

LOCAL VESSELS ADVISORY COMMITTEE

**Amendments to the Requirements for the Authorization of
Approved Persons issuing Gas Free Certificates**

Purpose

The purpose of this paper is to seek members' endorsement on the proposed amendments to the academic or professional qualification, working experience and relevant training requirements for a person seeking approval of the Director of Marine ("Director") to issue gas free certificates.

Background

2. Section 40 of the Shipping and Port Control Ordinance, CAP 313 and Section 41 of the Merchant Shipping (Local Vessels) Ordinance, CAP 548 stipulate that a written permission of the Director is required before any repair to a vessel can be carried out. The standard written permission is issued by the Director with a condition that a gas free certificate for certifying the state of a particular space that hot work can be carried out safely shall be issued by a person approved by the Director under CAP 295.

3. At present there are ten (10) persons on the list who are approved by the Director under Regulation 21 of the Dangerous Goods (Shipping) Regulations, CAP 295C for issuing gas free certificates ("Approved Person"). The first Approved Person on the current list was authorized in 1976, and after 1996, it was until September 2009 that a new Approved Person was authorized.

4. The ship-repairing industry has complained that there is a shortage of active Approved Persons in the market. This shortage had sometimes resulted in delays in ship repair schedules. The ship-repairing industry requests that the number of Approved Persons be increased.

5. It is a general opinion that the main obstacle for a person seeking approval to become an Approved Person is the lack of training opportunities to meet the relevant training requirements stipulated by the Marine Department ("Department"). The current requirement is that, depending on the relevant work experiences of a person seeking approval as an Approved Person, the person has to complete either twelve (12) or twenty-four (24)

substantial gas free certification assignments under the supervision of an Approved Person. After acquiring the required number of gas free certification assignments, the person may sit for an assessment by the Department which if passed will enable the person to be approved by the Director as an Approved Person. It is generally agreed that it is difficult to find an Approved Person willing to assist a new entrant to complete the required gas free certification assignments.

Proposal

6. In an attempt to alleviate the problem caused by the shortage of Approved Persons and on the understanding that the major hurdle for new entrants into the market is the lack of training opportunities available to them, the Department proposes to amend the requirements for the authorization of Approved Persons. The amended authorization requirements are detailed in the document titled “Guidance notes for seeking approval as Approved Persons to issue gas free certificates” (“Guidance Notes”) in *Appendix A*. The details of the proposed amendments and the reasons for change are provided in the table in *Appendix B*.

7. It is emphasized that the proposed training arrangement mentioned in Paragraph 5 of the Guidance Notes is to provide an alternative route for new entrants to acquire the requisite training. The gas free certification service provided by the Department in association with new entrants is solely for training purposes. It is not the intention of the Department to offer the gas free certification service as a standard service to the industry.

Consultation

8. The Guidance Notes had been discussed in the Sub-committee on Safety for Works on Vessels and was endorsed by the sub-committee on its 5th meeting on 28 July 2009. Practicing Approved Persons have also been consulted and their views have been incorporated in the Guidance Notes where appropriate.

Recommendation

9. The Guidance Notes in *Appendix A* is recommended for members’ endorsement.

Shipping Division
Marine Department
October 2009



**Guidance notes for seeking approval as
Approved Persons to issue gas free certificates**

The following guidance notes lay down the requirements leading to the authorization or revalidation, by the Director of Marine (“Director”), of a person to issue gas free certificates under Regulation 21 of the Dangerous Goods (Shipping) Regulations, Chapter 295C of the Laws of HKSAR. Such a person so authorized is hereafter known as an Approved Person.

2. Effective from [a date to be decided], a candidate who applies to the Director for authorization as an Approved Person must satisfy the following conditions:
 - (a) Holds an acceptable academic or professional qualification (paragraph 3);
 - (b) has the relevant working experience (paragraph 4);
 - (c) has completed the relevant training requirement (paragraph 5); and
 - (d) passes an assessment conducted by Marine Department (“MD”) (paragraph 6).
3. *Acceptable Academic or Professional Qualifications*
 - (a) A relevant Degree, Higher Diploma, Higher Certificate, Ordinary Diploma or Ordinary Certificate in an engineering discipline (i.e. Chemical, Marine or Mechanical) or in nautical science recognized by the Director; OR
 - (b) A Class 2 or above seagoing Certificate of Competency or License, recognized by the Director, as either Deck Officer or Marine Engineer Officer; OR
 - (c) An Associate member of the Hong Kong Institution of Engineers in a relevant discipline (i.e. Gas or Chemical).

