

Making waves

IVSS CAMPAIGN FEB 2025





Table of Contents

- 01. PSC INSPECTIONS IN RELATION TO E/R EMERGENCY ESCAPE TRUNK
- 02. ENCLOSED SPACE CIC
- 03. CYBER SECURITY
- 04. KARCO TRAINING
- 05. STOWNET FISHING SEASON IN BISAN SETO 2025
- 06. BALLAST WATER RECORD BOOK
- 07. OJT- MANOEUVERING CHARACTERISTICS
- 08. RIGHTSHIP SECTION 2 CERTIFICATE AND PERSONNEL MANAGEMENT

PSC INSPECTIONS IN RELATION TO E/R EMERGENCY ESCAPE TRUNK

SOLAS Ch.-2/Reg. 13.4.2.1.1 requires that the emergency escape trunk extends to the "lower part of the space its serves".

IMO issued MSC.1/Circ.1511/Rev.1 on Unified interpretations of SOLAS regulations II-2/9 and 13, dated 24 Jun 2024, providing more specific guidance on "safe position" in SOLAS regulation II-2/13.4.

China MSA has commenced a focused inspection campaign (FIC) from 15 January 2025 to 14 October 2025 on E/R Emergency Escape Trunk.

China MSA requires that:

- The escape trunks are extended to the lowest platform/deck within the machinery space.
- Training and regular drills for evacuation from emergency escape trunk are conducted and recorded.
- An evacuation drill of an injured crew is completed between 3 to 5 minutes

The Master shall prepare ship specific evacuation procedure for injured crew from the lowest platform/deck to the escape trunk and send the procedure to the Company for review.

When preparing the evacuation procedure, the ship staff must consider the following:

- Whether the escape trunk is straight from the bottom to top without any intermediate platform for lifting the injured crew
- if there is any intermediate platform, what is the safe procedure to lift the injured crew considering the length / breadth of the platform, how to move the injured crew within the platform and the number of blocks required (Please specify the length and breadth of the intermediate platform)

Once approved by the Company, the evacuation procedure shall be posted in vicinity of the emergency escape trunk.

2. ENCLOSED SPACE CIC

China MSA has launched a special campaign on the illegal entry into enclosed spaces onboard ships from January 15 to October 14, 2025.

Kindly go through attached circular and check list to ensure compliance.

CYBER SECURITY

The Office will be sending video training links to each vessel along with the instructions by email. Once received all crew on board shall view the cybersecurity videos.

Typically, the video's will be made available on the Master's Laptop, CEO's PC and Admin 1 pc. We propose that the Engine Dept. must watch the video on the CEO's PC likewise the Deck Dept. will watch on Admin 1.

The Office will be providing details of the video to be viewed shortly. A poster will also be made available to be displayed.

KARCO TRAINING

The ship staff shall conduct the following training modules this month:

- SLIP, TRIP AND FALLS
- BUNKER OVERFLOW LEARNING FROM INCIDENT
- MOORING ACCIDENTS
- COLREG RULE 13,14 and 15

The duration of each title is only about 10-15 minutes.

Training must be carried out in two sessions (based on work/rest hours) to ensure all crew are able to attend. Each session must be opened and concluded by a Senior Officer.

After the training, the Senior Officer should have an interactive session with the crew, discuss questions and the crew can also share their experience (Reflective learning). Once the training is completed, each crew shall log on individually and an assessment must be completed, and the records must be exported to KARCO system.

The Master can contact IT department and support team (support@karcoservices.com) for any queries regarding KARCO.

Records of training to be maintained in form 3.2.3

5. STOWNET FISHING SEASON IN BISAN SETO 2025

The Stownet fishing season starts from 1 February 2025 throughout Bisan Seto, Japan.

Kindly go through attached Japan P&I circular and mark the relevant areas on the ECDIS.

Relevant information shall be included in the passage plan.

6. BALLAST WATER RECORD BOOK

From 01 Feb 2025, Record-keeping of ballast water operations in the BWRB shall be in accordance with guidance BWM.2/Circ.80.

The Company has dispatched the revised ballast water record books to all vessels.

The Master shall ensure that the revised ballast water record book is used from 01 Feb 2025.

The Master shall also carry out on the job training as per the attached sample entries to all deck officers and record details on training in form 3.2.3.

The present Ballast water record book is to be officially closed by the Master and kept ready for inspection, if requested by the relevant authorities

7. MANOEUVERING CHARACTERISTICS

All deck officers shall familiarize with the manoeuvring characteristics and stopping distances of the vessel. Reference to be made to the Wheelhouse poster. The wheelhouse poster characteristics reflect sea trial information in ideal conditions.

The following factors shall be considered when determining the manoeuvring characteristics:

- Depth / Draft / UKC / heel / squat / trim
- Weather conditions
- Speed
- Current
- Machinery status
- Turn radius
- Loaded / Ballast condition
- Steering particulars

The Master shall also carry out on the job training to all deck officers and record details on training in form 3.2.3

8. RIGHTSHIP SECTION 2 - CERTIFICATE AND PERSONNEL MANAGEMENT.

RIGHTSHIP has commenced inspection of dry vessels using their checklist (RISQ) which is uploaded on the landing page of SHEQ. The RIGHTSHIP inspection is similar to the OCIMF SIRE inspection on tankers.

There are 17 chapters in the RIGHTSHIP questionnaire.

The Company will send guidance for each section as part of the monthly campaign.

For this month, the Master shall go through the attached "CERTIFICATE AND PERSONNEL MANAGEMENT" checklist with all deck officers and ensure that the vessel is in compliance with all the items.

Please revert to the Marine Superintendent with any queries or sections that your vessel does not fully comply with.

S.NO	QUESTION	GUIDANCE	Verified by Master
1	Are crew members responsible for enclosed space entry aware of the associated risks?	 Refer HSE Procedure Manual, 4.10. ENCLOSED SPACE ENTRY. Discuss the risks associated with entry into enclosed space with all crew (HSE Manual, 4.10 section 3 and section 4) Prepare risk assessment in CSM for enclosed space entry Pre-entry atmosphere test reading for entering the enclosed space shall be as follows: Oxygen – 20.9 % Hydrocarbon – 0% CO2 0% H2S 0% 	
2	Are the measures in place to permit to work for visitors and crew members for enclosed space entry?	 Enclosed space permit form 3.3.1 Name of person entering the space shall be entered in the permit to work form Crew and visitors are not allowed to enter any enclosed space unless the enclosed space permit form 3.3.1 is fully completed and approved by the Master / Chief engineer 	
3	Is there a list of enclosed space identified?	 A detailed ship specific list of enclosed spaces shall be prepared by the Master and posted on the Notice board. All crew shall be briefed on the list of enclosed spaces onboard. Refer HSE Manual, 4.10, section 3.4, 3.5 If in doubt, consider the space to contain hazards of an Enclosed Space and proceed as an Enclosed Space 	
4	Are the enclosed spaces marked and for authorized personnel only?	All enclosed spaces onboard shall be marked Enclosed Space No entry without permit	

5	Are the atmosphere testing devices regularly checked and calibrated?	 Ensure gas meters are in good working order, serviced, calibrated and tested in accordance with the manufacturer's instructions. Calibration kit to be available on board Personnel carrying out checks and bump tests are to be suitably trained. Calibration / Bump test certificate to be filed in share point Length of sampling hose to be sufficient to reach bottom of enclosed space from deck Maker manual to be available onboard 	
6	Is the emergency rescue equipment for enclosed space entry and rescue in good condition?	 Rescue equipment like tripod, stretcher, resuscitator, BA sets etc and a plan to get the crew out from the most difficult spot in space shall be in readiness The rescue equipment to be kept in readiness at the entrance shall be clearly specified in the permit. Ensure rescue equipment is in good condition Reference HSE 4.10 / SECTION 11 - RESCUE FROM ENCLOSED SPACES 	
7	Are the personnel familiar with the safe entry and risk assessment procedures for enclosed space?	 All crew members must be aware of the spaces identified as enclosed space on board, risks involved, entry procedure, entry permit, PPE and communication required during entering enclosed space All crew members shall be aware of the safety equipment for enclosed space entry and rescue, such as ventilation, lifting and other personnel rescue equipment, first aid and resuscitation equipment, gas testing equipment, breathing apparatus etc that may be required in an emergency Crew must be able to don the breathing apparatus and carry out checks correctly Breathing apparatus including all spare SCBA bottles shall be kept fully charged and all other rescue equipment kept in readiness and in good order All crew members shall be familiar with their duties as assigned in the enclosed space emergency muster list before the voyage begins. All crew members must be aware that in case they detect hazardous situation they can order and evacuation of the space. All crew members shall be familiarized with Contingency plan 35. Rescue from enclosed space 	
8	Are the personnel familiar with the operation of safety protective	 Master to provide training in the use and operation of equipment to all officers and crew 	

	equipment and devices?	 Competent, Responsible, and Attendant persons planning an enclosed space entry should be aware of the limitations of the testing equipment and should be able to demonstrate that they can use it competently Crew should be aware that oxygen, flammable or toxic gas or vapor concentrations may not be uniform throughout space, and it may not be possible to measure concentrations throughout the entire space prior to entry Master to provide training in calibration of equipment to all deck officers and engineers Training in the use of gas equipment should be provided during each enclosed space drill Reference to be made to Maker's manual for operation and calibration of equipment Records of training to be maintained on board 	
9	Is the enclosed space entry and rescue drill in accordance with SOLAS Chapter III, Regulation 19.3.3?	 The interval of the enclosed space entry and rescue drills should not exceed two months. Ensure enclosed space entry and enclosed space rescue drills are conducted in accordance with drill planner (Every 2 months) Drill record sheet and entry permit used for entering the enclosed space shall be available. Entry permit is evidence that pre-entry checks and authorization of entry Refer to form 3.2.1 "Emergency Drill planner" The drill shall be recorded in Deck Logbook, Drill Record Sheet 3.2.3 Be ready at any time for this request from PSCO A scenario for a planned enclosed space and subsequent rescue should be agreed with PSCO. The scenario should reflect a designated enclosed space on the ship, and the hazards associated with entry into that space. The inspector shall verify that crew are able to conduct enclosed space entry and rescue drills competently and in a safe manner The inspector shall verify that crew can communicate effectively during both a planned entry and in an emergency The inspector shall verify that documented procedures are being followed, the prescribed safety briefings are given, and the required authorizations (permits) are completed, and signoffs are obtained. Those taking part should be identified on the appropriate checklists and authorizations 	

		 Drill should not take longer than 20 minutes Follow the procedure as provided in contingency plan Crew shall be made aware of their duties and equipment locations. All equipment shall be kept in readiness Following shall be complied as per SOLAS: Checking and use of personal protective equipment required for entry Checking the use of communication equipment and procedures including emergency signals prior entry Checking and use of instruments for measuring the atmosphere in enclosed spaces 	
		 Checking and use of rescue equipment and procedures Instructions in first aid and resuscitation techniques 	
10	Is the SMS related to enclosed space operations effectively implemented on board?	 HSE Procedure Manual, 4.10. ENCLOSED SPACE ENTRY Permit to work form 3.3.1 Risk assessment in CSM Form 3.2.1 Emergency Drill planner Contingency plan 35 - Rescue from enclosed space 	



CIRCULAR

www.huataimarine.com pni.bj@huatai-serv.com Duty Phone: +86 13701125026

> PNI [2025] 01 22 January 2025



China MSA Launched a Special Campaign against Illegal Entry into Enclosed Spaces onboard Ships

Dear Sir/Madam,

It is reported that China Maritime Safety Administration (China MSA) has recently launched a nine-month special campaign against illegal entry into dangerous enclosed spaces onboard ships. On basis of the information we

obtained thus far, we have prepared this Circular to briefly introduce the special campaign and provide relevant suggestions for the reference of the Clubs and their Members.

The Main Contents of the Special Campaign

Period of Special Campaign

From January 15 to October 14, 2025.

Targets of Special Campaign

Ships and waterborne facilities equipped with enclosed spaces that meet the following definitions.

Enclosed space means a space which has any of the following characteristics:

- 1. limited openings for entry and exit;
- 2. inadequate ventilation; and
- 3. is not designed for continuous worker occupancy.

Enclosed spaces include, but are not limited to, cargo spaces, double bottoms, fuel tanks, ballast tanks, cargo pump-rooms, cargo compressor rooms, cofferdams, chain lockers, void spaces, duct keels, inter-barrier spaces, boilers, engine crankcases, engine scavenge air receivers, sewage tanks, and the adjacent connected spaces which are normally unventilated and not used for cargo storage but which may share the same atmospheric characteristics with the enclosed spaces.

Frequency of Inspection

In principle, only one special inspection shall be carried out onboard the same ship during the special campaign period, except for the following situations:

- 1. Where an accident or dangerous situation is triggered due to illegal entry into the enclosed space onboard a ship.
- 2. Where serious deficiencies or potential risks in the management of entering enclosed spaces onboard the ship are identified during on-site ship supervision.
- 3. Where a ship is reported under real name for serious problems or potential risks in the management of entry into the enclosed spaces.
- 4. Where special inspections are required as designated by the MSA of the Ministry of Transport.

Key Points of Inspection

The special campaign action plan provides an inspection checklist with the following contents:

- 1. Are crew members responsible for enclosed space entry aware of the associated risks?
- 2. Are the measures in place to permit to work for visitors and crew members for enclosed space entry?
- 3. Is there a list of enclosed space identified?

