopy of the Bunker Delivery Note (BDN).
(d) Last 10 Ports of Calling List.
(iv) The applications are reviewed monthly through a review meeting co-hosted by both the Marine Port Bureau (MPB) and Taiwan International Ports Corporation (TIPC).
Based on the conclusions of the review meetings, Branches of the TIPC would issue reward to the ships with valid tax invoice.

(4) Payment amount

Gross Tonnage	Reward (NTD)
5,000 ton or less	5,000
5,001-10,000 ton	10,000
10,001-20,000 ton	20,000
20,001-40,000 ton	30,000
40,001ton or more	40,000

TOPICS

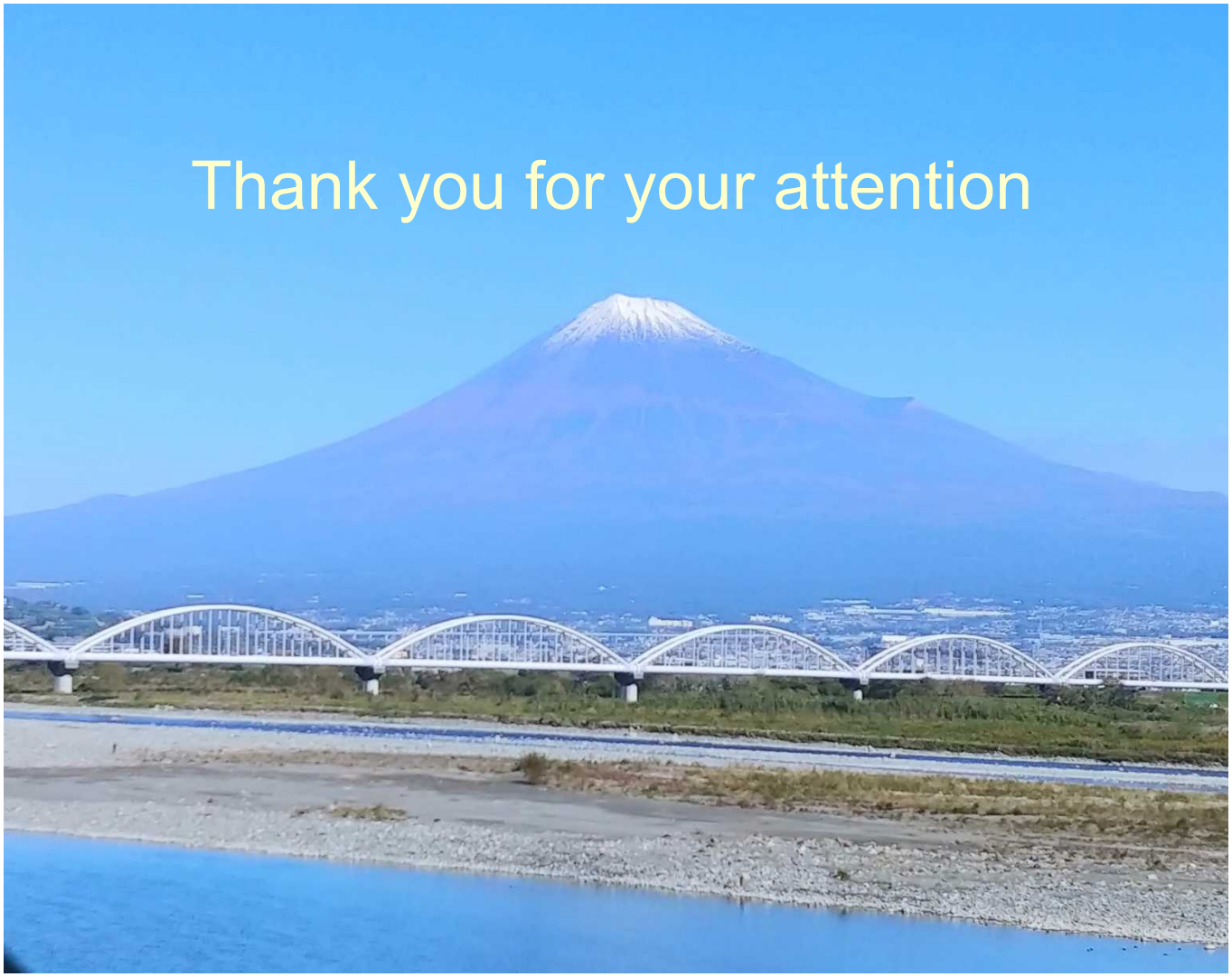
- Chinese emission control areas
- Exhaust emission from engine of ship operation in China
- Taiwanese international Commercial ports Regulation
- **Indonesia Implements Expanded B20 Program**

