

PILOTAGE ADVISORY COMMITTEE WORKING GROUP

Training, Assessment and Examination Arrangements for Upgrading from Class IIA to Class I Pilots

Purpose

The purpose of this paper is to seek members' comments and advice on training, assessment and examination arrangements for upgrading from class IIA to class I pilots under the framework endorsed at the Pilotage Advisory Committee (PAC) meeting held on 18 January 2013¹.

Background

2. The latest Pilotage (Amendment) Order came into operation on 23 December 2016 (hereafter "the Amended Order"). Classes of pilots were amended from a five-tier structure (4 levels of class II and 1 level of class I) to a seven-tier structure (6 levels of class II and 1 level of class I).

3. The training, assessment and examination arrangements for apprentice and class II pilots (up to class IIA pilot) under the Amended Order were endorsed by the Pilotage Authority after consulting the Pilotage Advisory Committee (PAC) on 29 June 2016² vide PAC paper no. 5/2016³.

4. Numerous meetings on details of training, assessment and examination arrangement for upgrading from class IIA to class I were held between the Marine Department (MD) and Hong Kong Pilots Association Limited (HKPA) since the endorsement of framework in 2013.

5. Consultation on the requirements for upgrading from class IIA to class I pilots was made at the PAC Working Group (PACWG) meeting held on 14 December 2015 vide PACWG paper no. 5/2015. No negative feedback has been received on the content for simulation training, practical vessel training, practical assessment and syllabus for oral examination. MD had later added the new elements on "complete blackout" and "near submarine infrastructures" under item (xiii) in the oral examination syllabus (*Annexes I and II*).

¹ https://www.mardep.gov.hk/en/aboutus/pdf/pac_m130118.pdf

² https://www.mardep.gov.hk/en/aboutus/pdf/pac_m160629.pdf

³ https://www.mardep.gov.hk/en/aboutus/pdf/pacp5_16.pdf

6. At the PACWG meeting held on 31 October 2018, consensus was reached on two of the three occasions of joint practical examination vide PACWG Paper No. 1/2018⁴, these two occasions were:

- (i) piloting and berthing a container ship with LOA >350m, but need not be >364m, to Kwai Chung terminal on one occasion; and
- (ii) Unberthing and piloting a container ship with LOA >350m, but need not be >364m, from Kwai Chung terminal on one occasion.

7. In respect of the third occasion proposed by MD,

“piloting and berthing a dry cargo/bulker ship with LOA >350m to any dry cargo vessel/bulker berth on one occasion.*

note: If a dry cargo/bulker ship of LOA >350m is not available within 3 months prior to the date of upgrading, the candidate may take the practical examination with a dry cargo/bulker ship of less than but as far as practical close to 350m in length.”*

as the CLPTSK berth was the only berth suitable for the above examination, the meeting agreed to put it on hold until consent from the berth operator could be obtained.

Latest development

8. MD met with the operator of CLPTSK berth, CLP Power Hong Kong Limited (CLPHK), explaining the change in legislation and needs to use the berth for joint practical examination⁵.

9. CLPHK took a positive view and understood that the proposal is to ensure the safe operation of cape-size vessel through a more stringent training path and examination process; manpower during examination would be no less than the current normal operation. As such, there should be no additional risk to their berth and the vessel; CLPHK believed the new system would bring positive improvement to their vessels' safety in the long run and gave their

⁴ https://www.mardep.gov.hk/en/aboutus/pdf/pacwgp1_18.pdf

⁵ See attached presentation materials vide *Annex IV* for reference.

support in principle.

10. Further discussion with HKPA has suggested that for the practical examination on container ships, there was no need to specify “*but need not be >364m*”.

11. It was noticed that the term “Kwai Chung terminal” was used in the existing syllabus. While it matches with the term “Kwai Chung berth” (KC berth) that is widely used in the berthing guidelines, it does causing confusion with the newer term “Kwai Tsing terminal/basin”. In order to precisely indicate the applicable berths, it is suggested aligning with the berthing guidelines and use the term “any Kwai Chung berth”; hence, the practical examination on container ship should be:

- (i) piloting and berthing a container ship with LOA >350m to any Kwai Chung berth on one occasion; and
- (ii) Unberthing and piloting a container ship with LOA >350m from any Kwai Chung berth on one occasion.