- 4. Are the enclosed spaces marked and for authorized personnel only?
- 5. Are the atmosphere testing devices regularly checked and calibrated?
- 6. Are the emergency rescue equipment for enclosed space entry in good condition?
- 7. Are the personnel familiar with the safe entry and risk assessment procedures for enclosed space?
- 8. Are the personnel familiar with the operation of safety protective equipment and devices?
- 9. Is the enclosed space entry and rescue drill in accordance with SOLAS Chapter III, Regulation 19.3.3?
- 10. Is the SMS related to enclosed space operations effectively implemented on board?

Huatai Suggestions

In recent years, the number of accidents caused by the act of illegally entering enclosed spaces has been increasing year by year, and such illegal acts have pose serious threaten to the safety of both personnel and ships. In view of this, China MSA has launched a special campaign on the illegal entry into enclosed spaces onboard ships, aiming to standardize the behavior of operation personnel entering enclosed places onboard ships and prevent and curb the occurrence of such accidents.

Viewing from an organizational perspective, the special campaign is similar to the Concentrated Inspection Campaign (CIC) held annually by some PSC Memorandum of Understanding organizations, but the inspection period of this campaign is much longer than the PSC CIC. According to the requirements of the special campaign, it will be conducted in combination with the daily supervision and management of shipping companies, safety management system audits, ship safety inspections and on-site supervision, etc. The targets of this special campaign are the ships entering Chinese ports, regardless of their nationality.

In order to effectively respond to this long-term special campaign and avoid the identification of deficiencies related to illegal entry into enclosed spaces during the flag state / PSC inspection, we suggest that whilst conducting self-inspection in accordance with the items listed in the above mentioned inspection checklist, the Shipowners, Managers / Operators and ships should also draw their particular attention on the following aspects in order to pass the inspection smoothly:

1. Self-check the relevant procedures in the SMS documents

Check and confirm that the ship's SMS documents contain the safety operation procedure for guiding the personnel entering enclosed spaces, the emergency response and rescue plan and the maintenance procedure/plan for the safety equipment, communication devices, rescue and first aid tools which are necessary for entering enclosed spaces by way of a thorough self-inspection. The SMS documents should be modified and improved in accordance with appropriate procedures if the aforementioned procedures / plans are found to be absent.

2. Establish and strictly comply with the risk assessment and entry permit system

Ensure that crew members possess the ability to determine the various types

of hazards and risk levels that may exist in the enclosed spaces by comprehensively analyze on the various factual conditions such as cargo type, ventilation status, operation type, gas composition, tank coating, adjacent area conditions, etc., and able to propose reasonable measures to reduce the corresponding risks to an acceptable level and keep proper records. After sufficient risk assessment, an authorized entry permit from the master or the designated person in charge shall be obtained before entering. Furthermore, the entry permit should be kept on board along with the risk assessment documents for inspection.

3. Physical inspection of enclosed spaces and the related equipment

Ships should regularly identify and establish a list of enclosed spaces on board. Through regular inspections, ships shall confirm that the entrances or passageways to the enclosed space are in good maintenance condition, free from obstacles that could affect the safe entry of personnel and rescue operations; the internal structures within the enclosed spaces are complete, safe and reliable; the connecting ventilation systems are working properly; and the interior equipment such as lighting, fixed gas monitoring equipment, water level detectors (if any), etc. are in good working condition. In addition, regular inspection should also be carried out to ensure the personal protective equipment, rescue tools, communication devices etc., are in good order.

4. Training and Emergency Drills

Provide regular training to crew members, conduct drills for entering enclosed spaces strictly in accordance with the requirements of the Convention (every two months) and keep the training and drill records. Through adequate training and drills, ensure that crew members are familiar with their emergency responsibilities, aware of the dangers of enclosed spaces, understand the correct procedures for entering enclosed spaces and familiar with emergency

evacuation and the rescue procedures. Ensure that the responsible personnel

can correctly inspect, use, and maintain the protective and rescue equipment,

and is proficient in the operating, inspection, testing, and calibration of the

fixed and portable gas detection instruments.

Last but not least, it is equally important to promptly notify ships destined for

Chinese ports about the ongoing special campaign being carried out by China

MSA during this period so that crew members have sufficient time to prepare

for the onboard inspections and pass them smoothly.

Should you have any inquiries, please feel free to contact Huatai Beijing

(pni.bj@huatai-serv.com) or our local branch offices.

Best regards,

CUI Jiyu

Head of Marine Team



No.1293 20 January 2025

JAPAN P&I NEWS

To the Members

Stownet fishing season in Bisan Seto 2025—The expected navigable water area in the traffic lane during the peak season

The Stownet fishing season starts from 1 February 2025 throughout Bisan Seto, Japan. We have obtained a table on the expected navigable water area in the traffic lane during the peak season from Licensed Inlandsea Pilots' Association. We attach a free translation of the table for your reference.

