



THE GOVERNMENT OF THE HONG KONG
SPECIAL ADMINISTRATIVE REGION

APPROVAL OF DOMESTIC GAS APPLIANCES

CODE OF PRACTICE GU 05



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Issue 2

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Code of Practice GU 05:
Approval of Domestic Gas Appliances

Part 1 Foreword and Scope

- 1.1 This code, which describes requirements for the approval of domestic gas appliances by the Gas Authority, has been prepared by the Gas Standards Office in conjunction with Hong Kong registered gas contractors and suppliers of gas appliances. Established international or national safety and quality standards are utilised in the document but local measures which focus on quality and safety of gas appliances are also included. The requirements specified in the code for an appliance to gain approval by the Gas Authority are mandatory.
- 1.2 The approval requirements contained within this code apply to:
- (a) domestic gas appliances which are fixed installations in premises designed for indoor application; and
 - (b) portable cassette cookers of table-top type design fuelled by small disposable gas cylinders.
- 1.3 Those models of gas appliances designed for outdoor applications do not generally require submission for approval under this Code but shall, in the interests of public safety, comply with relevant recognised international / national safety and quality standards. Associated certification documents should be available for inspection at the request of the Gas Authority.
- 1.4 Reference should also be made to relevant current legislation, including:-
- Gas Safety Ordinance, Cap. 51
 - Gas Safety (Installation and Use) Regulations
 - Gas Safety (Miscellaneous) Regulations
- 1.5 Approval of domestic gas appliances shall be granted to an Applicant to:
- (a) import; or
 - (b) manufacture in Hong Kong
- for use in Hong Kong models of domestic gas appliances which are deemed to comply with international or national safety standards and local quality assurance measures in accordance with this Code. Having gained approval, the Applicant shall arrange to display prominently a mark on the approved model for use in Hong Kong (see Section 4.6). The gas appliance model description will be entered onto the Approved List (see Section 6.2) by the Gas Authority.
- 1.6 The fulfilment of requirements of international or national safety and quality standards and local quality assurance measures relating to gas appliances under application in accordance with this Code does not derogate the responsibilities of the Applicants from fully complying with all other current, relevant codes of

practice, approval requirements, and statutory requirements of other government departments, bodies, etc. under the Laws of Hong Kong.

- 1.7 Approval by the Gas Authority does not imply, nor guarantee production quality of shipments of domestic gas appliances for use in Hong Kong. Applicants shall be fully responsible for the quality of gas appliances they supply and must take all reasonable measures to monitor performance of manufacturers and initiate any remedial action arising from product safety and quality concerns (see Section 7.1).
- 1.8 The Gas Authority shall:
- (a) assume no responsibilities for how the information contained on the Approved List is used;
 - (b) make no representations, warranties or endorsements whatsoever about the suitability of proprietary products and related services for individual uses/applications, safety of products, fitness for purposes, merchantable quality, etc.; and
 - (c) not be liable for any loss or damage or injury to any property or person howsoever arises whether directly or indirectly as a result of referring to or using any information contained on the Approved List.

Part 2 Terminology

Applicant for the purpose of this code means a person who applies for type approval of a model of domestic gas appliance from the Gas Authority with an intention to import or manufacture in Hong Kong such model for use in Hong Kong. Applicant therefore refers to an importer or a local manufacturer registered for business in Hong Kong.

Basic Safety Assessment Certificate means a certificate issued by a HOKLAS laboratory in Hong Kong to certify a domestic gas appliance complies with the basic safety assessment as stated in Section 5.3 of Part 5.

Domestic Gas Appliance means a gas appliance which is designed, or intended to be used primarily in domestic premises, irrespective of whether it is so used (*regulation 2 of the Gas Safety (Installation and Use) Regulations Cap. 51*). Those gas appliances having heat inputs exceeding 70KW are excluded from the requirements of this code.

Flame Failure Protection means an integral control device responsive to flame properties which by means of detecting the presence of a nominated flame will cause the gas supply to the appliance burner(s) to shut off safely in the event of ignition failure or inadvertent flame extinction.

Gas Appliance means a domestic appliance which *burns* gas types defined in Section 2 of the Gas Safety Ordinance Cap. 51 to provide lighting, heating or cooling.

Gas Authority for the purpose of this code means the Gas Standards Office (GasSO), Electrical and Mechanical Services Department, Government of the Hong Kong Special Administrative Region, on behalf of the Gas Authority appointed under Section 5 of the Gas Safety Ordinance Cap. 51.

Gazette means the Government of the Hong Kong Special Administrative Region Gazette.

GU Mark means the mark specified in the Gas Safety (Miscellaneous) Regulations.

HOKLAS means the Hong Kong Laboratory Accreditation Scheme under the charge of the Commissioner of Innovation and Technology on behalf of the Government of the Hong Kong Special Administrative Region.

Importer, for the purpose of this Code, means a person who engages in the business of importation of domestic gas appliances for use in Hong Kong.

Initial Type Approval (TA1) means compliance with recognised safety, performance and quality standards as stated in Section 5.2 of Part 5.

Initial Type Approval (TA2) means a basic safety assessment conducted in Hong Kong as stated in Section 5.3 of Part 5.

International / National Safety Standards means standards for gas appliance design, construction and safety performance issued by recognised certification authorities such as:

- Australian Gas Association (AGA) – AS standard
- European Committee for Standardisation (CEN) – EN standard
- Japan Gas Appliances Inspection Association (JIA) – JIA standard
- State Administration of the PRC for Quality Supervision and Inspection and Quarantine (AQSIQ) – GB standard

ISO/IEC 17025 refers to general requirements for the competence of testing and calibration laboratories as stated in Section 3.2.2 of Part 3.

Overheat Protection means a non-adjustable temperature actuated device designed to protect an appliance and its surroundings in the event of failure of the normal means of temperature control.