Proposal

12. In consideration of the discussions and consensus reached on the training, assessment and examination arrangements for upgrading from class IIA to class I pilots, in addition to the content for simulation training, practical vessel training, practical assessment and syllabus for oral examination previously endorsed by PACWG at ***Annexes I and II***, the content for the joint practical examination is proposed as follows, reproduced at ***Annex III***:

- (i) *piloting and berthing a container ship with LOA >350m to any Kwai Chung berth on one occasion;*
- (ii) *Unberthing and piloting a container ship with LOA >350m from any Kwai Chung berth on one occasion; and*
- (iii) *piloting and berthing a dry cargo/bulker ship with LOA >350m* to any dry cargo /bulker berth on one occasion.*

*note *: If a dry cargo/bulker ship of LOA >350m is not available within 3 months prior to the date of upgrading, the candidate may take the practical examination with a dry cargo/bulker ship of less than but as far as practical close to 350m in length.”*

Advice sought

13. Members' comments and advice are sought on the content for simulation training, practical vessel training, practical assessment and syllabus for oral examination at *Annexes I and II*; and the proposed joint practical examination for upgrading from class IIA to class I pilots in paragraph 11 above (*Annex III*).

Pilotage Unit
Marine Department
September 2019

Proposed Arrangements for Training, Assessment and Examination for Upgrading from Class IIA to Class I Pilots

Pilot Class	Maximum Length	Training, Assessment and Examination for Upgrading to Class I	
II A	350m	Simulation training (MD and Pilots)	Simulation training should comprise of at least 6 exercise scenarios, include piloting, berthing, anchoring and crisis management of heavy laden bulkers, tankers and vessels with LOA >350m or a length appropriate to the role played in various locations within HK waters. ^{note 1}
		2 practical vessel-training (Pilots)	Piloting & berthing a ship of any type with LOA >350m but need not be ≥364m ^{note 2} on 2 occasions.
		1 practical assessment (Pilots)	Piloting & berthing a ship of any type with LOA >350m but need not be ≥364m ^{note 2} on 1 occasion.
		3 joint practical examination (MD and Pilots)	<i>(Please refer to the proposal at Annex III to this paper)</i>
		Oral Examination (PAC)	As per <i>Annex II</i> to this paper
		Experience required	As required under Schedule 3 to the Pilotage Order, Cap. 84C

Note 1 : Adjusted to match with endorsement for other classes made at the PAC meeting held on 29 June 2016.

Note 2 : Deleted as per latest discussion with HKPA.

**Proposed Examination Syllabuses for
Upgrading from Class IIA to Class I Pilot**

Practical Examination

(Please refer to Annex III to this paper)

Oral Examination

A comprehensive knowledge of -

- (i) Tidal streams, depths and shoals throughout Hong Kong waters;
- (ii) Characteristics of all lights, buoys, beacons, bridge lighting system and harbour facilities throughout Hong Kong waters;
- (iii) Depths and scope of berth at all Government mooring buoys;
- (iv) Limits of local pilotage areas including prohibited areas, anchorages and areas of restriction of any kind;
(These will be indicated by the candidate on a plan of Hong Kong waters.)
- (v) Berthing and unberthing at various wharves, piers, buoys, etc. in Hong Kong under the influence of wind, current and tide;
- (vi) Manoeuvring behaviour of the types of ships expected to be piloted and the limitations imposed by particular propulsion and steering systems;
- (vii) Use and limitation of various types of tugs;
- (viii) The bridge equipment and navigational aids used for navigation, i.e. radar, Automatic Identification System (AIS), Electronic Chart Display and Information System (ECDIS), etc.;
- (ix) Systems of radio navigational warning broadcasts in Hong Kong and the type of information broadcast;
- (x) International Regulations for Preventing Collisions at Sea 1972 as amended, port regulations and pollution prevention rules;

- (xi) Use of VHF in accordance with the International recognized standards;
- (xii) Hong Kong Merchant Shipping Notice, Hong Kong Merchant Shipping Information Notes and Marine Department Notices (MDN);
- (xiii) Handling emergency conditions, i.e. collision with other vessel, grounding, loss of steering, loss of propulsion, failure of vital systems and automation, complete blackout ^{note 1} etc. in a narrow channel, fairway, or near submarine infrastructures ^{note 1}, and
- (xiv) Knowledge required in the examination syllabus of class II Pilots.