Yours faithfully,

The Japan Ship Owners' Mutual Protection & Indemnity Association

Attachment: The Stownet fishing season's Table for 2025 by Licensed Inlandsea Pilots' Association (free translation)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar	Sunset	water	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunrise	between sunrise to sunset	operating times	(°C/ last year)	tisning	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
						- 1		07:01 ~ 12:41	West	09:42	2.9			
1-Feb	Sat	4-Jan	07:01	12:41	2	9.3	Off	12:41 ~ 17:35	East	15:29	2.2			0
			17:35			10.1								
2-Feb	Sun	5-Jan	07:00	07:05	2	9.3		07:05 ~ 13:15	West	10:19	2.7			0
			17:36	13:15		10		13:15 ~ 17:36	East	16:04	2.2			
								06:59 ~ 07:45	East	04:17	2.3			
3-Feb	Mon	6-Jan	06:59	07:45	3	9.25		07:45 ~ 13:48	West	10:56	2.4			Δ
			17:37	13:48		9.9		13:48 ~ 17:37	East	16:41	2.1			
								06:59 ~ 08:27	East	05:03	2.0			
4-Feb	Tue	7-Jan	06:59	08:27	3	9.25	Off	08:27 ~ 14:23	West	11:35	2.0			Δ
			17:38	14:23		9.9		14:23 ~ 17:38	East	17:22	2.0			
								06:58 ~ 09:15	East	05:56	1.6			
5-Feb	Wed	8-Jan	06:58	09:15	3	9.25		09:15 ~ 15:02	West	12:18	1.6		Non-fishing	
			17:39	15:02		9.9		15:02 ~ 17:39	East	18:11	1.8			
								06:57 ~ 10:13	East	07:01	1.2			
6-Feb	Thu	9-Jan	06:57	10:13	3	9.2		10:13 ~ 15:50	West	13:11	1.1		Non-fishing	
			17:39	15:50		9.8		15:50 ~ 17:39	East	19:11	1.6			
								06:56 ~ 11:35	East	08:24	0.9			
7-Feb	Fri	10-Jan	06:56	11:35	3	9.3		11:35 ~ 16:55	West	14:28	0.8			
			17:40	16:55		9.9		16:55 ~ 17:40	East	20:27	1.5			
8-Feb	Sat	11-Jan	06:55	07:21	2	9.35	Off	07:21 ~ 13:21	East	10:00	0.9			
			17:41	13:21		9.9		13:21 ~ 17:41	West	16:05	0.8			
								06:54 ~ 08:36	West	05:07	1.9			
9-Feb	Sun	12-Jan	06:54	08:36	3	9.3		08:36 ~ 14:47	East	11:28	1.1			
			17:42	14:47		9.8		14:47 ~ 17:42	West	17:25	1.0			
								06:53 ~ 09:31	West	06:09	2.3			
10-Feb	Mon	13-Jan	06:53	09:31	3	9.3	Off	09:31 ~ 15:46	East	12:32	1.4	1		Δ
			17:43	15:46		9.8		15:46 ~ 17:43	West	18:25	1.4	1		
								06:53 ~ 10:16	West	06:59	2.6			
11-Feb	Tue	14-Jan	06:53		3	9.25 9.7		10:16 ~ 16:30	East	13:19	1.7			0
			17:44	16:30		9.7		16:30 ~ 17:44	West	19:13	1.8			
					1			06:52 ~ 10:53	West	07:41	2.8			
12-Feb	Wed	15-Jan	06:52	10:53	3	9.3		10:53 ~ 17:09	East	13:57	1.9			0
			17:45	17:09		9.7		17:09 ~ 17:45	West	19:55	2.1			
								06:51 ~ 11:26	West	08:20	2.9			
13-Feb	Thu	16-Jan	06:51	11:26	3	9.4		11:26 ~ 17:43	East	14:28	2.1			0
			17:46	17:43		9.7		17:43 ~ 17:46	West	20:33	2.3			
								06:50 ~ 11:55	West	08:54	2.9			
14-Feb	Fri	17-Jan	06:50	11:55	2	9.35 9.8		11:55 ~ 17:47	East	14:54	2.1			0
			17:47			9.8			J	<u> </u>	†			
					1			06:49 ~ 12:21	West	09:26	2.7			
15-Feb	Sat	18-Jan	06:49	12:21	2	9.35	Off	12:21 ~ 17:48	East	15:17	2.2			0
			17:48			10			 	<u> </u>	 			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fisl	hing day	
Date	Day	Lunar	Sunset Sunrise	water	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunnse	between sunrise to sunset	operating times	(°C/ last year)	lisning	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
								06:48 ~ 12:46	West	09:55	2.5			
16-Feb	Sun	19-Jan	06:48	12:46	2	9.25		12:46 ~ 17:49	East	15:38	2.1			0
			17:49			10					 			
17-Feb	Mon	20-Jan	06:46	07:11	2	9.3		07:11 ~ 13:09	West	10:23	2.2			Δ
			17:50	13:09		10		13:09 ~ 17:50	East	16:02	2.1			
18-Feb	Tue	21-Jan	06:45 17:51	07:34 13:34	2	9.45 10.1	Off	07:34 ~ 13:34	West	10:49	2.0			Δ
			17:51	13:34		10.1		13:34 ~ 17:51	East	16:29	2.1			
								06:44 ~ 08:00	East	04:48	1.6			
19-Feb	Wed	22-Jan	06:44 17:52	08:00 14:01	3	9.5 10.2		08:00 ~ 14:01	West	11:16	1.7			
			17.32	14.01		10.2		14:01 ~ 17:52	East	17:02	2.0			
			06.40			0.55		06:43 ~ 08:34	East	05:28	1.4			
20-Feb	Thu	23-Jan	06:43 17:53	08:34 14:34	3	9.55 10.3		08:34 ~ 14:34	West	11:47	1.4		Non-fishing	
			17.55	14.54		10.5		14:34 ~ 17:53	East	17:42	1.8			
			06:42	09:20		9.55								
21-Feb	Fri	24-Jan	17:54	15:15	0	10.4					Non-fis	hing		
				20120										
			06:41	10:30		9.45		06:41 ~ 10:30	East	07:34	0.9			
22-Feb	Sat	25-Jan	17:54	16:16	3	10.3	Off	10:30 ~ 16:16	West	13:33	0.8	Non-fishing		
								16:16 ~ 17:54	East	19:47	1.4			
			06:40	12:18		9.5		06:40 ~ 12:18	East	09:05	0.8			
23-Feb	Sun	26-Jan	17:55	17:45	3	10.3	Off	12:18 ~ 17:45	West	15:24	0.6	Non-fishing		
								17:45 ~ 17:55	East	21:11	1.4			
			06:39	07:57		9.5		06:39 ~ 07:57	West	04:38	1.6			
24-Feb	Mon	27-Jan	17:56	14:07	3	10.2		07:57 ~ 14:07	East	10:33	1.0			
								14:07 ~ 17:56	West	17:02	0.9			
			06:37	08:57		9.5		06:37 ~ 08:57	West	05:46	2.1			
25-Feb	Tue	28-Jan	17:57	15:14	3	10.2		08:57 ~ 15:14	East	11:42	1.4			Δ
								15:14 ~ 17:57	West	18:06	1.3			
06 = 1			06:36	09:45		9.45		06:36 ~ 09:45	West	06:39	2.5			
26-Feb	Wed	29-Jan	17:58	16:02	3	10.1		09:45 ~ 16:02	East	12:35	1.7			0
<u> </u>								16:02 ~ 17:58	West	18:56	1.8			
27 524	Thu	20 1	06:35	10:27	3	9.45		06:35 ~ 10:27	West	07:24	2.8			
27-Feb	ınu	30-Jan	17:59	16:41	3	10.1		10:27 ~ 16:41	East	13:17	2.1			0
-								16:41 ~ 17:59	West	19:39				
29_Eab	Eri	1_Eob	06:34	11:04	3	9.45		06:34 ~ 11:04	West	08:05	3.0			
28-Feb	Fri	1-Feb	18:00	17:17	3	10		$11:04 \sim 17:17$ $17:17 \sim 18:00$	East	13:55	2.3			0
								17:17 ~ 18:00	West	20:19	2.6			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar	Sunset	water	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunrise	between sunrise to sunset	operating times	(°C/ last year)	isning	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
						-		06:33 ~ 11:39	West	08:43	3.1			
1-Mar	Sat	2-Feb	06:33	11:39	3	9.55	Off	11:39 ~ 17:51	East	14:29	2.5			0
			18:01	17:51		10		17:51 ~ 18:01	West	20:58	2.8			Ü
								06:31 ~ 12:11	West	09:20	2.9			
2-Mar	Sun	3-Feb	06:31	12:11	2	9.55		12:11 ~ 18:01	East	15:03	2.5			0
	04	0.00	18:01	12.11	_	9.9		12.11	Last	13.03				Ü
3-Mar	Mon	4-Feb	06:30	06:51	2	9.45		06:51 ~ 12:43	West	09:56	2.6	ł		0
0			18:02	12:43	_	9.9		12:43 ~ 18:02	East	15:36	2.5			
								06:29 ~ 07:29	East	04:01	2.3			
4-Mar	Tue	5-Feb	06:29	07:29	3	9.45	Off	07:29 ~ 13:14	West	10:31	2.3			Δ
- Indi	Tuc	3 1 65	18:03	13:14		9.8	On	13:14 ~ 18:03	East	16:10	2.4			
								06:28 ~ 08:08	East	04:43	1.9			
5-Mar	Wed	6-Feb	06:28	08:08	3	9.6		08:08 ~ 13:46	West	11:08	1.9			
J Mai	WCG	0 1 0 5	18:04	13:46		10		13:46 ~ 18:04	East	16:48	2.1			
								06:26 ~ 08:52	East	05:31	1.5			
6-Mar	Thu	7-Feb	06:26	08:52	3	9.65		08:52 ~ 14:22	West	11:49	1.4			
O Mai	IIIu	7-1-65	18:05	14:22		10		14:22 ~ 18:05	East	17:33	1.8			
								14.22 70 10.03	Last	17.55	1.0			
7-Mar	Fri	8-Feb	06:25	09:50	0	9.7					Non-fis	shina		
/-I*IaI	FII	o-reb	18:06	15:08	U	10					INOIT-IIS	sillig		
8-Mar	Sat	9-Feb	06:24	11:22	0	9.75	Off				Non-fis	shina		
0-Mai	Sat	9-гер	18:06	16:19	U	10	OII				INOIT-IIS	sillig		
								07:10 ~ 13:19	East	10:01	0.7	ı	1	
9-Mar	Sun	10-Feb	06:22	07:10 13:19	3	9.8		13:19 ~ 18:06	West	15:53	0.6	Non-fishing		
9-11101	Juli	10-1 60	18:07	18:06		9.9			East	21:43	 -	Non-iisiiiig		
								18:06 ~ 18:07 06:21 ~ 08:22	West	04:52	1.3			
10-Mar	Mon	11-Feb	06:21	08:22	3	9.8		08:22 ~ 14:36	 	 				
10-14141	MOH	11-гер	18:08	14:36	3	9.8		14:36 ~ 18:08	East	11:24 17:15	1.0			
									West	05:53	1.0 2.1			
11_Mar	Tuo	12-Feb	06:20	09:10	3	10	Off	06:20 ~ 09:10 09:10 ~ 15:26	West East	12:16	1.4			Δ
11-Mai	Tue	12-160	18:09	15:26		10	OII			18:11	1.5			Δ
							 	15:26 ~ 18:09	West					
12-Mar	Wod	13-Feb	06:18	09:48	3	10.15		06:18 ~ 09:48 09:48 ~ 16:05	West	06:39	2.4			_
12-14191	wed	12-LGD	18:10	16:05	ا ا	10.1			East	12:54	1.8			Δ
							<u> </u>	16:05 ~ 18:10	West	18:55	2.0			
12 Ma:-	Thu	11 506	06:17	10:21	3	10.15		06:17 ~ 10:21	West	07:18	2.6			
12-Mat	inu	14-Feb	18:10	16:40	3	10		10:21 ~ 16:40	East	13:26	2.0			0
	<u> </u>				<u> </u>		-	16:40 ~ 18:10	West	19:34	2.3			
1 / 14 -		15 5-1	06:16	10:50	_	10.25		06:16 ~ 10:50	West	07:53	2.7			
14-Mar	Fri	15-Feb	18:11	17:11	3	10.2		10:50 ~ 17:11	East	13:53	2.2			0
					<u> </u>			17:11 ~ 18:11	West	20:09	2.6			
1 - 14-	C-+	16 5-1	06:14	11:17	_	10.4	Off.	06:14 ~ 11:17	West	08:26	2.7			
15-Mar	Sat	16-Feb	18:12	17:39	3	10.4	Off	11:17 ~ 17:39	East	14:15	2.3	ļ		0
								17:39 ~ 18:12	West	20:42	2.7			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)		Non-fish	ning day	
Date	Day	Lunar Calendar	Sunset	water	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunrise	between sunrise to sunset	operating times	(°C/ last year)	lisning	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
								06:13 ~ 11:41	West	08:56	2.6			
16-Mar	Sun	17-Feb	06:13	11:41	3	10.55		11:41 ~ 18:04	East	14:36	2.3			0
			18:13	18:04		10.5		18:04 ~ 18:13	West	21:12	2.6			
17-Mar	Mon	18-Feb	06:12	06:17	2	10.7		06:17 ~ 12:05	West	09:23	2.4			Δ
			18:14	12:05	_	10.7		12:05 ~ 18:14	East	14:57	2.4			
								12.00	2400	11107				
18-Mar	Tue	19-Feb	06:10	06:39	2	10.65	Off	06:39 ~ 12:27	West	09:48	2.1			Δ
10		13 . 05	18:14	12:27	_	10.7	0	12:27 ~ 18:14	East	15:20	2.3			1
								06:09 ~ 07:01	East	03:42	1.9			
19-Mar	Wed	20-Feb	06:09	07:01	3	10.7	Off	07:01 ~ 12:51	West	10:13	1.9			
15 Mai	Wed	20 1 CD	18:15	12:51	3	10.8	Oli	$12:51 \sim 18:15$	East	15:47	2.3			
								06:08 ~ 07:27	East	04:14	1.7			
20-Mar	Thu	21-Feb	06:08	07:27	3	10.7		07:27 ~ 13:17	West	10:39	1.6			
20 11101	IIIu	21 1 60	18:16	13:17	3	10.7				16:19	2.1			
									East					
21 May	ri	22 Fab	06:06	08:00	3	10.7		06:06 ~ 08:00	East	04:53	1.5			
21-Mar	Fri	22-Feb	18:17	13:49	3	10.6		08:00 ~ 13:49	West	11:10	1.3			
								13:49 ~ 18:17	East	16:58	1.9			
			06:05	08:48		10.7	0.00							
22-Mar	Sat	23-Feb	18:17	14:30	0	10.6	Off				Non-fis	shing		
			06:03	10:02		10.85								
23-Mar	Sun	24-Feb	18:18	15:34	0	10.6					Non-fis	hing		
			06:02	11:55		10.95		06:02 ~ 11:55	East	08:35	0.8			
24-Mar	Mon	25-Feb	18:19	17:17	3	10.7		11:55 ~ 17:17	West	14:53	0.6	Non-fishing		
								17:17 ~ 18:19	East	20:42	1.3			
			06:01	07:23		11		06:01 ~ 07:23	West	04:04	1.6			
25-Mar	Tue	26-Feb	18:20	13:37	3	10.7	Off	07:23 ~ 13:37	East	10:07	1.1			
								13:37 ~ 18:20	West	16:36	1.0			
			05:59	08:24		11.05		05:59 ~ 08:24	West	05:17	2.0			
26-Mar	Wed	27-Feb	18:21	14:41	3	10.7		08:24 ~ 14:41	East	11:13	1.5			Δ
								14:41 ~ 18:21	West	17:41	1.5			
			05:58	09:11		11.15		05:58 ~ 09:11	West	06:12	2.4			
27-Mar	Thu	28-Feb	18:21	15:27	3	10.8		09:11 ~ 15:27	East	12:04	1.9			Δ
								15:27 ~ 18:21	West	18:32	2.1			
			05:57	09:53		11.25		05:57 ~ 09:53	West	06:58	2.7			
28-Mar	Fri	02/29	18:22	16:07	3	10.9		09:53 ~ 16:07	East	12:46	2.3			0
			10.22	10.07		10.5		16:07 ~ 18:22	West	19:16	2.6			
			05:55	10.20		11 45		05:55 ~ 10:30	West	07:39	2.9			
29-Mar	Sat	1-Mar	18:23	10:30 16:45	3	11.45 11.1	Off	10:30 ~ 16:45	East	13:24	2.6			0
			10.23	10.75		11.1		16:45 ~ 18:23	West	19:57	3.0			
			05 5	44.0=		44.55		05:54 ~ 11:05	West	08:18	2.9			
30-Mar	Sun	2-Mar	05:54	11:05	3	11.65		11:05 ~ 17:21	East	13:59	2.7			0
			18:24	17:21		11.3		17:21 ~ 18:24	West	20:36	3.2			
				05:55				05:55 ~ 11:38	West	08:56	2.7			
31-Mar	Mon	3-Mar	05:53	11:38	3	11.75		11:38 ~ 17:57	East	14:34	2.7			0
			18:24	17:57		11.5		17:57 ~ 18:24	West	21:16	3.2			
								10.27			0.2			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)		Non-fish	ning day	
Date	Day	Lunar	Sunset	water	of 	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunrise	between sunrise to sunset	operating times	(°C/ last year)	fishing	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	,
						,,				Tille	Speeu			
1 0 0 0	Tue	4 May	05:51	06:35	2	11.57	Off	06.25 12.10)A/	00.22	2.4			٨
1-Apr	Tue	4-Mar	18:25	12:10	2	11.8	OII	06:35 ~ 12:10	West	09:32	2.4			Δ
								12:10 ~ 18:25	East	15:07	2.6			
			05:50	07:14		11.67		05:50 ~ 07:14	East	03:45	2.2			
2-Apr	Wed	5-Mar	18:26	12:42	3	11.9		07:14 ~ 12:42	West	10:09	2.0			Δ
								12:42 ~ 18:26	East	15:42	2.4			
								05:49 ~ 07:54	East	04:27	1.8			
3-Apr	Thu	6-Mar	05:49	07:54	3	11.7		07:54 ~ 13:16	West	10:47	1.6			
			18:27	13:16		11.9		13:16 ~ 18:27	East	16:21	2.1			
								05:47 ~ 08:41	East	05:15	1.3			
4-Apr	Fri	7-Mar	05:47	08:41	3	11.8		08:41 ~ 13:54	West	11:30	1.2			
т Дрі		7 Mai	18:27	13:54	3	11.9		13:54 ~ 18:27	East	17:06	1.8			
								13.54 ~ 16.27	EdSL	17.00	1.0			
			05:46	09:45		12.03	0.55							
5-Apr	Sat	8-Mar	18:28	14:45	0	12.2	Off				Non-fis	hing		
			05:45	11.10		12.1								
6-Apr	Sun	9-Mar	18:29	11:19 16:07	0	12.1					Non-fis	hing		
			10.29	10.07		12.1								
				06:41				06:41 ~ 12:58	East	09:45	0.8			
7-Apr	Mon	10-Mar	05:43	12:58	3	12.23		12:58 ~ 18:02	West	15:35	0.7	Non-fishing		
·			18:30	18:02		12.2		18:02 ~ 18:30	East	21:35	1.2	3		
								05:42 ~ 07:44	West	04:23	1.6			
8-Apr	Tue	11-Mar	05:42	07:44	3	12.27	Off							
о-Арі	Tue	11-11101	18:30	14:04	3	12.3	OII		East	10:52	1.1			
								14:04 ~ 18:30	West	16:52	1.2			
			05:41	08:29		12.33		05:41 ~ 08:29	West	05:22	1.8			
9-Apr	Wed	12-Mar	18:31	14:51	3	12.3		08:29 ~ 14:51	East	11:38	1.5			
								14:51 ~ 18:31	West	17:46	1.7			
			05:39	00.06		12.5		05:39 ~ 09:06	West	06:08	2.1			
10-Apr	Thu	13-Mar	18:32	09:06 15:29	3	12.5 12.3		09:06 ~ 15:29	East	12:13	1.8			Δ
			10.32	15.29		12.3		15:29 ~ 18:32	West	18:28	2.1			
								05:38 ~ 09:38	West	06:47	2.3			
11-Apr	Fri	14-Mar	05:38	09:38	3	12.63		09:38 ~ 16:03	East	12:43	2.1			0
			18:33	16:03		12.4		16:03 ~ 18:33	West	19:06	2.5			_
										07:21	2.4			
12 4	Cat	15 M	05:37	10:07	2	12.83	Off	05:37 ~ 10:07	West					
12-Apr	Sat	15-Mar	18:33	16:33	3	12.7	Off	10:07 ~ 16:33	East	13:09	2.3			0
								16:33 ~ 18:33	West	19:41	2.7			
			05:35	10:35		12.93		05:35 ~ 10:35	West	07:54	2.4			
13-Apr	Sun	16-Mar	18:34	17:01	3	12.93		10:35 ~ 17:01	East	13:33	2.4			0
				27.01				17:01 ~ 18:34	West	20:13	2.8			
			05.1			4		05:34 ~ 11:01	West	08:24	2.3			
14-Apr	Mon	17-Mar	05:34	11:01	3	13.2		11:01 ~ 17:26	East	13:56	2.4			0
			18:35	17:26		13.2		17:26 ~ 18:35	West	20:43	2.8			
				05.50				05:50 ~ 11:25	West	08:52	2.1			
15-Apr	Tuo	18-Mar	05:33	05:50 11:25	3	13.13	Off							0
13-Apr	rue	TO-MQI.	18:36	11:25 17:48	3	13.3	OII	11:25 ~ 17:48	East	14:19	2.4			
				17.40				17:48 ~ 18:36	West	21:12	2.7			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