Quality Assurance means quality assurance assessment conducted in Hong Kong as stated in Section 6.3 of Part 6.

Recognised Certification Authority (RCA) means an independent organisation recognised by the Gas Authority which is empowered under law or decree, (e.g. notified body appointed by the Commission of European Communities), to certify that the a gas appliance is designed and produced in compliance with international or national safety standards.

Revalidation Certificate means a certificate issued by a Recognised Certification Authority to confirm continued compliance with standard(s) quoted in the original type test certificate as stated in Section 3.3.2 of Part 3.

Supplier(s), for the purpose of this Code, means the organisation(s) in connection with local sale or supply business of gas appliances for use in Hong Kong excluding the importer and local manufacturer.

Type-test Certificate means a certificate issued by a Recognised Certification Authority to certify a domestic gas appliance complies with a relevant international / national safety standard(s) as stipulated in Section 3.3.1 of Part 3.

Part 3 Selection of Manufacturers and Certification

3.1 Manufacturers of Gas Appliances

3.1.1 Manufacturers' production processes shall incorporate quality systems certified¹ or assessed² to recognised international or national quality standards, (for example ISO 9000), by an organisation recognised by the Gas Authority to ensure:-

- (a) quality of components and materials supplied by sub-contractors which are critical to the safe operation of an appliance;
- (b) quality at each stage in production and assembly processes; and
- (c) quality of finished products.

Note 1: In the case of certification, an independent organisation which is either empowered for example under law or decree, or accredited by an overseas authority to certify manufacturing process in accordance with international or national quality standards (e.g. ISO 9000).

Note 2: In the case of assessment, an independent organisation recognised by Commissioner of Innovation and Technology, Government of the Hong Kong Special Administrative Region.

3.1.2 Documentary evidence to confirm compliance with Section 3.1.1 above shall be submitted to the Gas Authority (Appendix 1(a) refers).

3.1.3 Manufacturers shall be capable of producing appliances in accordance with recognised international or national safety standards (for example EN, JIA) to include initial type-test approval and quality surveillance (Section 3.3 refers).

3.2 Recognised Certification Authority (RCA)

3.2.1 For the purpose of obtaining all necessary certification to demonstrate compliance with international or national safety and quality standards, gas appliance manufacturers must employ the services of established certification authorities. Such certification authorities must be recognised by the Gas Authority.

3.2.2 An RCA employed by a manufacturer will normally be located in the country in which the appliances are produced, but alternative arrangements may be advised to the Gas Authority where an RCA is outside the country of origin. However, in all cases testing procedures should be operated in accordance with recognised international or national standards (for example ISO/IEC 17025). The

assessment of appliance safety and performance operated by an RCA shall be in accordance with recognised international or national safety standards (for example EN, JIA). Similarly, quality standards used in surveillance and assessment of manufacturers production systems shall be in accordance with recognised international or national practice.

3.3 Product Certification

3.3.1 RCA Type-test Certification

3.3.1.1 Initial type-test certification for each model³ of gas appliance issued by an RCA and which confirms that:-

- (a) the model has successfully completed tests in accordance with recognised international or national gas appliance safety standards (for example EN, JIA, etc.); and
- (b) the model is suitable for particular gas type(s) distributed in Hong Kong,

shall be provided by the manufacturer. The Applicant shall submit original or certified copies of certification to the Gas Authority upon application for approval (Section 5.2.1 refers).

Note 3: Where a gas appliance is produced having a number of model descriptions, because of one or more cosmetic (i.e. not functional) variations, one type-test certificate suitably endorsed by the RCA to include other model descriptions will be acceptable. In such circumstances, appliances listed on the RCA certificate may be submitted as a single application to the Gas Authority for approval. Examples of type-test certificates are shown in Appendix 2.

3.3.1.2 In addition, evidence of the manufacturer having entered into a formal agreement with an RCA to undertake programmed surveillance of production quality systems shall also be submitted to the Gas Authority (Appendix 1(a) refers).

3.3.2 RCA Revalidation Certification

The importer / local manufacturer shall be responsible for ensuring that only models of appliance which are subject to quality surveillance by an RCA are supplied by his/her organisation. An original or certified copy of certification⁴ prepared by an RCA confirming:-

- (a) formal surveillance of the manufacturer's quality systems during the specified period has been, and is still being, carried out; and
- (b) that the model(s) of appliance in question continue to comply with the international or national safety standard(s) declared in initial type-test certification,

shall be forwarded by the importer / local manufacturer to the Gas Authority three months before the lapse of the first 5 years after initial type-approval (Part 5 refers) and every 5 years thereafter. Such certification may apply to more than one approved model applying for revalidation. The Gas Authority shall update the Approved List to show those models which have been subject to revalidation certification. Failure to provide revalidation certification in accordance with the above shall result in an appliance model being prohibited from further importation to or manufacture in Hong Kong.

Note 4: The precise format of documents confirming revalidation may be determined by the RCA but submitted certification should include the basic data shown in Appendix 1(a)-1(b).

3.3.3 Certificates of Compliance

Each batch of appliances received by the Hong Kong supplier shall be accompanied by a certificate of compliance, prepared by the manufacturer. This shall confirm:-

- (a) the batch of appliances has been produced in compliance with the original international or national standard declared in the RCA initial type-test certification; and
- (b) the location of manufacture.

Importer or local manufacturer shall keep full records of certificates of compliance for inspection at the request of the Gas Authority.

Part 4 Requirements for Gas Appliances

4.1 General

- 4.1.1 A gas appliance, which is to be supplied⁵ or has been supplied⁶ for use in Hong Kong and is submitted to the Gas Authority for approval, shall be approved in accordance with this code. The procedure for initial type-approval of a new model is described in Part 5 of this code.

