



**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 26 January 2010, 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 Institution (“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(c) 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
26 January 2010