		Ī		The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar	Sunset Sunrise	water	of	tem. * (°C/ last	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunnse	between sunrise to sunset	operating times	year)	lisning	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
				06:13							'			
16-Apr	Wed	19-Mar	05:32	11:50	2	13.23		06:13 ~ 11:50	West	09:19	1.9			
			18:37	18:11		13.6		11:50 ~ 18:11	East	14:45	2.4			
				06:38				05:30 ~ 06:38	East	03:17	1.9			
17-Apr	Thu	20-Mar	05:30	12:16	3	13.4		06:38 ~ 12:16	West	09:45	1.7	ł		
			18:37	18:37		13.8		12:16 ~ 18:37	East	15:14	2.3			
								05:29 ~ 07:06	East	03:50	1.7			
18-Apr	Fri	21-Mar	05:29	07:06	3	13.47		07:06 ~ 12:44	West	10:14	1.5	ł		
10 / ip.			18:38	12:44		13.7		12:44 ~ 18:38	East	15:47	2.2			
								05:28 ~ 07:44	East	04:30	1.5			
19-Apr	Sat	22-Mar	05:28	07:44	3	13.6	Off	07:44 ~ 13:20	West	10:48	1.2			
13 Api	Juc	22 1101	18:39	13:20		13.9	OII	13:20 ~ 18:39	East	16:29	2.0			
								13.20 10.39	Last	10.29	2.0			
20-Apr	Sun	23-Mar	05:27	08:36	0	13.63					Non-fis	:hina		
20-Api	Juli	23-Mai	18:40	14:06	0	13.9					INOIT-IIS	sillig		
21 / 00 11	Mon	24-Mar	05:26	09:53	0	13.7					Non-fis	ala i a a		
21-Apr	MOH	24-Mai	18:40	15:17	U	13.7					INOIT-IIS	sillig		
								05.24 11.20	F	00.07	1.0	1		
22 4	T	25 M	05:24	11:29	_	13.8	044	05:24 ~ 11:29	East	08:07	1.0	Nan Galaina		
22-Apr	Tue	25-Mar	18:41	17:01	3	13.7	Off	11:29 ~ 17:01	West	14:28	0.8	Non-fishing		
								17:01 ~ 18:41	East	20:19	1.3			
			05:23	06:38		14		06:38 ~ 12:55	East	09:31	1.2			
23-Apr	Wed	26-Mar	18:42	12:55	3	13.9		12:55 ~ 18:41	West	16:03	1.2			
				18:41				18:41 ~ 18:42	East	21:47	1.6			
			05:22	07:40		14		05:22 ~ 07:40	West	04:40	1.8			
24-Apr	Thu	27-Mar	18:43	13:57	3	13.9		07:40 ~ 13:57	East	10:34	1.6			
								13:57 ~ 18:43	West	17:10	1.8			
			05:21	08:30		13.97		05:21 ~ 08:30	West	05:38	2.1			
25-Apr	Fri	28-Mar	18:44	14:47	3	13.9		08:30 ~ 14:47	East	11:25	2.0			Δ
								14:47 ~ 18:44	West	18:03	2.3			
			05:20	09:13		14.17		05:20 ~ 09:13	West	06:27	2.4			
26-Apr	Sat	29-Mar	18:44	15:31	3	14.1	Off	09:13 ~ 15:31	East	12:10	2.4			0
								15:31 ~ 18:44	West	18:50	2.8			
			05:19	09:53		14.3		05:19 ~ 09:53	West	07:11	2.5			
27-Apr	Sun	30-Mar	18:45	16:13	3	14.3		09:53 ~ 16:13	East	12:51	2.6			0
								16:13 ~ 18:45	West	19:34	3.2			
			05:18	10:30		14.5		05:18 ~ 10:30	West	07:53	2.5			
28-Apr	Mon	1-Apr	18:46	16:54	3	14.5	Off	10:30 ~ 16:54	East	13:29	2.8			0
								16:54 ~ 18:46	West	20:16	3.4			
			05:17	05:40	l	14.6		05:40 ~ 11:07	West	08:33	2.4		·	
29-Apr	Tue	2-Apr	18:47	11:07	3	14.5		11:07 ~ 17:34	East	14:07	2.8			0
				17:34	L			17:34 ~ 18:47	West	20:58	3.3			
			05.45	06:22		14.7		05:15 ~ 06:22	East	02:53	2.3			
30-Apr	Wed	3-Apr	05:15 18:47	11:42	3	14.7 14.8		06:22 ~ 11:42	West	09:12	2.1			Δ
	1	ı	10:4/	18:15	I	14.0		11:42 ~ 18:15	East	14:44	2.6	1		

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar	Sunset	water	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
		Calendar	Sunrise	between sunrise to sunset	operating times	year)	fishing	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
								05:14 ~ 07:05	East	03:35	2.0			
1-May	Thu	4-Apr	05:14	07:05	3	14.83		07:05 ~ 12:18	West	09:52	1.8			
,			18:48	12:18		14.9		12:18 ~ 18:48	East	15:23	2.4			
								05:13 ~ 07:49	East	04:19	1.6			
2-May	Fri	5-Apr	05:13	07:49	3	14.87		07:49 ~ 12:57	West	10:34	1.5			
Z Muy	'''	3 дрі	18:49	12:57		14.9		12:57 ~ 18:49	East	16:04	2.1			
								05:12 ~ 08:40	East	05:10	1.3			
3-May	Sat	6-Apr	05:12	08:40	3	14.97		08:40 ~ 13:41	West	11:21	1.2			
3 May	Jac	ОАрі	18:50	13:41		15.1		13:41 ~ 18:50	East	16:53	1.7			
										06:16				
4 May	C	7 4 2 2	05:11	09:43	3	15.1	Off		East		1.0			
4-May	Sun	7-Apr	18:51	14:40	3	15.1	OII	09:43 ~ 14:40	West	12:18	0.9			
								14:40 ~ 18:51	East	17:59	1.3			
г мач	Man	0 4 5 5	05:11	10:58	0	15.33	Off				Non fin	la in a		
5-May	Mon	8-Apr	18:51	16:03	0	15.3	Off				Non-fis	ning		
	_	١	05:10	05:45		15.53								
6-May	Tue	9-Apr	18:52	12:13 17:44	0	15.5					Non-fis	ining		
				17.44										
			05:09	06:45	_	15.67		05:09 ~ 06:45	West	03:34	1.4			
7-May	Wed	10-Apr	18:53	13:14	3	15.5		06:45 ~ 13:14	East	09:57	1.2	Non-fishing		
								13:14 ~ 18:53	West	16:13	1.3			
			05:08	07:32		15.67		05:08 ~ 07:32	West	04:36	1.6			
8-May	Thu	11-Apr	18:54	14:03	3	15.5		07:32 ~ 14:03	East	10:42	1.5			
								14:03 ~ 18:54	West	17:09	1.7			
			05:07	08:12		15.7		05:07 ~ 08:12	West	05:25	1.7			
9-May	Fri	12-Apr	18:54	14:44	3	15.5		08:12 ~ 14:44	East	11:21	1.8			Δ
								14:44 ~ 18:54	West	17:54	2.1			
			05:06	08:48		15.8		05:06 ~ 08:48	West	06:07	1.9			
10-May	Sat	13-Apr	18:55	15:21	3	15.6	Off	08:48 ~ 15:21	East	11:54	2.0			Δ
								15:21 ~ 18:55	West	18:34	2.4			
			05:05	09:22		16		05:05 ~ 09:22	West	06:46	2.0			
11-May	Sun	14-Apr	18:56	15:54	3	15.9		09:22 ~ 15:54	East	12:24	2.2			0
								15:54 ~ 18:56	West	19:11	2.6			
	l		05:04	09:53		16.13		05:04 ~ 09:53	West	07:21	2.0			
12-May	Mon	15-Apr	18:57	16:24	3	16.13		09:53 ~ 16:24	East	12:53	2.3			0
								16:24 ~ 18:57	West	19:45	2.7			
			05:04	10.22		16 22		05:04 ~ 10:23	West	07:54	1.9			
13-May	Tue	16-Apr	18:58	10:23 16:52	3	16.23 16.2	Off	10:23 ~ 16:52	East	13:21	2.4			0
	<u> </u>	<u> </u>	10.00	10.02	<u> </u>			16:52 ~ 18:58	West	20:18	2.8			
			05.02	05:29		16 27		05:29 ~ 10:52	West	08:26	1.8			
14-May	Wed	17-Apr	05:03 18:58	10:52	3	16.27 16.3		10:52 ~ 17:18	East	13:49	2.4			0
			10.50	17:18		10.5		17:18 ~ 18:58	West	20:51	2.7			
				05:58				05:58 ~ 11:21	West	08:58	1.7			
15-May	Thu	18-Apr	05:02 18:59	11:21	3	16.37 16.5		11:21 ~ 17:46	East	14:18	2.4			0
	Ī	I	10:29	17:46		10.5		17:46 ~ 18:59	West	21:23	2.6			1

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

Date Day Lunar Calendar Sunset Sunset water between sunrise to sunset Sunset water between sunrise to sunset Sunset Sunset water between sunrise to sunset S		Difficulty**
16-May Fri 19-Apr 05:01 11:52 3 16.47 16:6	and Ogijima isiand	
16-May Fri 19-Apr		
16-May Fri 19-Apr 19:00 11:52 18:17 16.6 16.47 16.6 16.6 16.6 16.7 16.6 16.6 16.7 16.6 16.6 16.7 16.6 16.7 16.6 16.7 16.6 16.6 16.7 16.6 16.7 16.6 16.7 16.6 16.7 16.6 1		
19:00 18:17 16.6 11:52 ~ 18:17 East 14:51 2.3 17-May Sat 20-Apr 05:01 19:01 12:26 18:53 16.67 16.9 07:02 ~ 12:26 West 10:03 1.4 12:26 ~ 18:53 East 15:29 2.2 18-May Sun 21-Apr 05:00 07:43 19:01 13:07 16.67 16.7 07:43 ~ 13:07 West 10:43 1.2 13:07 ~ 19:01 East 16:13 2.0 19-May Mon 22-Apr 04:59 19:02 14:00 3 16.67 16.5 04:59 ~ 08:35		
17-May Sat 20-Apr Sat		
17-May Sat 20-Apr 05:01 12:26 3 16.67 16.9 Off 16.9 Off 07:02 ~ 12:26 West 10:03 1.4 12:26 ~ 18:53 East 15:29 2.2 18-May Sun 21-Apr 05:00 07:43 13:07 3 16.67 16.7 19-May Mon 22-Apr 04:59 19:02 14:00 3 16.67 16.5 20-May Tue 23-Apr 04:59 19:03 15:12 0 16.8 16.8 Off Off Off Off Off 07:02 ~ 12:26 West 10:03 1.4 12:26 ~ 18:53 East 15:29 2.2 05:00 ~ 07:43 East 04:19 1.5 07:43 ~ 13:07 West 10:43 1.2 13:07 ~ 19:01 East 16:13 2.0 04:59 ~ 08:35 East 05:11 1.4 08:35 ~ 14:00 West 11:33 1.1 14:00 ~ 19:02 East 17:10 1.7 20-May Tue 23-Apr 04:59 09:41 15:12 0 16.8 16.8 Off Non-fishing		
18-May Sun 21-Apr 05:00 07:43 13:07 3 16.67 16.7 05:00 07:43 13:07 West 10:43 1.2 13:07 ~ 19:01 East 16:13 2.0 16.67 16.5 16.5 16.5 16.5 16.8 Off Non-fishing		
18-May Sun 21-Apr 05:00 07:43 13:07 3 16.67 16.7 07:43 ~ 13:07 West 10:43 1.2 13:07 ~ 19:01 East 16:13 2.0 13:07 ~ 19:01 East 16:13 2.0 14:00 3 16.67 16.5 07:43 ~ 13:07 West 11:33 1.1 14:00 ~ 19:02 East 17:10 1.7 20-May Tue 23-Apr 04:59 19:03 15:12 0 16.8 16.8 Off Non-fishing		
18-May Sun 21-Apr 05:00 19:01 07:43 13:07 3 16.67 16.7 07:43 ~ 13:07 West 10:43 1.2 13:07 ~ 19:01 East 16:13 2.0 13:07 ~ 19:01 East 16:13 2.0 14:00 15:02 14:00 3 16.67 16.5 16.67 16.5 16.67 16.5 16.8 Off Non-fishing		
19-May Mon 22-Apr 04:59		
19-May Mon 22-Apr 04:59		
19-May Mon 22-Apr 04:59 19:02 08:35 14:00 3 16.67 16.5 08:35 ~ 14:00 West 11:33 1.1 14:00 ~ 19:02 East 17:10 1.7 20-May Tue 23-Apr 04:59 19:03 15:12 0 16.8 16.8 Off Non-fishing		
20-May Tue 23-Apr 04:59		
20-May Tue 23-Apr 04:59 09:41 0 16.8 0ff Non-fishing 21-May Wed 24-Apr 04:58 10:54 0 17 Non-fishing		
20-May Tue 23-Apr 19:03 15:12 0 16.8 Off Non-fishing 21-May Wed 24-Apr 04:58 10:54 0 17 Non-fishing		
21-May Wed 24-Apr 04:58 10:54 0 17 Non-fishing		
I 21-May I Wed I 24-Apr I I I I I I Non-fishing		
I 21-May I Wed I 24-Apr I I I I I I Non-fishing		
05:46 05:46 ~ 12:06 East 08:46 1.5		
22-May Thu 25-Apr 04:57 19:04 12:06 3 17.07 12:06 ~ 18:16 West 15:22 1.4 Non-fish	ing	
18:16 18:16 ~ 19:04 East 21:16 1.5		
04:57 ~ 06:48 West 03:54 1.6		
23-May Fri 26-Apr 04:57 06:48 3 17.2 06:48 ~ 13:11 East 09:50 1.7		
19:05 13:11 17.1 13:11 ~ 19:05 West 16:34 1.9		
04:56 ~ 07:43 West 05:00 1.8		
24-May Sat 27-Apr 04:56 07:43 3 17.43 0ff 07:43 ~ 14:07 Fast 10:45 2.1		Δ
19:06 14:07 17.4 17.4 14:07 West 17:34 2.4		
04:56 ~ 08:32 West 05:55 1.9		
25-May Sun 28-Apr 04:56 08:32 17.77 08:32 08:32 17.77 08:32 ~ 14:59 East 11:35 2.4		0
19:06 14:59 18.2 14:59 28.4 18:26 2.8		
04:55 ~ 09:17 West 06:45 2.1		
04:55 09:17 18		0
04:55 ~ 10:00 West 07:31 2.1		
19:08 16:34 18.2		0
16:34 ~ 19:08 West 20:00 3.3		
05:29 05:29 06:55 06:42 West 08:15 2.0		_
28-May Wed 2-May 19:08 10:42 3 18.7 10:42 ~ 17:20 East 13:48 2.7		0
17:20 17:20 20:45 3.3		
06:14 06:14		
29-May Thu 3-May 19:09 11:23 3 18.3 11:23 ~ 18:05 East 14:30 2.6		0
18:05 18:05 ~ 19:09 West 21:29 3.1		
06:59 04:54 ~ 06:59 East 03:31 1.9		
30-May Fri 4-May 19:10 12:05 3 18.6 06:59 ~ 12:05 West 09:41 1.8		Δ
18:50 18:50 12:05 ~ 18:50 East 15:13 2.3		
04:53 ~ 07:45 East 04:17 1.6		
31-May Sat 5-May 04:53 07:45 3 18.4 Off 07:45 ~ 12:49 West 10:25 1.6		
18.7 18.7 19:10 12:49 18.7 12:49 ~ 19:10 East 15:58 2.0		