Note 5: A model of gas appliance to be supplied for use in Hong Kong (*new model*) also includes previously approved models which have undergone functional modification(s) that are related to the operation and safety of the gas appliance. Normally such modification(s) will have resulted in additional performance testing of the modified gas appliance by an RCA. However, excluded are previously approved models which have merely undergone cosmetic modification(s) so as not to affect the operation nor safety of the gas appliance. In such cases, initial type-test approval will not be necessary for the *new model* description to be entered onto the Approved List, but revalidation certification will be required for a period of 5 years in accordance with Section 3.3.2.

Note 6: A model of gas appliance which has been supplied for installation in Hong Kong before 1 October 1998 and continues to be supplied thereafter is eligible for exemption from initial type-approval described in Part 5 providing it:

- (a) has been manufactured in accordance with a recognised international or national safety standard;
- (b) has been approved by an RCA; and
- (c) is subject to quality surveillance by an RCA.

However, revalidation certification should be provided in accordance with Section 3.3.2 together with evidence of current quality assurance (Appendix 6 refers) in order that the model description may be entered onto the Approved List for a period of 5 years (Sections 4.1.2 and 6.2 refer).

- 4.1.2 Approval shall be granted to the Applicant and is valid for 5 years from the date of notification and during this period newly approved model description shall be entered onto the Approved List (Section 6.2 refers) maintained by the Gas Authority. The approved status of a model of gas appliance may be extended for further periods of 5 years subject to the provision of necessary revalidation and quality assurance certification documents stated in Sections 3.3.2 and 6.3.

- 4.1.3 A gas appliance shall be produced in accordance with recognised international or national safety standards (for example EN, JIA) and shall:-

- (a) incorporate automatic ignition;
- (b) incorporate a means of flame failure protection for each burner;

- (c) in the case of an air heater⁷, incorporate an oxygen deficiency device; and
- (d) in the case of a room-sealed heater, incorporate an overheat protection device.

Note 7: To include clothes dryer not connected to a flue and natural draught room heater for example.

4.2 Supply of Appliance Spare Parts

The Applicant shall undertake to supply *functional*⁸ spare parts for a gas appliance in agreement with manufacturers for the following *minimum* periods subsequent to gaining approval from the Gas Authority:-

- 4.2.1 portable hot-plate..... 5 years (from date of approval)
- 4.2.2 cooking appliance..... 10 years (from date of approval)
- 4.2.3 air heating appliance..... 10 years (from date of approval)
- 4.2.4 water heater..... 15 years (from date of approval)

Note 8: The term *functional* refers to those components which are essential for the safe operation of a gas appliance.

4.3 Installation and Servicing Instructions

A gas appliance shall be supplied by the manufacturer with installation and servicing instructions approved by the RCA responsible for initial type testing in accordance with Section 3.3. Installation and servicing instructions shall be printed in Chinese language⁹.

Note 9: Diagrams/drawings may include some technical terms in the English language where such terms are commonly used and applied by registered gas installers. However, all instructions relating to safety of installation must be written in the Chinese language.

4.4 User Instructions

A gas appliance shall be supplied by the manufacturer with a document advising the user on how to operate and maintain it safely (Regulation 26 of the Gas Safety (Installation and Use) Regulations Cap. 51). Essential safety information shall be printed in both Chinese and English languages.

4.5 Labelling of Gas Appliances

A domestic gas appliance shall be supplied by the manufacturer displaying data labels containing information stipulated in respective international or national safety standards and bearing an indication that it conforms to a type approved by a RCA as complying with the said standards under which the appliance was originally approved by the RCA. The indication shall be in the form of a label for example: description which reads "Type approved by: ABC" and "Type approval certificate number: 1234", or symbol issued by the RCA. In addition, any warning labels having regard

to user safety shall be durable, legible and clearly printed in Chinese and English languages.

4.6. GU Mark

Having gained approval, the Applicant shall arrange to display in a durable manner a mark (GU Mark) on the approved model for use in Hong Kong as specified under the Gas Safety (Miscellaneous) Regulations. The configuration of GU Mark is shown in Appendix 5 for reference. In addition, importers, manufacturers and suppliers shall ensure that the mark is used for related purposes only, for example packaging, advertisements and sale promotions in Hong Kong in accordance with the Gas Safety (Miscellaneous) Regulations.

4.7. Packaging

Gas appliances shall be supplied by manufacturers in packaging which affords maximum protection having due regard to market conditions in Hong Kong. Appliances shall be packed in containers displaying outer markings printed in either Chinese or English language.

Part 5 Procedure for Obtaining Initial Type-Approval of Gas Appliances

5.1 General

- 5.1.1 Approval of domestic gas appliances consists of gaining initial type-approval in two parts, i.e. TA1 and TA2 (procedural flow charts in Appendices 1(a) and 1(b) refer).
- 5.1.2 Section 5.2 (part TA1) requires an assessment by the Gas Authority of supporting documentation for each model of appliance submitted to check compliance with recognised safety, performance and quality standards. An RCA not previously recognised by the Gas Authority will be assessed and may include an inspection of test facilities.
- 5.1.3 Section 5.3 (part TA2) requires a basic safety assessment to be carried out in Hong Kong on new models submitted for approval. Details of the assessment are shown in Appendices 4(a) and 4(b).
- 5.1.4 The award of initial approval is based upon successful completion of parts TA1 and TA2 which may be carried out consecutively or in parallel.

5.2 Compliance with Recognised Standards (TA1)

- 5.2.1 An importer or a local manufacturer wishing to supply a new model of gas appliance in Hong Kong shall apply to the Gas Authority.
- 5.2.2 The Gas Authority shall supply an Applicant with:-
- (a) an application form and notes to aid completion;
 - (b) a list of documents required to be submitted by the Applicant
(e.g. certification- Sections 3.1.2 & 3.3, installation and servicing instructions- Section 4.3, confirmation of supply of spare parts- Section 4.2, confirmation of existence of manual of remedial measures- Section 7.6, etc. refer).
- 5.2.3 Upon receipt of completed application form and submitted documents, the Gas Authority :-
- (a) will scrutinise all documents; and
 - (b) may undertake an inspection of the RCA/appliance testing laboratory.
- 5.2.4 Subsequent to an application and all necessary inspections being judged as satisfactory, part TA1 is deemed to have been completed.