Indonesia Implements Expanded B20 Program

Indonesia has enforced mandatory use of diesel fuel containing 20 percent locally produced biofuel. It amid steps to rein in its fuel bill and cushion the impact on its economy of a currency crisis and higher oil prices, a government told official announcement.

Indonesia Implements Expanded B20 Program on 1 September 2018

On 1st September 2018 all vehicles and heavy machinery that have diesel engines will have to use biodiesel fuel that contains fatty acid methyl ester (FAME), which made by palm oil in Indonesia. The new rule is part of the Indonesian government's expanded B20 program that makes mandatory use of B20 for all vehicles to use biodiesel that consists of 20 percent biodiesel and 80 percent petroleum diesel fuels.


Thank you for your attention

TOPICS

- Chinese emission control areas
- Taiwanese international Commercial ports Regulation
- **PSC Concentrated Inspection Campaign on “MARPOL ANNEX VI**

PSC Concentrated Inspection Campaign on “MARPOL ANNEX VI

Please be informed that Paris MoU and Tokyo MOU recently issued a Press Release announcing the launch of the following PSC joint Concentrated Inspection Campaign (CIC) in 2018.

Outline of CIC
Focus of CIC: MARPOL ANNEX VI (Regulations on the Prevention of Air Pollution from Ships)

CIC period: From 1 September 2018 to 30 November 2018

Please refer to the attached "Questionnaire for the Inspection Campaign on MARPOL ANNEX VI" for details on the specific items to be targeted in CIC.
Also, please note that Indian Ocean MOU has also issued Press Releases announcing that concentrated inspection campaigns targeting the same items will be held during the same period in their respective jurisdictions.

PSC Concentrated Inspection Campaign on “MARPOL ANNEX VI

"Approved Method" as mentioned in Question 7 of the attached questionnaire for this CIC is a method designed to make existing diesel engines without EIAPP certification compliant with the NOx Tier I regulations.

It is required to apply to some diesel engines installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000.

With regard to information about diesel engines to which Approved Method is to be applied and necessary measures for such diesel engines subject to Approved Method, please refer to ClassNK Technical Information No.TEC-0836, TEC-0848, TEC-0867, TEC-0878 and TEC-1028.

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Indonesia Implements Expanded B20 Program

インドネシア：バイオディーゼル会社 9月開始のB20（バイオ20%混合）燃料使用義務に合わせて準備

8月30日付けの地元報道によると、政府が9月から開始するB20（バイオ20%混合）燃料使用義務に合わせて、バイオディーゼル会社は、準備は出来ていると確認した。インドネシアバイオ燃料生産協会（Aprobi）の会長は、問題は何もないと語った。従前、政府は、バイオ燃料生産者は9月から12月の期間で概算94万klを供給しなければならないと発表していた。

8月24日に発行されたエネルギー・鉱物資源省（MEMR）の省令No.14／2018（インドネシアパーム油不動産基金（BPDP-KS）のバイオディーゼル供給・利用）に基づき、石油・ガス会社はB20生産ができないと事業展開が出来なくなり、罰金を科せられる。