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar Calendar	Sunset Sunrise	water between sunrise	of operating	tem. * (°C/ last	Trawl	-	Current	Maximum	Current	West of Ogijima Island	East of Ogijima Island	Difficulty**
		Caleridar	Surinse	to sunset	times	year)	listility	Time	Direction	Time	Speed	Ogijima island	Ogijima island	
								04:53 ~ 08:32	East	05:05	1.4			
1-Jun	Sun	6-May	04:53	08:32	3	18.43		08:32 ~ 13:38	West	11:12	1.4			
			19:11	13:38		18.6		13:38 ~ 19:11	East	16:47	1.7			
								04:53 ~ 09:22	East	05:58	1.3			
2-Jun	Mon	7-May	04:53	09:22	3	18.47		09:22 ~ 14:35	West	12:03	1.2			
			19:11	14:35		18.6		14:35 ~ 19:11	East	17:46	1.4			
3-Jun	Tue	8-May	04:53 19:12	10:17 15:44	0	18.63 18.6	Off		•		Non-fis	hing		
4-Jun	Wed	9-May	04:52 19:13	11:15 17:04	0	18.87 18.7					Non-fis	hing		
			04.50	05:30		10.07		05:30 ~ 12:11	East	08:46	1.4			
5-Jun	Thu	10-May	04:52 19:13	12:11	3	18.97 18.9		12:11 ~ 18:21	West	15:17	1.3	Non-fishing		
			19.13	18:21		10.5		18:21 ~ 19:13	East	21:14	1.1			
			04.50	06.24		40.0		04:52 ~ 06:21	West	03:32	1.3			
6-Jun	Fri	11-May	04:52 19:14	06:21 13:04	3	18.9 19		06:21 ~ 13:04	East	09:35	1.5			
			13.11	13.01		13		13:04 ~ 19:14	West	16:19	1.6			
			04:52	07:09		19		04:52 ~ 07:09	West	04:30	1.3			
7-Jun	Sat	12-May	19:14	13:52	3	19.1	Off	07:09 ~ 13:52	East	10:20	1.7			
			19.11.	10.02		15.1		13:52 ~ 19:14	West	17:12	1.9			
			04:52	07:54		19.1		04:52 ~ 07:54	West	05:22	1.4			
8-Jun	Sun	13-May	19:15	14:35	3	19.1		07:54 ~ 14:35	East	11:02	1.9			Δ
			15.15	155		2511		14:35 ~ 19:15	West	17:59	2.2			
			04:52	08:35		19.27		04:52 ~ 08:35	West	06:08	1.5			
9-Jun	Mon	14-May	19:15	15:14	3	19.5		08:35 ~ 15:14	East	11:41	2.1			Δ
								15:14 ~ 19:15	West	18:41	2.4			
			04:51	09:15		19.33		04:51 ~ 09:15	West	06:51	1.6			
10-Jun	Tue	15-May	19:16	15:51	3	19.4	Off	09:15 ~ 15:51	East	12:17	2.2			0
								15:51 ~ 19:16	West	19:21	2.6			
			04:51	09:52		19.47		04:51 ~ 09:52	West	07:30	1.6			
11-Jun	Wed	16-May	19:16	16:26	3	19.8		09:52 ~ 16:26	East	12:53	2.3			0
								16:26 ~ 19:16	West	19:59	2.7			
			04:51	05:17		19.57		05:17 ~ 10:28	West	08:08	1.6			
12-Jun	Thu	17-May	19:16	10:28	3	20		10:28 ~ 17:00	East	13:28	2.3			0
				17:00				17:00 ~ 19:16	West	20:35	2.7			
			04:51	05:53		19.73		05:53 ~ 11:04	West	08:45	1.6			
13-Jun	Fri	18-May	19:17	11:04	3	20.2		11:04 ~ 17:35	East	14:03	2.3			0
				17:35				17:35 ~ 19:17	West	21:12	2.7			
			04:51	06:28		19.97		04:51 ~ 06:28	East	02:53	1.7			
14-Jun	Sat	19-May	19:17	11:41	3	20.8	Off	06:28 ~ 11:41	West	09:21	1.5			Δ
				18:11	ļ			11:41 ~ 18:11	East	14:41	2.3			
			04:51	07:03		19.93		04:51 ~ 07:03	East	03:31	1.7			
15-Jun	Sun	20-May	19:18	12:21	3	20.9		07:03 ~ 12:21	West	09:59	1.5			
				18:50				12:21 ~ 18:50	East	15:22	2.2			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar	Sunset	water	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
	,	Calendar	Sunrise	between sunrise to sunset	operating times	(°C/ last year)	isning	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	,
								04:52 ~ 07:41	East	04:12	1.7			
16-Jun	Mon	21-May	04:52	07:41	3	20.03		07:41 ~ 13:06	West	10:39	1.5			
		,	19:18	13:06		20.8		13:06 ~ 19:18	East	16:08	2.0			
								04:52 ~ 08:25	East	04:59	1.6			
17-Jun	Tue	22-May	04:52	08:25	3	20.17	Off	08:25 ~ 13:59	West	11:25	1.4			
		,	19:18	13:59		20.8		13:59 ~ 19:18	East	17:01	1.8			
								13.33	Lust	17.01	1.0			
18-Jun	Wed	23-May	04:52	09:16	0	20.17					Non-fis	hina		
		,	19:19	15:04		20.4						J		
19-Jun	Thu	24-May	04:52	10:14	0	20.3					Non-fis	hing		
			19:19	16:21		20.4								
			0.4.50	44.40				04:52 ~ 11:19	East	07:58	1.6			
20-Jun	Fri	25-May	04:52 19:19	11:19 17:48	3	20.5 20.6		11:19 ~ 17:48	West	14:39	1.6	Non-fishing		
			15.15	17.40		20.0		17:48 ~ 19:19	East	20:40	1.4			
			0.4.50	05:53		20.62		05:53 ~ 12:26	East	09:03	1.8			
21-Jun	Sat	26-May	04:52 19:19	12:26	3	20.63	Off	12:26 ~ 19:10	West	15:58	1.9			
			15.15	19:10		20.7		19:10 ~ 19:19	East	21:56	1.4			
			04.50	06.55		20.62		04:53 ~ 06:55	West	04:20	1.3			
22-Jun	Sun	27-May	04:53 19:19	06:55 13:32	3	20.63		06:55 ~ 13:32	East	10:06	2.0			Δ
			19.19	15.52		20.7		13:32 ~ 19:19	West	17:08	2.3			
			0.4.50	07.50		20.0		04:53 ~ 07:53	West	05:27	1.5			
23-Jun	Mon	28-May	04:53 19:20	07:53 14:34	3	20.8 20.7		07:53 ~ 14:34	East	11:04	2.2			0
			19.20	14.54		20.7		14:34 ~ 19:20	West	18:08	2.7			
			04.50	00.40		24		04:53 ~ 08:48	West	06:24	1.6			
24-Jun	Tue	29-May	04:53 19:20	08:48 15:31	3	21 20.8	Off	08:48 ~ 15:31	East	11:59	2.4			0
			13.20	13.31		20.0		15:31 ~ 19:20	West	19:01	3.0			
			04.52	00.20		21.02		04:53 ~ 09:39	West	07:16	1.8			
25-Jun	Wed	1-Jun	04:53 19:20	09:39 16:24	3	21.03		09:39 ~ 16:24	East	12:51	2.5			0
			13.20	10.24		20.5		16:24 ~ 19:20	West	19:49	3.2			
			04.54	05:22		21.17		05:22 ~ 10:28	West	08:03	1.9			
26-Jun	Thu	2-Jun	04:54 19:20	10:28	3	21.17		10:28 ~ 17:13	East	13:40	2.5			0
				17:13				17:13 ~ 19:20	West	20:35	3.2			
			04:54	06:06		21.37		06:06 ~ 11:14	West	08:48	1.9			
27-Jun	Fri	3-Jun	19:20	11:14	3	21.37		11:14 ~ 17:59	East	14:26	2.5			0
				17:59				17:59 ~ 19:20	West	21:18	3.1			
			04:54	06:49		21.5		04:54 ~ 06:49	East	03:28	1.9			
28-Jun	Sat	4-Jun	19:20	12:00	3	21.5	Off	06:49 ~ 12:00	West	09:31	1.9			
				18:43		·		12:00 ~ 18:43	East	15:10	2.3			
			04:55	07:29		21.73		04:55 ~ 07:29	East	04:07	1.8			
29-Jun	Sun	5-Jun	19:20	12:45	3	21.73		07:29 ~ 12:45	West	10:13	1.9			
								12:45 ~ 19:20	East	15:53	2.1			
			04:55	08:08		21.83		04:55 ~ 08:08	East	04:44	1.7			
30-Jun	Mon	6-Jun	19:20	13:30	3	21.55		08:08 ~ 13:30	West	10:54	1.8			
								13:30 ~ 19:20	East	16:35	1.9			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)	Non-fish	ning day	
Date	Day	Lunar Calendar	Sunset Sunrise	water between sunrise	of	tem. *	Trawl		Current	Maximum	Current	West of	East of	Difficulty**
	-	Calendar	Sunnse	to sunset	operating times	(°C/ last year)	fishing	Time	Direction	Time	Speed	Ogijima Island	Ogijima Island	
								04:56 ~ 08:47	East	05:20	1.6			
1-Jul	Tue	7-Jun	04:56	08:47	3	21.87	Off	08:47 ~ 14:18	West	11:36	1.6	Non-fishing		
			19:20	14:18		21.6		14:18 ~ 19:20	East	17:18	1.6			
										l	<u>l</u>			
2-Jul	Wed	8-Jun	04:56	09:27	0	22.03					Non-fis	hing		
			19:20	15:11		21.7								
3-Jul	Thu	9-Jun	04:56	10:11	0	22.13					Non-fis	hing		
			19:20	16:11		21.6								
			0.4.55	11.00		00.07		04:57 ~ 11:00	East	07:29	1.5			
4-Jul	Fri	10-Jun	04:57 19:20	11:00 17:20	3	22.27 21.9		11:00 ~ 17:20	West	14:10	1.4	Non-fishing		
			19.20	17.20		21.9		17:20 ~ 19:20	East	20:02	1.0			
			04.57	05:03		22.27		05:03 ~ 11:54	East	08:21	1.5			
5-Jul	Sat	11-Jun	04:57 19:20	11:54	3	22.27 22	Off	11:54 ~ 18:32	West	15:16	1.4	Non-fishing		
			13.20	18:32		22		18:32 ~ 19:20	East	21:06	0.9			
			04.50	05.50		22.47		04:58 ~ 05:58	West	03:22	1.0			
6-Jul	Sun	12-Jun	04:58 19:20	05:58 12:50	3	22.47 22.1		05:58 ~ 12:50	East	09:16	1.6	Non-fishing		
				22.00				12:50 ~ 19:20	West	16:23	1.6			
			04:58	06:56		22.83		04:58 ~ 06:56	West	04:31	1.0			
7-Jul	Mon	13-Jun	19:19	13:46	3	22.3		06:56 ~ 13:46	East	10:10	1.7			
								13:46 ~ 19:19	West	17:23	1.9			
			04:59	07:52		22.73		04:59 ~ 07:52	West	05:33	1.1			
8-Jul	Tue	14-Jun	19:19	14:38	3	22.4	Off	07:52 ~ 14:38	East	11:01	1.8			Δ
								14:38 ~ 19:19	West	18:15	2.2			
			04:59	08:44		22.83		04:59 ~ 08:44	West	06:26	1.3			
9-Jul	Wed	15-Jun	19:19	15:25	3	22.6		08:44 ~ 15:25	East	11:49	2.0			Δ
								15:25 ~ 19:19	West	19:00	2.4			
			05:00	09:31		23.03		05:00 ~ 09:31	West	07:13	1.4			
10-Jul	Thu	16-Jun	19:19	16:09	3	23.1		09:31 ~ 16:09	East	12:34	2.1			0
								16:09 ~ 19:19	West	19:43	2.7			
		l	05:01	05:07		23.1		05:07 ~ 10:15	West	07:55	1.6			
11-Jul	Fri	17-Jun	19:18	10:15 16:51	3	23.2		10:15 ~ 16:51	East	13:17	2.3			0
								16:51 ~ 19:18	West	20:23	2.8			
12.7.1		10.7	05:01	05:45	_	23.2	655	05:45 ~ 10:57	West	08:35	1.7			
12-Jul	Sat	18-Jun	19:18	10:57 17:30	3	23.1	Off	10:57 ~ 17:30	East	13:57	2.4			0
								17:30 ~ 19:18	West	21:00	2.8			
10 7	C	10 3	05:02	06:19	,	23.37		05:02 ~ 06:19	East	02:47	1.9			
13-Jul	Sun	19-Jun	19:18	11:38 18:09	3	23.2		06:19 ~ 11:38	West	09:12	1.8			
								11:38 ~ 18:09	East	14:38	2.4			
14 3	M	20 3	05:02	06:51	2	23.33		05:02 ~ 06:51	East	03:22	1.9			
14-Jul	Mon	20-Jun	19:17	12:20 18:48	3	23.2		06:51 ~ 12:20	West	09:50	1.9			
				10.70				12:20 ~ 18:48	East	15:19	2.4			
15 301	Tuo	21_1	05:03	07:25	2	23.33	Off	05:03 ~ 07:25	East	03:59	2.0			_
15-Jul	rue	21-Jun	19:17	13:05	3	23.1	Off	07:25 ~ 13:05	West	10:28	1.9			Δ
								13:05 ~ 19:17	East	16:02	2.2			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time))	Non-fish	ning day	
Date	Day	Lunar Calendar	Sunset Sunrise	water between sunrise	of operating	tem. * (°C/ last	Trawl		Current	Maximum	Current	West of Ogijima Island	East of Ogijima Island	Difficulty**
		Calciluai	Sumse	to sunset	times	year)	listiling	Time	Direction	Time	Speed	Ogijima islanu	Ogijima islanu	
			05.04			22.42		05:04 ~ 08:02	East	04:38	1.9			
16-Jul	Wed	22-Jun	05:04 19:16	08:02 13:53	3	23.43 23.1		08:02 ~ 13:53	West	11:09	1.9	Non-fishing		Δ
			19.10	13.55		23.1		13:53 ~ 19:16	East	16:49	2.0			
			05.04	00.45		22.72						•		
17-Jul	Thu	23-Jun	05:04 19:16	08:45 14:49	0	23.73 23.5					Non-fis	shing		
			19.10	14.49		25.5								
			05:05	09:35		23.9								
18-Jul	Fri	24-Jun	19:15	15:58	0	23.5					Non-fis	shing		
			05:06	10:36		23.9		05:06 ~ 10:36	East	07:10	1.7			
19-Jul	Sat	25-Jun	19:15	17:21	3	23.5	Off	10:36 ~ 17:21	West	14:00	1.7	Non-fishing		
								17:21 ~ 19:15	East	20:05	1.2			
			05:06	11:47		24.03		05:06 ~ 11:47	East	08:19	1.7			
20-Jul	Sun	26-Jun	19:14	18:52	3	23.7	Off	11:47 ~ 18:52	West	15:25	1.8	Non-fishing		
								18:52 ~ 19:14	East	21:30	1.1			
04.7.1			05:07	06:10		24.17		05:07 ~ 06:10	West	03:44	0.9			
21-Jul	Mon	27-Jun	19:14	13:06	3	23.6		06:10 ~ 13:06	East	09:33	1.7	Non-fishing		Δ
								13:06 ~ 19:14	West	16:48	2.0			
22 7.4	Tuo	28-Jun	05:08	07:24	2	24.33	Off	05:08 ~ 07:24	West	05:07	1.1			^
22-Jul	Tue	28-Jun	19:13	14:20	3	23.8	OII	07:24 ~ 14:20 14:20 ~ 19:13	East West	10:45 17:56	1.9 2.4			Δ
								14:20 ~ 19:13 05:08 ~ 08:32	West	06:12	1.3			
23-Jul	Wed	29-Jun	05:08	08:32	3	24.63		08:32 ~ 15:24	East	11:50	2.1			0
25 Jul	wea	29-Juli	19:12	15:24	3	24.2		15:24 ~ 19:12	West	18:51	2.7			O
								05:09 ~ 09:30	West	07:05	1.7			
24-Jul	Thu	30-Jun	05:09	09:30	3	24.67		09:30 ~ 16:19	East	12:48	2.3			©
			19:12	16:19		24.3		16:19 ~ 19:12	West	19:39	3.0			
				05:10				05:10 ~ 10:22	West	07:53	2.0			
25-Jul	Fri	1-Jun	05:10	10:22	3	24.77		10:22 ~ 17:07	East	13:39	2.5			0
			19:11	17:07		24.7		17:07 ~ 19:11	West	20:22	3.1			
				05:50				05:50 ~ 11:09	West	08:35	2.2			
26-Jul	Sat	2-Jun	05:10 19:10	11:09	3	25.2 25	Off	11:09 ~ 17:51	East	14:23	2.5			0
			19.10	17:51		25		17:51 ~ 19:10	West	21:01	3.1			
			05.44	06:27		o= 4		05:11 ~ 06:27	East	03:11	2.1			
27-Jul	Sun	3-Jun	05:11 19:10	11:53	3	25.4 25.1		06:27 ~ 11:53	West	09:15	2.3			Δ
			13.10	18:29		23.1		11:53 ~ 18:29	East	15:02	2.4			
			05.12	07:01		25 57		05:12 ~ 07:01	East	03:41	2.1			
28-Jul	Mon	4-Jun	05:12 19:09	12:34	3	25.57 25.6		07:01 ~ 12:34	West	09:53	2.3			Δ
			13.03	19:05				12:34 ~ 19:05	East	15:38	2.3			
			05:12	07:33		25.7		05:12 ~ 07:33	East	04:08	2.1			
29-Jul	Tue	5-Jun	19:08	13:12	3	25.9	Off	07:33 ~ 13:12	West	10:29	2.2			Δ
								13:12 ~ 19:08	East	16:10	2.0			
			05:13	08:04		25.83		05:13 ~ 08:04	East	04:35	2.0			
30-Jul	Wed	6-Jun	19:07	13:51	3	26.1		08:04 ~ 13:51	West	11:04	2.1			Δ
								13:51 ~ 19:07	East	16:42	1.8			
			05:14	08:35		25.93		05:14 ~ 08:35	East	05:03	1.9			
31-Jul	Thu	7-Jun	19:07	14:32	3	26.5		08:35 ~ 14:32	West	11:40	1.9	Non-fishing		
								14:32 ~ 19:07	East	17:17	1.5			