5.3 Basic Safety Assessment (TA2)

5.3.1 The Applicant shall arrange for a sample of an appliance model to be made available for assessment¹⁰ at a HOKLAS laboratory. This may be undertaken subsequent to gaining (TA1), or in parallel with the assessment of submitted documentation in Section 5.2.

Note 10: Basic safety assessment included in Appendices 4(a) and 4(b).

5.3.2 The laboratory will provide the assessment results and a certificate to the Applicant. An original or certified true copy of the certificate and results confirming completion of the basic safety assessment shall be provided to the Gas Authority.

5.3.3 Subject to the certificate confirming completion of the basic safety assessment to the satisfaction of the Gas Authority, part TA2 is deemed to have been completed.

5.4 Completion of TA1 and TA2

Upon completion of TA1 and TA2, (Sections 5.2 and 5.3 refer) to the satisfaction of the Gas Authority, the Applicant shall be advised in writing of initial approval. The Applicant is authorised to advise the manufacturer to display prominently a Mark on the approved model (see Section 4.6) and may commence marketing the gas appliance in Hong Kong. The gas appliance model description shall be entered onto the Approved List (procedural flow chart in Appendix 1(c) refers) by the Gas Authority.

Part 6 Approved List and Quality Assurance

6.1 General

Importers are required to satisfy themselves concerning continued quality of approved appliances they market in Hong Kong. Quality assurance checks concerning key areas of safety and performance are referred to in Section 6.3. Where a gas appliance fails to comply with quality requirements which relate to safety, this must be reported to the Gas Authority without delay and may result in suspension of appliance approval pending correction of any variance in production quality or withdrawal of appliance approval and removal from the Approved List.

6.2 The Approved List of Gas Appliances

The Approved List will be issued six monthly by the Gas Authority to all relevant Government Departments, Trade and Consumer Organisations and be available for inspection by the public at EMSD during office hours. In addition, an updated Approved List will be displayed on the EMSD web site. A gas appliance model will continue to remain on the Approved List for successive periods of 5 years provided revalidation certification is forwarded to the Gas Authority in accordance with Section 3.3.2 (Appendix 1(c) refers) together with favourable quality assurance data (Section 6.3 refers).

6.3 Quality Assurance

6.3.1 Importers (or local manufacturers) shall be responsible for the quality of approved gas appliances they market in Hong Kong. In addition to obtaining revalidation certification (Section 3.3.2 refers), evidence of local quality assurance¹¹ throughout each 5-year revalidation period (Appendix 1(c) refers), having regard to appliance safety and performance, shall be available for inspection by the Gas Authority.

Note 11: Quality assurance to be undertaken by a HOKLAS laboratory in accordance with Appendix 6.

6.3.2 The purpose of local quality assurance of an approved gas appliance is to supplement on-going quality surveillance undertaken by an RCA in the country of origin. This should aim to identify, for example, any defect occasioned during shipment which may have potential safety implications. In this respect, it is the duty of all importers (or local manufacturers) to satisfy themselves concerning the quality and safety of each batch of gas appliances imported (or manufactured) (Appendix 6 refers). Should a gas appliance fail to complete local safety and performance quality checks satisfactorily, the importer (or local manufacturer) shall inform the Gas Authority and

take all necessary investigative and corrective measures urgently in accordance with Part 7.

Part 7 Remedial Measures for Unsafe Gas Appliances

7.1 General

- 7.1.1 Where the Gas Authority has reason to believe that a domestic gas appliance is shown to be prejudicial to the safety of the members of the public, the Authority may suspend or withdraw the approval of the gas appliance. The importer (or local manufacturer) / supplier(s) shall cease to import, manufacture in Hong Kong, sell or expose for sale, supply or offer to supply the gas appliances for use in Hong Kong.
- 7.1.2 Upon suspension or withdrawal of approval of the gas appliance, the Gas Authority is also empowered to serve on the importer (or local manufacturer) a written notice to take reasonable remedial measures in association with its supplier(s), e.g. in-situ repair, replacement or recall of the gas appliance depending upon the circumstances.
- 7.1.3 Apart from mandatory remedial measures as directed by the Gas Authority, the importer (or local manufacturer) / supplier(s) should, in consultation with the Gas Authority, initiate voluntary remedial measures to, as far as reasonably practicable, avoid a safety hazard arising from an unsafe gas appliance.

7.2 Objectives

Remedial measures for an unsafe gas appliance, whether on a mandatory or voluntary basis, involves prompt and effective actions to be carried out by the importer (or local manufacturer) / supplier(s) aiming at:

- (a) Minimizing the risk of injury to the public and / or damage to property;
- (b) Complying with statutory provisions; and
- (c) Where appropriate, restoring public confidence in the safety of the gas appliance in question.

7.3 Planning

- 7.3.1 The importer (or local manufacturer) shall compile in advance a "Manual of Remedial Measures" containing documented procedures to ensure that actions are taken in a prompt and effective manner (see Section 5.2.2).
- 7.3.2 The importer (or local manufacturer) shall appoint a coordinator who represents the company to liaise with the Gas Authority, media and the public. The role of the coordinator shall be documented in the manual.
- 7.3.3 The importer (or local manufacturer) shall develop and maintain communication channels with all parties in the

supply chain and where possible, customers / end users so as to ensure that prompt and effective actions can be taken where necessary.

- 7.3.4 The importer (or local manufacturer) shall maintain necessary information which should include product identification, product supply quantities and locations, customer / end user information where applicable, etc. so as to facilitate the implementation of remedial measures.