Note 1: newly added components

Other Requirements

Candidate is required to produce the following training records to the Pilotage Authority:

- (i) Simulation training;
- (ii) 2 practical vessel training;
- (iii) 1 practical assessment; and
- (iv) any other training and courses attended.

**Proposed Joint Practical Examination for
Upgrading from Class IIA Pilot to Class I Pilot**

- (i) piloting and berthing a container ship with LOA >350m to any Kwai Chung berth on one occasion;
- (ii) Unberthing and piloting a container ship with LOA >350m from any Kwai Chung berth on one occasion; and
- (iii) piloting and berthing a dry cargo/bulker ship with LOA >350m* to any dry cargo /bulker berth on one occasion.

note *: If a dry cargo/bulker ship of LOA >350m is not available within 3 months prior to the date of upgrading, the candidate may take the practical examination with a dry cargo/bulker ship of less than but as far as practical close to 350m in length.

Presentation Materials on CLPTSK berth delivered to the operator of CLPTSK berth, CLP Power Hong Kong in May 2019

Pilot's Practical Examination

At CLPTSK berth

Pilotage Advisory Committee (PAC)

- Established under the Pilotage Ordinance, Cap.84
- Director of Marine shall be the Pilotage Authority
- 17 PAC members appointed by CE
- Ms. Caroline Lu represents the interest of dry bulk cargo terminal operators

Functions of the PAC

Advise the Pilotage Authority (PA) on any matter which is connected or incidental to :

- The exercise of PA's powers, or the performance of PA's duties under Cap.84;
- The general regulation or control of pilotage in Hong Kong.

CLPTSK berth

- China Light & Power Station(Tap Shek Kok)
- Critical infrastructure
- For sizable bulk carrier with deep draught (16.8m)
- Route through Ma Wan
- Subject to tidal current effects

Examination - Bulk Carrier

class IIA to class I pilot

Background

Pre-amended Order – before 23 December 2016 (*Old System*)
Classes of Pilot – IID, IIC, IIB, IIA and I

Amended Order – after 23 December 2016 (*New System*)
Classes of Pilot – IIF, IIE, IID, IIC, IIB, IIA and I

Pilotage Order

Cap.84C Schedule 2

Classes of Pilotage
Max. length of ship could be piloted by each class

	IIF	IIE	IID	IIC	IIB	IIA	I
Old	-	-	150m	165m	220m	260m	any
New	160m	180m	210m	250m	300m	350m	any

Matching classes

Pilotage Order

Cap.84C Schedule 2

Practical Examination

Classes of Pilotage
Max. length of ship could be piloted by each class

	IIIF	IIIE	IID	IIIC	IIIB	IIA	I
Old	-	-	150m	165m	220m	260m	any
New	160m	180m	210m	250m	300m	350m	any

matching classes

Pre-amended Order

Old System

- Since 1995
- 3 occasions of practical examination for upgrading from class IIA to class I
- As length of ship increased over time, the jump from 260m capping at class IIA to any length at class I caused concerns
- Pilots exercised in-house measures in job assignments

Practical Examination

Pre-amended Order

3 occasions of berthing

- 1 x container vessel
- 1 x oil tanker
- 1 x dry cargo/bulker of not less than 260m³ in length

If a dry cargo/bulker of not less than 260m is not available within 3 months prior to the date of upgrade, the candidate may take the practical examination with a dry cargo vessel/bulker of less than but as far as practical close to 260m in length

Apollo



Length : 225m
Draft : 13 ~ 14m

IVS Pinotage




Length : 225m
Draft : 13 ~ 14m

Berthing Guidelines

CLPTSK berth

030	Berthing	LOA: Max 230m
Draft:	Max 15m (min 15% UKC)	
Time:	Day @ berth. Day light HW+1 to HW+3 @ Mawan.	
Tugs:	3 incl 1 escort @ Mawan. From URMA: 3 incl 1 escort from URMA to berth.	
Remarks:	2 pilots. Starboard side to.	