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time	:)	Non-fisl	hing day	
Date	Day	Lunar Calendar	Sunset Sunrise	water between sunrise	of operating	tem. * (°C/ last	Trawl fishing	Time	Current	Maximum	Current	West of Ogijima Island	East of Ogijima Island	Difficulty**
		Galoridai	Cumico	to sunset	times	year)	normig	Time	Direction	Time	Speed	Ogijima lolana	Ogijima lolana	
1-Aug	Fri	8-Jun	05:15 19:06	09:10 15:18	0	25.7 25.7					Non-fis	hing		
2-Aug	Sat	9-Jun	05:15 19:05	09:50 16:16	0	26 26.1	Off				Non-fis	hing		
3-Aug	Sun	10-Jun	05:16 19:04	10:41 17:29	0	26.07 25.8					Non-fis	hing		
4-Aug	Mon	11-Jun	05:17 19:03	11:44 18:51	0	26.07 25.8					Non-fis	hing		
5-Aug	Tue	12-Jun	05:18 19:02	05:58 12:55	0	26.07 25.6	Off				Non-fis	hing		
6-Aug	Wed	13-Jun	05:18 19:01	07:16 14:05	3	26.27 25.9		05:18 ~ 07:16 07:16 ~ 14:05 14:05 ~ 19:01	West East West	05:02 10:29 17:49	0.8 1.6 2.0			Δ
7-Aug	Thu	14-Jun	05:19 19:00	08:22 15:05	3	26.33 26.1		05:19 ~ 08:22 08:22 ~ 15:05 15:05 ~ 19:00	West East West	06:05 11:29 18:41	1.1 1.8 2.3			Δ
8-Aug	Fri	15-Jun	05:20 18:59	09:17 15:56	3	26.37 26.2		05:20 ~ 09:17 09:17 ~ 15:56 15:56 ~ 18:59	West East West	06:56 12:22 19:25	1.5 2.1 2.7			0
9-Aug	Sat	16-Jun	05:20 18:58	10:06 16:41	3	26.4 26.7	Off	05:20 ~ 10:06 10:06 ~ 16:41 16:41 ~ 18:58	West East West	07:39 13:09 20:05	2.3 2.9			0
10-Aug	Sun	17-Jun	05:21 18:57	05:23 10:50 17:23	3	26.6 27	Off	05:23 ~ 10:50 10:50 ~ 17:23 17:23 ~ 18:57	West East West	08:19 13:51 20:43	2.1 2.5 3.0			0
11-Aug	Mon	18-Jun	05:22 18:56	05:56 11:32 18:02	3	26.77 27.2		05:56 ~ 11:32 11:32 ~ 18:02 18:02 ~ 18:56	West East West	08:57 14:31 21:19	2.3 2.6 2.9			0
12-Aug	Tue	19-Jun	05:23 18:55	06:27 12:14 18:40	3	26.87 27.2		05:23 ~ 06:27 06:27 ~ 12:14 12:14 ~ 18:40	East West East	03:03 09:33 15:11	2.3 2.4 2.5			Δ
13-Aug	Wed	20-Jun	05:23 18:54	06:59 12:57	3	27.03 27.4		05:23 ~ 06:59 06:59 ~ 12:57 12:57 ~ 18:54	East West East	03:36 10:10 15:50	2.3 2.4 2.4			Δ
14-Aug	Thu	21-Jun	05:24 18:53	07:34 13:42	3	27.17 27.8	Off	05:24 ~ 07:34 07:34 ~ 13:42 13:42 ~ 18:53	East West East	04:10 10:49 16:32	2.2 2.4 2.1			Δ
15-Aug	Fri	22-Jun	05:25 18:52	08:13 14:34	3	27.2 28.1	Off	05:25 ~ 08:13 08:13 ~ 14:34 14:34 ~ 18:52	East West East	04:48 11:32 17:20	2.1 2.2 1.7	Non-fishing		Δ