7.4 Implementation

- 7.4.1 When the importer (or local manufacturer) / supplier has reason to believe a gas appliance is potentially unsafe, he/she shall immediately investigate the situation and devise appropriate remedial strategies. The remedial actions shall be implemented in accordance with the company's Manual of Remedial Measures (see Section 7.3.1) and in agreement with the Gas Authority.

- 7.4.2 Implementation of remedial measures by the importer (or local manufacturer) / supplier shall normally consist of three sequential phases, namely:

- (a) public notification;
- (b) disconnection from the gas supply and /or product recovery; and
- (c) progress monitoring.

- 7.4.3 Means of notifying the public will depend on the extent of the problem and the size of population affected, etc. The following means of notification may be considered:

- (a) Direct notification to relevant parties of supply chain and where appropriate, customers. In case of recall, notification should contain instructions that the product must be immediately withdrawn from supply, sale or use.
- (b) Public announcements through mass media through Chinese and English television and / or radio broadcast and / or newspapers and any other appropriate means, e.g. internet, etc. to disseminate remedy message.
- (c) Display of point-of-sale posters / notices at retail outlets, supermarkets, chain stores, department stores and any other places visited by the public as appropriate, where the product has been supplied. Posters / notices should be displayed at strategic conspicuous locations in the premises to arouse wide attention.

- 7.4.4 Notification to the public which is made for a sufficient period in a clear and precise manner, shall include all relevant information, for example:
- (a) Description of product including brand name, model or serial number, product identification code and / or production date, supplemented with photograph or drawing.
 - (b) Reason for remedial action, i.e. problem of product and specific hazard.
 - (c) Advice to customers on immediate action to be taken.
 - (d) A telephone hotline for enquiries and / or assistance.
- 7.4.5 The importer (or local manufacturer) in conjunction with the supplier(s) shall arrange with registered gas supply companies, with assistance of the Gas Authority where necessary, to isolate the unsafe gas appliance from the gas supply. Where immediate action to rectify the safety defect cannot be taken, the importer (or local manufacturer) / supplier(s) shall require registered gas contractors to affix warning labels onto the gas appliances in accordance with the Gas Safety (Installation and Use) Regulations.
- 7.4.6 Notwithstanding the above and in order to rectify the safety defect of the product, the importer (or local manufacturer) in conjunction with the supplier(s), shall formulate urgent product recovery strategies. The following options may apply:
- (a) Retrieval of product from sale outlets or customers' possession.
 - (b) Retrieval of product from customers' premises where installed and used.
 - (c) Replacement or repair of product at customers' premises where installed and used.
 - (d) Withdrawal of product from the production lines, if manufactured and supplied in Hong Kong.
- 7.4.7 The importer (or local manufacturer) and supplier(s) shall record all decisions made, actions taken and achievements attained for the purposes of monitoring the progress of remedial action. It is crucial that the product recovery period should be kept to a minimum. This may necessitate stepped up actions to expedite remedial measures, for example reiterating or intensifying notification to the public, highlighting repair / replacement programme, etc.
- 7.4.8 The importer (or local manufacturer) and supplier(s) shall analyze and monitor the ongoing progress taking consideration of the set targets and potential risks

associated with the outstanding products yet to be remedied. Consultation or assistance may need to be sought from the Recognised Certification Authority or an appropriate independent party to carry out investigation, testing, evaluation, etc. Interim reports and other required information shall be submitted periodically to the Gas Authority for examination.

7.5 Follow-up on Post-remedial Action

- 7.5.1 Before the remedial action is concluded, the importer (or local manufacturer) shall outline, evaluate and review the whole incident, and draw on lessons learnt with respect to identifying the problems, promulgating remedy messages, taking corrective actions, etc. with a view to making recommendations for possible room for improvement in terms of product design, manufacture or transportation, and remedial action procedure per se, etc. as deemed necessary.
- 7.5.2 If the situation warrants, the importer (or local manufacturer) shall collect and dispose of batches of unsafe or unserviceable gas appliances consequent to the conclusion of remedial action in a secure and proper manner and maintain an inventory of disposal for record purposes.
- 7.5.3 The importer (or local manufacturer) shall submit a final report to the Gas Authority. The report should contain analysis of incident, summary of remedial process, results of remedial action taken, evaluation, conclusion and improvement plans. Upon scrutiny of the report, the Gas Authority may require further follow-up on post-remedial action to be taken as deemed necessary in the interests of public safety.
- 7.5.4 The Gas Authority may serve a notice in writing upon the importer (or local manufacturer) to suspend the approval of the domestic gas appliance at the implementation stage. When the importer (or local manufacturer) has confirmed in writing the completion of all measures and post-remedial action and follow-up, if any; and the Gas Authority is fully satisfied that members of the public are not exposed to undue risk, such a suspension will be lifted and the importer (or local manufacturer) may then re-market the product. In the event of functional modification of the gas appliance, a fresh application for approval shall be submitted to the Gas Authority.