4. *Relevant Working Experience*

Any following working experience are considered relevant:

- (a) Not less than twelve (12) months sea service experience on tankers (petroleum, gas or chemical) with supervisory responsibility for gas-freeing operation.
- (b) Not less than twelve (12) months experience in oil terminal operation or shore-based oil storage facilities with supervisory responsibility for gas-freeing operation.

Any following working experience plus the specified training are considered relevant:

- (c) Not less than twelve (12) months sea service experience on vessels (but not meeting the condition in paragraph (a)) and successful completion of the “Tanker Familiarization Course” offered by the Maritime Services Training Institute (“MSTI Course”) or a STCW complying specialized training course leading to the “Dangerous Cargo Endorsement” (Petroleum or Liquefied Gases or Liquid Chemicals) (“STCW Course”) recognized by the Director.

- (d) Not less than three (3) years experience at a supervisory level in a shipyard or dockyard specifically responsible for shipboard gas free operation and successful completion of the MSTI Course or STCW Course. [Note: Should the Approved Person is the employee of the shipyard or dockyard carrying out the gas free operation, he or she must be attached to an independent unit other than any ship-repairing production units.]

5. *Relevant Training*

Candidates have to submit documentary evidence of having carried out the task of gas-free certification under the supervision of one or more Approved Person(s) covering at least the number of substantial assignments as specified below:

- (a) for working experience as in paragraph 4(a) and 4(b)—twelve (12) in the previous nine (9) months;
- (b) for working experience as in paragraph 4(b) and 4(d)—twenty-four (24) in the previous eighteen (18) months;
- (c) for working experience as in paragraph 4(c) which includes six (6) months or more service on tankers—twelve (12) in the previous nine (9) months.

The gas-free assignments should cover a variety of ship types including tankers (petroleum, gas or chemical). Candidates are responsible for their own training arrangements. In case there is a genuine difficulty in seeking the supervision of an Approved Person, the candidate may consider seeking the assistance of the Director to complete the training requirements by alternative arrangements.

6. *Assessment*

Candidates applying for authorization must have completed the requisite requirements stated in paragraphs 2(a), 2(b) and 2(c) before appearing for an assessment. The assessment will be of approximately one (1) hour duration and will be conducted by an assessment panel appointed by the Director. The assessment will assess the competency of the candidates in three main areas namely applied science, ship design and related construction, and safety practices and equipment.

(a) *Applied Science*

- Physical and chemical properties of petroleum oil and distillates.
- Saturated vapour pressure.
- Saturated vapour pressure / temperature relationship.
- Boiling point.
- Influence of pressure on boiling point temperature.
- Flash point.
- Flammable range – upper and lower flammable limits.
- Relationship between flash point and lower flammable limit.
- Flammable and combustible liquids.
- Fire and explosion.
- Sources of ignition.

- Flammability and explosion hazards.
- Gas replacement – inerting & gas-freeing; characteristics of dilution and displacement methods.

(b) *Ship Design and Related Construction*

- General ship design considerations.
- Tank and hold arrangements.
- The cargo pump-room and its ventilation.
- Inert gas system and safety consideration.

(c) *Safety Practices and Equipment*

- Use of portable measuring instruments.
- The function, interpretation, and calibration of combustible gas indicators and oxygen analyzers.
- Procedures and precautions for entry into tanks and gas dangerous spaces.
- Enclosed space entry permits and checklist.
- Personnel safety equipment – SCBA, rescue and resuscitation equipment.

7. *Revalidation*

- (a) Authorization will remain valid for five (5) years and thereafter the authorization is due for revalidation every five (5) years.
- (b) The revalidation will only be considered upon the evidential proof provided by the concerned Approved Person that he/she had carried out at least twelve (12) substantial gas-free certification assignments during the preceding five (5) years (minimum three (3) assignments in the last year).