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

				The time of slack	Number	Water		Bisan Seto tide	table (ope	rating time)		Non-fish	ning day	
Date	Day	Lunar Calendar	Sunset Sunrise	water between sunrise	of operating	tem. * (°C/ last	Trawl	Time	Current	Maximum Cu	urrent	West of Ogijima Island	East of Ogijima Island	Difficulty**
		Calcilidai	Sumse	to sunset	times	year)	listiling	Time	Direction	Time S	Speed	Ogijima islanu	Ogijina islanu	
16-Aug	Sat	23-Jun	05:26 18:51	09:00 15:36	0	27.17 27.7			•	No	on-fisl	hing		
17-Aug	Sun	24-Jun	05:26 18:49	10:00 16:59	0	26.97 27.2				No	on-fisl	hing		
18-Aug	Mon	25-Jun	05:27 18:48	11:18 18:41	0	26.87 26.9				No	on-fisl	hing		
19-Aug	Tue	26-Jun	05:28 18:47	05:37 12:51	0	27.1 26.9	Off			No	on-fisl	hing		
20-Aug	Wed	27-Jun	05:28 18:46	07:12 14:14	0	27.17 26.7				No	on-fisl	hing		
21-Aug	Thu	28-Jun	05:29 18:45	08:28 15:19	3	27.23 26.7		05:29 ~ 08:28 08:28 ~ 15:19 15:19 ~ 18:45	West East West	11:51	1.31.92.5			0
22-Aug	Fri	29-Jun	05:30 18:44	09:27 16:11	3	27.37 27		05:30 ~ 09:27 09:27 ~ 16:11 16:11 ~ 18:44	West East West	12:47	1.82.22.8			0
23-Aug	Sat	1-Jul	05:31 18:42	10:16 16:55	3	27.4 27.2	Off	05:31 ~ 10:16 10:16 ~ 16:55 16:55 ~ 18:42	West East West	13:32	2.22.43.0			0
24-Aug	Sun	2-Jul	05:31 18:41	11:00 17:34	3	27.6 27.5		05:31 ~ 11:00 11:00 ~ 17:34 17:34 ~ 18:41	West East West	14:11	2.52.53.0			0
25-Aug	Mon	3-Jul	05:32 18:40	05:56 11:39 18:08	3	27.73 28		05:56 ~ 11:39 11:39 ~ 18:08 18:08 ~ 18:40	West East West	14:44	2.62.52.8			0
26-Aug	Tue	4-Jul	05:33 18:39	06:26 12:15 18:38	3	27.77 28	Off	05:33 ~ 06:26 06:26 ~ 12:15 12:15 ~ 18:38	East West East	09:27	2.32.62.3			0
27-Aug	Wed	5-Jul	05:33 18:37	06:53 12:48	3	27.8 27.9		05:33 ~ 06:53 06:53 ~ 12:48 12:48 ~ 18:37	East West East	09:59	2.32.52.1			0
28-Aug	Thu	6-Jul	05:34 18:36	07:19 13:22	3	27.93 28.4		05:34 ~ 07:19 07:19 ~ 13:22 13:22 ~ 18:36	East West East	10:29	2.3 2.4 1.9			Δ
29-Aug	Fri	7-Jul	05:35 18:35	07:44 13:56	3	27.67 27.7		05:35 ~ 07:44 07:44 ~ 13:56 13:56 ~ 18:35	East West East	11:00	2.2 2.2 1.7	Non-fishing		Δ
30-Aug	Sat	8-Jul	05:35 18:33	08:13 14:35	0	27.47 27.2	Off		•	No	on-fisl	hing		
31-Aug	Sun	9-Jul	05:36 18:32	08:49 15:24	0	27.37 26.9				No	on-fisl	hing		

^{*}The upper row of water temperatures is the average for the last three years.

^{**}Difficulty in navigation: $\triangle \rightarrow \bigcirc \rightarrow \bigcirc$ (maximum)

NO	QUESTION	GUIDANCE	REFERENCE / GUIDANCE	Verified by Master / Comments
2.1	Is the latest Class Survey Status available and are all statutory certificates listed in the Class Survey Status valid, and is the vessel free of condition of class or significant recommendations and are all classification and statutory surveys not overdue?	The PDF copy of the class survey status that was evaluated during the inspection shall be attached to the inspection report by the inspector. Record Finding if the vessel has any condition of class, significant recommendation, and memorandum. The class survey status shall be available on board and should be dated not more than seven (7) days prior to the date of the inspection. Record a Finding if an up-to-date class survey status was not available on board. The Inspector should accept electronic certificates containing the features below: 1. Validity and consistency with the format and content required by the relevant international convention or instrument, as applicable 2. Protected from edits, modifications, or revisions other than those authorised by the issuer or the Administration 3. A unique tracking number, and 4. A printable and visible symbol that confirms the source of issuance (GUIDELINES FOR THE USE OF ELECTRONIC CERTIFICATES, 2016) The inspector may request the Master to demonstrate the validity of the electronic certificate following the instructions available on board the ship. If the Master fails to demonstrate, to the satisfaction of the inspector, that an electronic certificate meets the requirements, the inspector shall record a Finding. The IMSBC Code fitness certificate in accordance with IMSBC Code (2020 Edition) may be issued upon request from owners/ shipbuilders on voluntary basis from 1 January 2020. For cargoes listed in Table G1 (Cargo newly added and requirements on construction/equipment (IMSBC Code-4th amendment) as 'Group A and B' or 'Group By, IMSBC Code (2020 Edition) a fitness certificate will be issued in cases where ships comply with requirements in Table G1.	Vessel to have latest CLASS survey report prior inspection. Master to demonstrate validity of electronic certificates. SMS REFERENCE - FLEET PROCEDURES MANUAL - 2.0. SHEQ MANAGEMENT SYSTEM - SECTION 9 MEMO /ELECTRONIC CLEARANCE DOCUMENTS / CLASSNK -E CERTIFICATE / MARSHALL ISLANDS CERTIFICATE	
2.2	Has the vessel been provided with certificates of financial security for seafarers? (M)	Guide to Inspection From 18 January 2017, all ships which are subject to MLC have been required to carry and display on board two certificates confirming that financial security is in place for: (a) shipowners' liabilities for repatriation of crew, essential needs such as food, accommodation, medical care and up to four months' outstanding contractual wages and entitlements in the event of abandonment (Regulation 2.5, Standard A2.5.2 Paragraph 9) (b) contractual payments for death or long-term disability due to an occupational injury, illness or hazard set out in the employment agreement or collective agreement (Regulation 4.2, Standard A4.2.1 paragraph 1(b)) (FAQs: Maritime Labour Convention 2006 As Amended Financial Security Requirements - The Shipowners' Club, 2020)	Vessel to display both these financial security certificates on notice boards (Latest valid certificate MLC 2.5.2 / 4.2.1) SMS REFERENCE - PERSONNEL MANUAL/11 FINANCIAL SECURITY	
2.3	Can all crew communicate effectively in the working language of the ship? (V)	Record the common language and the level of English proficiency of the crew on board the vessel. On all ships, to ensure effective crew performance in safety matters, a working language shall be established and recorded in the ship's logbook. The company, as defined in regulation IX/1, or the Master, as appropriate, shall determine the appropriate working language. Each seafarer shall be required to understand and, where appropriate, give orders and instructions and to report back in that language. If the working language is not an official language of the State whose Flag the ship is entitled to fly, all plans and lists required to be posted shall include a translation into the working language. On ships to which SOLAS chapter I applies, English must be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communications as well as for communications on board between the pilot and bridge watchkeeping personnel, unless those directly involved in the communication speak a common language other than English. (SOLAS 74, 2020)	STCW - Section A- I/14 / SOLAS regulation V/14.3 /14.4 Personnel manual — chapter 3 - CONDITIONS OF EMPLOYMENT — section 2 mentions the working language on board is ENGLISH. Discuss this section with all officers and crew. Company has printed on the deck	

Section 2: Certificate and personnel management

logbook that English is the working language on board. Master shall ensure that working language (English) is	
language on board. Master shall ensure that working language (English) is	
Master shall ensure that working language (English) is	
that working language (English) is	
that working language (English) is	
language (English) is	
language (English) is	
recorded in MPA	
Official Logbook,	
nago 10 / applicable	
page 19 (applicable	
only for SINGAPORE flag	
SINGAPORE flag	
vessels).	
Ensure all bridge-to-	
bridge and bridge-to-	
shage and shage to	
communications as	
well as for	
communications on	
board between the	
pilot and bridge	
watch keeping	
personnel are only in	
English as per	
SOLAS regulation	
SOLAS regulation	
V/14.3 /14.4	
Ensure Safety,	
security and	
environmentally	
critical information,	
procedures and	
documentation are	
available / posted	
ONLY in English	
language. If any	
information is posted	
in any other in an	
language on notice	
boards or at any	
other leastion, some	
other location , same	
shall be removed.	
Ensure all day-to-day	
communications on	
board are only in	
ENGLISH.	
Ensure the	
instructions in	
SOLAS training	
manual, the fire	
safety operational	
booklet are in	
ENGLISH.	

2.4	Is the vessel's manning in	Guide to Inspection	Minimum safe manning document	
	compliance with the Safe Manning Certificate? (V)	Record in comments the actual and required manning of the vessel. Minimum safe manning is the level of manning that will ensure that a ship is sufficiently, effectively, and efficiently manned to provide safety and security of the ship, safe navigation and operations at sea, safe operations in port, prevention of human injury or loss of life, the avoidance of damage to the marine environment and property, and to ensure the welfare and health of seafarers through the avoidance of fatigue.	PERSONNEL MANUAL - 2.0. MANPOWER - SECTION 5 AND 6	
		Except in ships of limited size or propulsion power (which are not quantified), the determination of the minimum safe manning level should also consider the provision of qualified officers to ensure that it is not necessary for the Master or Chief Engineer to keep regular watches by adopting a three-watch system. (PRINCIPLES OF SAFE MANNING, IMO Resolution 1047(27), 2000)		
		Inspectors should review the crew list and, considering the level of operation at sea and port, assess if there are enough personnel on board to fulfil the following principles of safe manning: Maintain safe navigation by adequate manning of bridge throughout the passage. Mooring, tending mooring at port and unmooring the ship safely. Effective performance of cargo operation to ensure safe carriage of cargo during transit. Performance of on-board functions such as drills, ship security issues, equipment maintenance. Manning levels should be such as to ensure that the time and place available for taking rest periods are appropriate for achieving a good quality of rest.		
		If it is suspected that the manning levels are low, attention should be paid when answering the following questions where necessary (record Finding under the relevant questions): Navigation bridge, Q 3.8 and Q 3.9 Moorings Q 10.7 Engine Control Room Q 13.2, Q 13.5		
2.5	Do all personnel		STCW - Section A-	
2.0	maintain rest	Guide to Inspection	VIII/1	
	period/work hours and are the rest hours in compliance with STCW or MLC requirements? (V)	Record a Finding if: There are two or more consecutive violations by any seafarer on-board in any 30 day period. The vessel's manager has not been informed at least monthly of compliance levels on board. The work hour records are not to ILO format - Inspector should refer to the IMO/ILO guideline "Guidelines for the Development of Tables of Seafarers' Shipboard Working Arrangements and Formats of Records of Seafarers' Hours of Work or Hours of Rest".	Fitness for duty OJT -33 – WATCH SCHEDULE OJT 9 – REST	
		Each Administration shall, for the purpose of preventing fatigue:	HOURS	
		Establish and enforce rest periods for watchkeeping personnel and those whose duties involve designated safety, security and prevention of pollution duties in accordance with the provisions of section A-VIII/1 of the STCW Code.	PERSONNEL MANUAL –	
		All persons who are assigned duty as officer in charge of a watch or as a rating forming part of a watch and those whose duties involve designated safety, prevention of pollutions and security duties shall be provided with a rest period of not less than:	CHAPTER 3 – CONDITION OF EMPLOYMENT -	
		1. minimum of 10 hours of rest in any 24-hour period; and	SECTION 3.1 TO 3.7	
		 77 hours in any 7-day period. The hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length, and the 	Form 5.2.1 C – ITEM	
		 intervals between consecutive periods of rest shall not exceed 14 hours. Parties may allow exceptions from the required periods of rest in paragraphs 2.2 and 3 above provided that the rest 	Ensure records of	
		period is not less than 70 hours in any 7-day period. Exception from the weekly rest period provided for in paragraph 2.2 shall not be allowed for more than two consecutive	work/rest/overtime is	
		weeks. The intervals between the two periods of exceptions onboard shall not be less than twice the duration of the exception.	recorded on daily basis by each ship staff using	
		The hours of rest provided for in paragraph 2.1 may be divided into no more than three periods, one of which shall be at least	CSM.	
		six hours in length, and neither of the other two shall be less than one hour in length. The intervals between consecutive periods of rest shall not exceed 14 hours. Exceptions shall not extend beyond two 24-hour periods in any 7-day period.	Ensure Individual crew,	
		Exceptions shall, as far as possible, take into account the guidance regarding prevention of fatigue in section B-VIII/1.	departmental head and master sign the rest	
		(Regulation VIII/1 Fitness for duty STCW 2017)	hour form every month.	
			Ensure that the records	
			are properly filed on	

			board. The crew shall receive a copy of the records pertaining to them. The crew should have access to the CSM software. Ensure the rest hour records are accurately recorded by crosschecking other documents, such as deck logbook, engine logbook, GMDSS radio logbook, drill record and oil record book, etc. Seafarers shall be compensated with an adequate rest period if the normal period of rest is disturbed by calls, drills, unscheduled work or emergency	
2.6	Has the Master been provided with relevant ship handling training? (V)	A Master with less than 5 years sea time in rank must have attended a ship handling course. It is important that Masters and chief mates should have had relevant experience and training before assuming the duties of Master or chief mate of large ships or ships having unusual manoeuvring and handling characteristics significantly different from those in which they have recently served. Such characteristics will generally be found in ships which are of considerable deadweight or length or of special design or of high speed. (Section B-V/a, STCW 2017) The Master should have attended an approved ship-handling simulator course on an installation capable of simulating the manoeuvring characteristics of such a ship.	Master shall have the ship handling simulator course certificate PERSONNEL MANUAL - 5.0 CERTIFICATION MATRIX (DRY FLEET)	
2.7	Have officers and ratings responsible for cargo handling on ships carrying dangerous and hazardous substances in solid form in bulk undergone formal training (v)	Guide to Inspection Guidance regarding training of officers and ratings responsible for cargo handling on ships carrying dangerous and hazardous substances in solid form in bulk. Training should be divided into two parts, a general section on the principles involved and a section on the application of such principles to ship operation. All training and instruction should be given by properly qualified and suitably experienced personnel and cover at least the subjects given in paragraphs 2 to 14 of section B/V b of STCW. Shipboard application: Class 4.1 - Flammable solids Class 4.2 - Substances liable to spontaneous combustion Class 4.3 - Substances which, in contact with water, emit flammable gases Class 5.1 - Oxidizing substances Class 5.1 - Toxic substances Class 7 - Radioactive Class 8 - Corrosives Class 9 - Miscellaneous dangerous substances and articles RightShip recommends that all officers and ratings responsible for the carriage and care of dangerous and hazardous substances in solid form in bulk, including Material Hazardous Only in Bulk (MHB), have received appropriate training to comply with the STCW Convention and Code's 2010 Manila Amendments. The 'trickle-down training' approach, a non-formal method of educating officers where one officer trains another, is not deemed acceptable.	Deck Officers and ratings to have received appropriate training to comply with the STCW Convention and Code's 2010 Manila Amendments. All officers and crew to undergo KARCO training on dangerous goods	