7.6 Documentation

- 7.6.1 As a condition of the first approval of a domestic gas appliance, the Applicant shall confirm that a Manual of Remedial Measures (see Section 7.3.1) are in place for

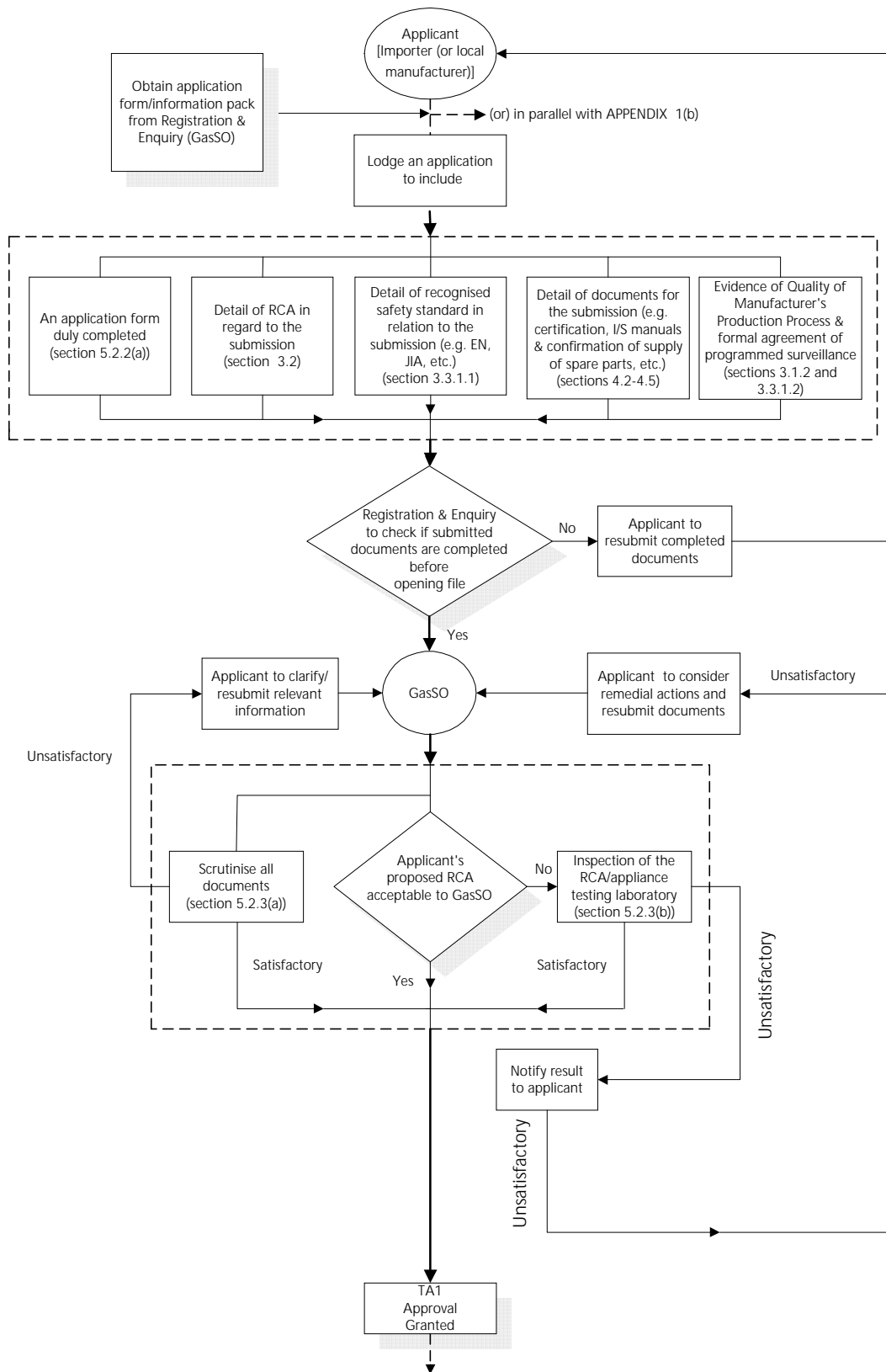
dealing with unsafe gas appliances, which details remedial measures to be taken.

- 7.6.2 When remedial action has been activated, the importer (or local manufacturer) and supplier(s) shall maintain full documentation of all messages, announcements, correspondences, certificates, reports, etc. of all concerned parties in connection with the chronological events before, during and after the remedial measures. Such documentation shall be kept properly and be available for inspection at the request of the Gas Authority.

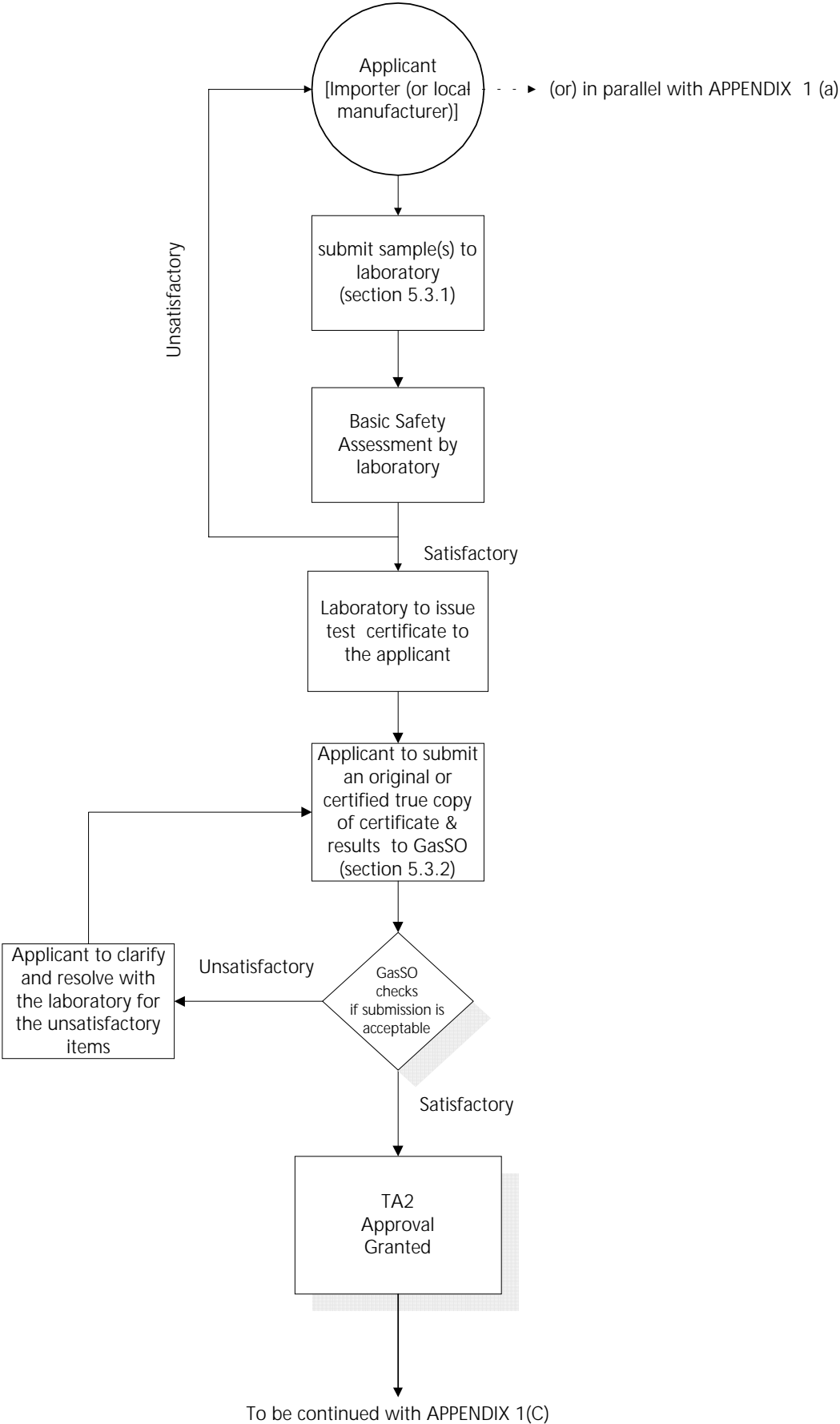
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- Appendix 3(b) Examples of RCA Revalidation Certificates
- Appendix 4(a) Basic Safety Assessment of Gas Appliance Not Connected to a Flue (Type-U)
- Appendix 4(b) Basic Safety Assessment of Gas Appliance Connected to a Flue (Type-F)
- Appendix 5 GU Mark
- Appendix 6 Local Quality Assurance of Approved Gas Appliances