8. *Application, Enquiry and Fees*

All applications for approval as Approved Person should be addressed to Marine Industrial Safety Section, Marine Department at 23rd Floor, Harbour Building, 38 Pier Road, Central, Hong Kong. For enquiries, please contact the Senior Shipping Safety Officer at telephone 2852 4472 or fax 2543 7209.

A nominal fee will be levied for each application for authorization as an Approved Person by the Director, the current rate as per Merchant Shipping (Fees) Regulations, CAP 281F is HK\$2,230. The current rate for revalidation of an Approved Person as per CAP 281F is HK\$1,115.

Shipping Division
Marine Department
28 July 2009

Proposed amendments to the authorization requirements for Approved Persons

Paragraph No. in Guidance Notes	Original requirements	Proposed amendments	Reasons for change
<i>Acceptable Academic or Professional Qualifications</i>			
2(a)	Academic qualifications in a Science or engineering discipline recognized by the Director of Marine.	Academic qualifications in an engineering discipline (i.e. Chemical, Marine or Mechanical) or in nautical science recognized by the Director.	To clarify the scope of recognized engineering discipline and accept also academic qualifications in nautical science.
<i>Relevant Working Experience</i>			
4(c)	New requirement	Not less than one year non-tanker sea-going experiences and successful completion of the “Tanker Familiarization Course” offered by Maritime Services Training Institute or a relevant STCW complying specialized training course.	To expand the scope of eligible candidates to include those with non-tanker sea-going experiences.
4(d)		Not less than three (3) years experience at a supervisory level in a shipyard or dockyard specifically responsible for shipboard gas free operation and successful completion of the “Tanker Familiarization Course” offered by Maritime Services Training Institute or a relevant STCW complying specialized training course.	To expand the scope of eligible candidates to include those with experiences in shipboard gas free operation in major ship-repairing organizations.

Paragraph No. in Guidance Notes	Original requirements	Proposed amendments	Reasons for change
<i>Relevant Training</i>			
5(a)	For candidates who comply the relevant working experience requirements, evidence of having completed at least twelve (12) substantial gas-free assignments under supervision of an Approved Person in the previous three (3) to six (6) months.	For candidates with adequate tanker sea-going experiences or oil terminal operation experiences, evidence of having completed at least twelve (12) substantial gas-free assignments under supervision of an Approved Person in the previous nine (9) months.	Allow candidates more time to complete the required training.
5(b)	For candidates who cannot comply the relevant working experience requirements, evidence of having completed at least twelve (24) substantial gas-free assignments under supervision of an Approved Person in the previous twelve (12) months.	For candidates with adequate non-tanker sea-going experiences or shipyard experiences, evidence of having completed at least twenty-four (24) substantial gas-free assignments under supervision of an Approved Person in the previous eighteen (18) months.	To set a minimum relevant working experience requirement and to allow candidates more time to complete the required training.
5(c)	New requirement	For candidates with adequate sea-going experiences and amongst which at least six (6) months are on tankers, evidence of having completed at least twelve (12) substantial gas-free assignments under supervision of an Approved Person in the previous eighteen (9) months.	Allow some concession to the training requirement if a candidate has at least six (6) months tanker experience.
5	New requirement	The gas-free assignments should cover a variety of ship types including tankers (petroleum, gas or chemical).	Make it more specific on ship types to cover in gas-free assignments.

Paragraph No. in Guidance Notes	Original requirements	Proposed amendments	Reasons for change
5	New requirement	In case there is a genuine difficulty in seeking the supervision of an Approved Person, the candidate may consider seeking the assistance of the Director to complete the training requirements by alternative arrangements.	Offer candidates an alternative route to complete the training requirements.
<i>Application, Enquiry and Fees</i>			
8	A nominal fee will be levied (HK\$1,115 current rate as per Merchant Shipping (Fee) Regulation) for revalidation.	A nominal fee will be levied for each application for authorization as an Approved Person by the Director, the current rate as per Merchant Shipping (Fees) Regulations, CAP 281F is HK\$2,230. The current rate for revalidation of an Approved Person as per CAP 281F is HK\$1,115.	To state clearly the fees required. There is no change in fees, currently a fee of HK\$2,230 is already levied for each application for authorization as Approved Person.