Lady Kadoorie



Length : 288.9m
Arrival Draft : 16.8m

Berthing Guidelines

CLPTSK berth

040	Berthing	LOA: Max 280m
Draft:	Max 16.8m (min 15% UKC)	
Time:	Day @ berth. Day light HW+1 @ Mawan. 1 st Jun – 15 th Oct : Day light HW+0.5 @ Mawan.	
Tugs:	4 tugs incl 1 escort from Gi & 1 @ Mawan to berth. From URMA: 4 tugs incl 1 escort from URMA to berth.	
Remarks:	2 pilots. Starboard side to.	

Current Situation

Practical Examinations

93 serving Class I pilots

Number of Pilots under Pre-amended Order (old system)

- Class IIB - 4
- Class IIA - 5

Number of Pilots under Amended Order (new system)

- Apprentice - 8
- Class IIF - 1
- Class IIE - 3

Amended Order (2016)

New System

- Pilotage Order, Cap.84C, Amended in 2016
- Changed from 4 (IID to IIA) to 6 (IIF to IIA) levels of class II
- More progressive in classes vs length
- Simulation Training at all classes
- More assessments/Examinations under PAC

Pilotage Order

Cap.84C Schedule 2

Practical Examination

Classes of Pilotage
Max. length of ship could be piloted by each class

	IIF	IIE	IID	IIC	IIB	IIA	I
Old	-	-	150m	165m	220m	260m	any
New	160m	180m	210m	250m	300m	350m	any

matching classes

Practical Examinations

Class	1	2	3	4	5	6	7
Old	<i>matching length</i>		IID	IIC	IIB	IIA	I
			150m	165m	220m	260m	any
New	App	IIF	IIE	IID	IIC	IIB	IIA
	160m	180m	210m	250m	300m	350m	any

Practical Examinations

Year class		1	2	3	4	5	6	7
Old	App	IID	IIC	IIB	IIA	I		
		150m	165m	220m	260m	any		
New	App	IIF	IIE	IID	IIC	IIB	IIA	I
		160m	180m	210m	250m	300m	350m	any
matching length								

Practical Examinations

Year class		1	2	3	4	5	6	7
Old	App	IID	IIC	IIB	IIA	I	*	*
		150m	165m	220m	260m	any		
New	App	IIF	IIE	IID	IIC	IIB	IIA	I
		160m	180m	210m	250m	300m	350m	any
pilot	4	1	1	1	0	*	*	*
PAC & pilot	0	0	0	0	3			
pilot	3	1	1	0	1	1	1	
PAC & pilot	1	0	0	1	0	0	3	
matching length								

Safe Berthing

Safe Examination

Berthing Guidelines

CLPTSK berth – practical examination ?

040	Berthing	LOA: Max 280m
Draft:	Max 16.8m (min 15% UKC)	
Time:	Day @ berth. Day light HW+1 @ Mawan. 1 st Jun – 15 th Oct : Day light HW+0.5 @ Mawan.	
Tugs:	4 tugs incl 1 escort from GI & 1 @ Mawan to berth. From URMA: 4 tugs incl 1 escort from URMA to berth.	
Remarks:	2 pilots. Starboard side to.	

+ Coach + Examiner

Practical Examinations

Year class		1	2	3	4	5	6	7
Old	App	IID	IIC	IIB	IIA	I		
		150m	165m	220m	260m	any		
New	App	IIF	IIE	IID	IIC	IIB	IIA	I
		160m	180m	210m	250m	300m	350m	any
pilot	4	1	1	1	0			
PAC & pilot	0	0	0	0	3			
pilot	3	1	1	0	1	1	1	
PAC & pilot	1	0	0	1	0	0	3	
matching length								

Practical Examinations

There should not be any significant increase in risk if PAC
Attend to the practical examination for upgrading
From class IIA to class I

Year class		1	2	3	4	5	6	7
New	App	IIF	IIE	IID	IIC	IIB	IIA	I
		160m	180m	210m	250m	300m	350m	any
pilot	3	1	1	0	1	1	1	
PAC & pilot	1	0	0	1	0	0	3	
matching length								