APPENDIX 1(a)
 Procedural Flow Diagram - TA1 Approval
 (section 5.2 refers)



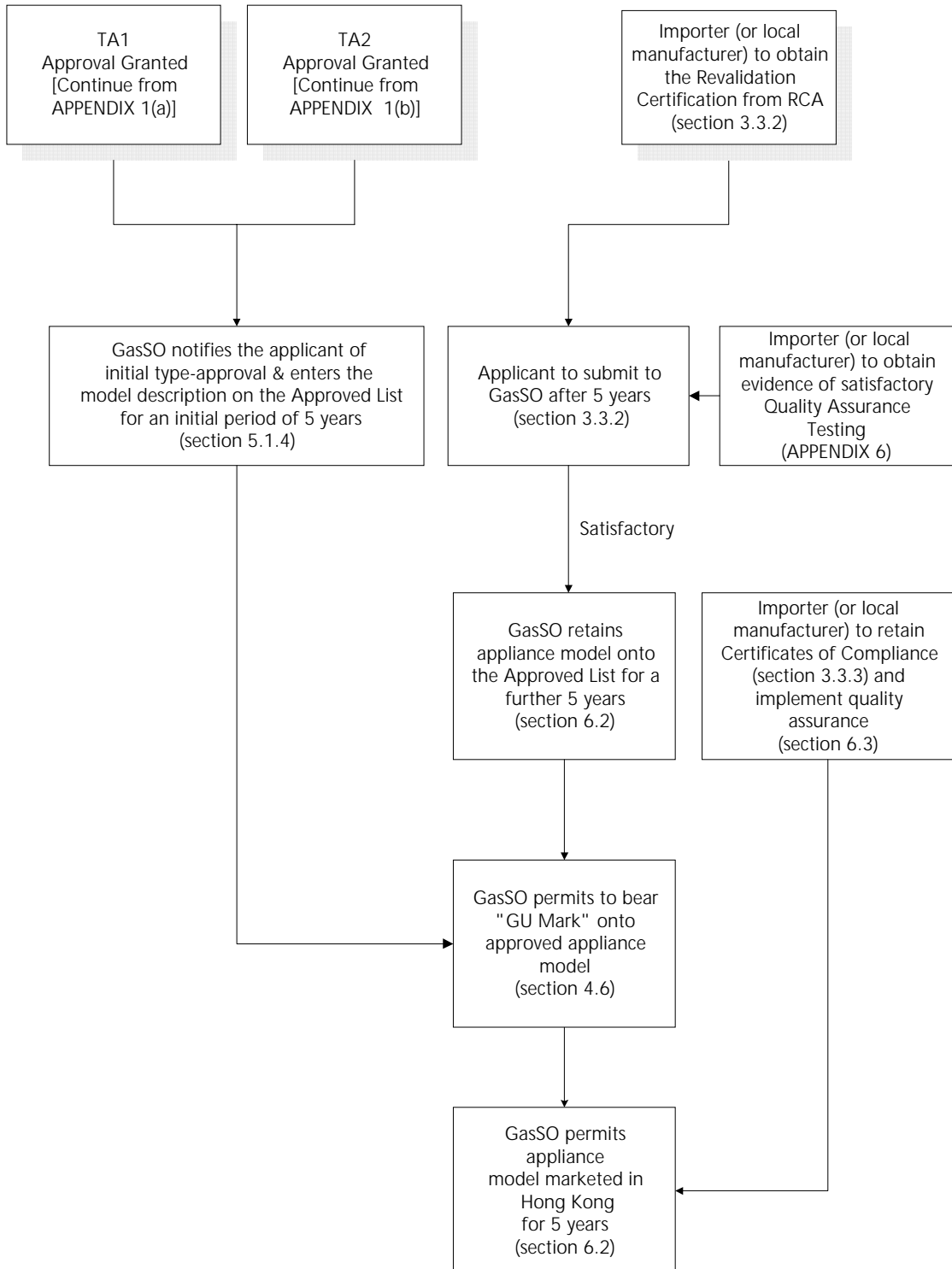
APPENDIX 1(b)
Procedural Flow Diagram - TA2 Approval
(section 5.3 refers)