バイオディーゼル会社は12～14百万klのバイオディーゼルを生産した。うち2百万klは9月のB20政策に向けて既に配送されている。

Indonesia Implements Expanded B20 Program

バイオディーゼルの使用義務が拡大 JETRO

インドネシアは産油国であるが、経済発展に伴い石油の消費量が増え続ける一方、1990年代以降、生産量は減少を続け、2003年を境に石油の純輸入国となっている。国営石油会社であるプルタミナが国家財政を支え、「国家の中の国家」と呼ばれた時代から様変わりした。2017年の数字では、生産量4,640万トンに対して、消費量7,370万トンとなっており、消費量が生産量の1.6倍近くに達している（BP資料）。このような中、エネルギー安全保障やCO2排出量削減といった観点で、インドネシアが世界最大の生産量を誇るパームオイルからバイオディーゼルを製造し、石油を代替しようという議論がされてきた。8月15日に署名された大統領令2018年66号で、バイオディーゼルを20%、軽油（Solar）を80%含む「B20」の使用義務が拡大され、9月1日に実施された。従来、「B20」の使用義務は、公共サービス義務（PSO：Public Service Obligation）という位置付けで、国鉄やその他国営企業などに限定されていたが、今回、全てのユーザー（Non-PSO）に拡大された格好だ。2016年からバイオディーゼルを20%含有している低所得者向け補助金つき軽油「SOLAR」（セタン価48、硫黄分3,500ppm）に加え、2018年9月1日から、「DEXLITE」（セタン価51、硫黄分1,200ppm）についてもバイオディーゼル20%の混合が始まった模様だ。

インドネシア・トラック経営者協会（APTRINDO）のキアットマジャ・ルクマン副会長によると、「B20」は2016年から導入されているものの、実際にトラック業界で使用されている軽油に含まれるバイオディーゼルはエンジンの仕様に合わせて5～10%だという（CNN Indonesia、2018年9月1日）。「B20」以上の軽油はタンクの汚れを引き起こすほか、オイルフィルターやエンジンオイルの交換をより頻繁に行う必要がある。さらに、バイオディーゼルは水と結びつきやすい性質であるため、水分離フィルターを取り付ける必要がある。このように「B20」の使用に当たってはユーザーサイドで適切な対策を講じる必要があるが、トラックの「B20」使用に関して政府による実証実験は行われておらず、政府によるユーザーへの周知不足が否めない状況だ。メンテナンスコストの増大による物流コストの上昇も心配だ。トラックなどの商用車だけでなく、三菱自動車のパジェロやトヨタのフォーチュナーといったSUVでもディーゼルエンジン仕様のものが人気で、影響に注意する必要がある。

なお、バイオディーゼルの活用については、石油の輸入減を通じた経常収支の改善を企図することで、通貨ルピア安を食い止めたいという政府の思いもにじむ。ルピアは2018年に入ってからほぼ一本調子で米ドルに対し下落を続けており、中央銀行であるバンク・インドネシアも4度にわたる利上げで対抗しているが、下落に歯止めがかかっていない

Indonesia Implements Expanded B20 Program

バイオディーゼル油で発電　インドネシア、燃料輸入減らし経常赤字削減

10/19(金) 7:15配信　SankeiBiz

インドネシアの国営電力会社ＰＬＮは、大統領令に基づく同国政府指針に沿って、パーム油などバイオエネルギーが２０％混合されたバイオディーゼル油（Ｂ２０）を２２０万キロリットル購入し、国内各地のディーゼル油発電所で使用する。現地紙ジャカルタ・ポストなどが報じた。

ＰＬＮで西ジャワ、バリ、ヌサテンガラ地区を担当するラハルジョ局長によると、Ｂ２０は国有石油・ガス会社プルタミナなど３社から購入予定だが、現状ではプルタミナのみが供給可能だという。プルタミナ側は、今年４月に就任したニッケ・ウィドヤワティ社長がＰＬＮへ供給可能と語った。

一方、ナスティオン調整相（経済担当）は、Ｂ２０の使用拡大で政府は燃料輸入を毎年３５０万～４５０万キロリットル減らし、経常赤字を削減したいが、現状では目標達成が難しいと打ち明けている。

インドネシア・バイオ燃料生産協会のデータによると、今年１～６月のバイオディーゼル油生産量は３４２万キロリットルで、国内消費量は２５７万キロリットルだった。（シンガポール支局）