2.8		NA	NA (WE DO NOT	
2.0		NA NA	`	
	Have officers and		LOAD DANGEROUS	
	ratings		CARGO IN	
	responsible for		PACKAGED FORM)	
	cargo handling on		.,,	
	ships carrying			
	dangerous and			
	hazardous			
	substances in			
	packaged form			
	undergone formal			
	training (v)			
2.9	Has an SMS		Company drug and	
	policy and	Outdo to become the	alcohol policy to be	
	procedure been	Guide to Inspection	posted	
	established to	The days and elected policy should define who it applies to In most circumstances this should be sympton in the organisation	p = 0.00	
		The drug and alcohol policy should define who it applies to. In most circumstances this should be everyone in the organisation,	December of	
	enforce the	including contractor personnel. The company should ensure that its contractors' policies on drugs and alcohol align with company	Records of	
	STCW	policy. There may also be reasons to make reference to safety-critical positions/roles or safety-critical work/operations. It should	Unannounced shore	
	Convention and	also specify what substances or categories of substance are prohibited under the policy. This should include any psychoactive	tests arranged by	
	Code	substance (i.e. affecting cognitive function), regardless of circumstances of use. Individual countries and jurisdictions may have	Company	
	requirements for	differing regulations on the import, stocking,		
	I -	possession, or use of drugs or alcohol, and there may be legal requirements for testing. The policy will need to take this into account	Dra joining madical	
	the purpose of	and make appropriate stipulations and requirements, especially with respect to prohibited behaviours, sampling and testing. These	Pre-joining medical	
	preventing drug	requirements should be made clear to personnel. The policy should also refer to those situations where the use of substances	tests	
	and alcohol	is permitted, specifying what the company will allow and the company's expectations and requirements with respect to usage		
	abuse? (V & M)	and fitness to work. Local regulations should always be considered and should take precedence when defining specific policy	Monthly onboard test	
	,	parameters. Permitted use may include prescription drugs brought onboard a ship, with evidence of a valid prescription from a	by Master – FORM	
		qualified registered medical practitioner or issued from the ship's medical store or the terminal's clinic.	3.2.15	
			3.2.15	
		This does not preclude a company from having a zero-alcohol and a zero-drug policy on company premises, ships, etc.		
			PERSONNEL	
		A drug and alcohol policy should set out clear and consistent expectations regarding conditions of employment, employee	MANUAL - 7.0. Drug	
		behaviour and the consequences of not meeting these expectations. It is recommended that companies set out in their policy a	Alcohol Policy	
		clear and consistent legally compliant stand-down procedure for those cases where the drug and/or alcohol test is confirmed	rucciici i ciicy	
		positive. Employees are expected to follow stand-down orders. Depending on company, role and situation, this could mean	11	
		standing down from all duties, or standing down from safety critical duties only.	Unannounced tests	
			for Master carried	
		The policy should highlight and describe those situations or behaviours where disciplinary or other action will be taken, up to and	out by CE.	
		including termination of employment.	•	
			Records to be filed in	
		Typical examples may include:		
		Using, distributing/selling, or possessing alcohol or drugs at work other than where use	sharepoint.	
		is permitted.		
		 Non-compliance with Standards of Training, Certification and Watchkeeping (STCW) guidance. 		
		Being under the influence at work, or otherwise unfit for work, due to any		
		prohibited substance.		
		The complying mandana de minoració giron ante a pociar o teorrocaia.		
		Refusal to test, interfering with or obstructing a sampling and testing process or otherwise failing to cooperate or comply.		
		Consequences should be consistent with local company policy and the law. Since many companies will have operations spanning		
		different countries, it may be necessary to adapt the drug and alcohol policy according to legal advice from those jurisdictions.		
		Companies should have a fair review process, ensuring personnel can challenge a positive result. It is recommended to choose		
		drug and alcohol testing programmes with the most appropriate technology for the specific type of organisation. Considerations		
		may include available tests, cost, gender sensitivity, any medical advice, availability of competent persons and laboratories to carry		
		out relevant tests, and the practicalities of the sampling processes.		

		Specific legal requirements of the jurisdiction may determined requirements are met, the procedures should include: Employees must consent to being tested for drugs are employer has grounds for testing, they should be made with, and that testing procedures and analyses are accordinate process. This must include adequate training of all particular of custody process, validated testing methods of positive) samples. Unannounced testing can be done at the workplace as party – for both drugs and alcohol. Unannounced alcohol tests conducted on-board ship Manager or the company. Initiation by the company is Terminal Manager.	and alcohol for practical and legal reasons de aware that they may face disciplinary processes, to ensure samples cannot be curate. It is recommended that comparties from sample collection to issuing the for laboratories, and an MRO process for and can be done by a trained company cost or in terminals can be initiated by the second control of the sample control of the sam	s. Should they refuse when an action. e contaminated or tampered hies follow a legally defensible the validated results, a robust non-negative (laboratory collecting officer or an external ship's Master, the Terminal		
		The following types of drug and alcohol screening at a m	ninimum are recommended:			
		Types of testing	Frequency			
		Pre-employment Pre-employment	As required			
		For cause/reasonable suspicion/post- accident or incident	As required			
		*Unannounced random/periodical On	ice per year OR sufficient to serve as a deterrent to misuse			
		Return to work/post-treatment	As required			
		Legal requirements: Depending on jurisdiction there may be legal prohibitions legal requirements for drug and alcohol testing. Non-command the employer. Since these policies and testing progrational safety and health, and data privacy laws, it is of a legal professional, drug and alcohol programme professional. (Reference: OCIMF Gu	npliance with these rules may have legal or ammes have implications under human rig is strongly recommended that they are de	onsequences for the employee ghts, employment, criminal, veloped under the guidance and an occupational health or		
2.10	Are the limits of			_	Company drug and	
2.10	blood and breath alcohol contents in the drug and alcohol policy equal to, or less than the STCW mandatory alcohol	Each Administration shall establish, for the purpose of palcohol concentration (BAC) or 0.25 mg/l alcohol in the for masters, officers and other seafarers while performing	breath or a quantity of alcohol leading t	o such alcohol concentration ne environmental duties.	alcohol policy PERSONNEL MANUAL - 7.0. Drug Alcohol Policy Company	
	limit? (V&M)		(Section B-VIII/ 1, Guidance regardii	ig fittless for duty, 51CW 2010)	requirements 0.04% BAC	
					Ensure alcohol meter is operational and vessel has spare sensor onboard	
2.11	When was the date of the last recorded unannounced on-				Monthly onboard test by Master - – FORM 3.2.15	

	board group alcohol test? (M) Record the date		Unannounced tests for Master carried out by CE PERSONNEL MANUAL - 7.0. Drug Alcohol Policy Records to be filed in sharepoint. Company drug and alcohol policy	
2.12	When was the date of the last unannounced drug test undertaken by an external agency? (M) Record the date		Unannounced shore drug tests (Company will decide on the vessel on random basis) PERSONNEL MANUAL - 7.0. Drug Alcohol Policy Company drug and alcohol policy.	
2.13	Is the officer matrix accurately completed and does it reflect the information on officers and engineers on board the vessel at the time of inspection? (V)	Inspector must record a Finding unless the crew change(s) took place more than seven days before the date of the inspection. If there is a documented procedure in place and senior officers have been transfered between sister ships, the inspector must not record a Finding for a lack of overlap or parallel sailing period. The vessel's manager shall provide sufficient overlap for Master / Chief Officer and Chief Engineer / Second Engineer to ensure that they are familiar with the vessel's operation before taking charge, and both senior officers and senior engineers are not changed at the same time. The vessel's manager is responsible to maintain up-to-date records relating to the officers and engineers on board the vessel at the time of inspection. The inspector should have a copy of the updated officer matrix and check the tour on board, qualifications and experience of officers and engineers against the crew list and seaman books. The actual details of Master, Chief Engineer, Chief Officer and Second Engineer / First Engineer must be checked against the data contained in the matrix and a Finding shall be recorded for inaccurate updates. Random checks must be made of the actual records applicable to junior officers and junior engineers. A seafarer may hold a Certificate of Receipt of Application (CRA) and a valid national STCW Certificate, for a period not exceeding three (3) months while an application for the STCW Endorsement Certificate is being processed. The inspector shall check the validity of CRAs.	PERSONNEL MANUAL - 4.0. PROCEDURE FOR CREW SIGNING ON AND OFF VESSELS -SECTION 7 Obtain officer matrix from crewing department (prior RIGHT SHIP inspection) Master to crosscheck the contents of the matrix Ensure COE /ROA are valid	
2.14	If ECDIS was fitted on board, have the Master and Deck Officers completed Generic training and type-specific familiarisation? (V)		STCW certificate shall specify ecdis training Company ECDIS familiarization form – NAV B4 – Completed prior taking over first watch	

Т				
		Guide to Inspection	CHARTWORLD / CBT to be completed	
		Inspector to record how the familiarisation training was carried out. ECDIS familiarisation should be provided to all on-signing deck officers before they take an independent navigation watch, and each time they join any vessel. (Recommendations on Usage of ECDIS and Preventing Incident, 2020) The STCW Code contains requirements for approved training on ECDIS. In cases where the approved training has not been completed, a limitation shall be included on the certificate and endorsements issued to the seafarer.	by all deck officers including MASTER All deck officers shall be competent in the use of onboard	
		Where such a limitation is not specified, the certificate and endorsements are evidence of having successfully completed the required approved training and that the standard of competence has been achieved.	ECDIS.	
		No requirement exists for the approved training on ECDIS equipment to be type specific. The knowledge, understanding and proficiency required to be demonstrated is generalized to ensure seafarers have the necessary skills for basic operation of all types of equipment.		
		In accordance with regulation, I/14, companies are responsible for ensuring that seafarers employed on their ships are familiarized with the installed equipment, including ECDIS. It is agreed that seafarers required to have training in the use of ECDIS: 1. Should not be required to provide documentation of training in ECDIS that is specific to the installed equipment; and 2. Are required to be familiarised with the ECDIS equipment installed on board.		
		(STCW.7/Circ.24/Rev.1, 2017) Deck officers who hold a Certificate of Competency with validity over 01 January 2017, in accordance to regulations II/1 and II/2 of the annex to the STCW-Convention and without an ECDIS limitation, fulfil the requirement of generic ECDIS-training.		
		The vessel's manager can consider a wide variety of options for achieving familiarisation both on-board and ashore. These include but are not limited to: Shore based manufacturer training followed by installation-specific familiarisation onboard. Independent training on specific systems followed by installation specific familiarisation. Computer Based Training (CBT), followed by installation-specific familiarisation on-board. Internet / Intranet Based Training (eLearning) followed by installation specific Familiarisation on-board. On-board training by appropriately trained crew or training personnel. Manufacturer provided training mode on the ECDIS, followed by installation-specific familiarisation on-board. Company bridge procedures and manuals.		
		Regardless of the method(s) used, it is essential that all watch keeping officers are competent in the use of the on-board ECDIS prior to taking charge of a navigational watch and remain so thereafter. (Industry Recommendations for ECDIS Familiarisation, 2012) Trickle-down familiarisation, such as one crew member training another, is not deemed acceptable. This approach is unstructured and often results in an incomplete understanding of the equipment's capabilities, particularly the functions that are less frequently used.		
2.15 Doe	es the ship's		Electronic engine	
man	anager provide ue-added	Guide to Inspection	training	
train beyo	training courses beyond the STCW to its on-board	Record any recent additional training conducted. The vessel's management is responsible for identifying additional training needs, whether they apply to a specific individual or vessel or to the entire fleet. The training technique may involve classroom training or computer-based training. However, a course's content shall address and comply to industry requirements.	Makers technical bulletins.	
	icers? (V)	Bridge Resource Management, Engine Room Resource Management, operation and maintenance of engine- specific types, injectors, exhaust valves, electronic fuel valves, electronic governors, dual fuel systems, fuel pump maintenance, boiler automation, plan maintenance system, environmental training, and hydraulic machinery are examples of additional training.	On MAN engines we have remote monitoring by MAN	
		The Company should establish and maintain procedures for identifying any training which may be required in support of the SMS and ensure that such training is provided for all personnel concerned. (ISM Code 2018)	KARCO training	
		The company should establish a procedure to provide company-specific additional training for all ranks. The procedure should specify the type of training and frequency of refresher training.	SHEQ Form 3.2.1 / 3.2.3	