APPENDIX 1(c)
 Procedural Flow Diagram - Requirements for Approved
 List and Quality Assurance (sections 5.4 and 6.2 refer)

Model Undergoing Initial Type-Approval

Model Undergoing Revalidation



Certificate of Compliance

Full Certification Approval



The Australian Gas Association
0224 266 288 634

Certificate holder:

ASN No. (if applicable):

Manufacturer:

Agent (if applicable):

Type of Appliance:

Model No. & Description:

Code(s) of Compliance:

Gas Type(s):



ISO 9002
2000

This is to certify that the particular APPLIANCE specifically described herein and supplied to The Australian Gas Association (hereafter called the Association) by the Certificate Holder named above has been accepted by the Association and found to comply with the requirements of the Association's Full Certification Approval Scheme.

This Certificate is issued on the express conditions that:

- (i) The Certificate Holder undertakes to comply with the Rules governing The Association (the Association's Full Certification Approval Scheme) (hereafter called the Rules Governing);
- (ii) The Certificate Holder undertakes to affix the Association's Certification Badge (hereafter called the Badge) to every appliance of the above named model(s) throughout the currency of the certification;
- (iii) This Certificate remains the property of the Association; and
- (iv) The Association reserves the right to cancel this Certificate in accordance with the Rules Governing, and in such an event the Certificate Holder undertakes to surrender the Certificate and Certification Badges to the Association upon request.

Certified on date: 29 November 1998 Certificate No.:

Manager, Certification Manager, Certification Policy and Services

MADE WITH WARRANTY

GAS

Full compliance with the requirements of the Australian Gas Association

APPLIANCE



CERTIFICATE

Number

GASTEC NV hereby declares that the types

made by

in

meet the essential requirements as described in the

(90/396/EEC).

PIN :
 Report number :
 Appliance type :
 Tested using : EN 1450-1:1999 & EN 12752:1:1999

Mentioned products have been approved for:

Category I₂ (Hong Kong Towngas)

Apeldoorn, July 2001

General manager:



GASTEC

Leuvensesteenweg 11
FD-3001
-3200 Leuven
The Netherlands
Tel: +31 (0) 43 200 20 00
Fax: +31 (0) 43 200 20 01



Example 1

Example 2

CE CERTIFICATO DI ESAME CE

CERTIFICATO DI ESAME CE DI TIPO n.
 EC TYPE EXAMINATION CERTIFICATE n. _____

L'IMQ quale organismo notificato, verifica la rispondenza ai requisiti essenziali stabiliti dalla Direttiva CEE 90/269 del seguente prodotto:
 An notified Body, IMQ assesses the compliance with the essential requirements stated by Directive 90/269 CEE of the following product:

FORNO / OVEN

Marca/Trade mark:
 Tipo/Type: _____

Il titolare dell'azienda sopra indicata è allegato. Per further information see annex.

Costruttore:
 Manufactured by: _____

A:
 M: _____

In base all'articolo 6 della Direttiva, il presente Certificato, unitamente al rapporto di cui sono state procedute le prove, consente alla Ditta di apporre sul prodotto sopradescritto la seguente marcatura:

According to the article 6 of the Directive, this Certificate, together with the statements of one of the procedures there foreseen, allows the firm to affix on the above mentioned product the following marking:

CE 00

Motto: _____

IMQ

Il presente certificato annulla e sostituisce il precedente.
 This Certificate cancels and replaces the previous one. No. _____ data _____

IMQ Via Quintiere 43, 20138 Milano - I

944_201_00000-2/04

Issued Date: June 1, 2001
 Certified Date: May 29, 2001

TYPE CERTIFICATE

Mitsubishi Rado
 Chairman and CEO
 Japan Gas Appliances
 Inspection Association

Based on the result of prototype test, Japan Gas Appliances Inspection Association certifies the following gas appliances applied on May 15, 2001.

Certification Number	_____
Classification of Appliance	_____
Type of Gas Appliance	_____
Type of Gas to be used	*****

Product Name	Li Gas (including Town Gas distributed in Hong Kong according to IMQCG specifications given under their fax dated 4 December 1999, ref. TS/GP/99/0150)
--------------	--

Address of Applicant	_____
Name of Factory	_____
Effective Date	This certification is effective until April 5, 2006
Applicable Standard	Inspection Standard for Gas Cooking Appliances (JIA C 060-98)
Remarks	Models for Hong Kong Gas Following items are not applicable for the JIA Inspection Standard, 1.5.1 Gas Inlet, 4.1 Instructions of Product, 4.2 Instructions of How to use 4.3 Instructions of Notes in Use, 5. Instruction Manual [See attached page]

IMPORTANT NOTICE: The company and/or factory is required the follow-up factory inspection to maintain this type certification.

- Any additional entries into this report are prohibited without written permission from Japan Gas Appliances Inspection Association.
- Any duplications of or any transfers of this report are prohibited without written permission from Japan Gas Appliances Inspection Association.

⋮

Example 3

Example 4

APPENDIX 3(a)

Typical format for RCA Revalidation Certificate

Certificate No. : _____

(Official RCA Heading)

The purpose of this document is to certify that the under-noted appliance models

.....*(model description)*.....

.....

.....

.....

manufactured at.....*(location)*.....

.....

by*(name of manufacturer)*.....

.....

(1) continue(s) to comply with...*(international/ national safety standards)*

.....

.....

as stated on type-test certificate number.....

.....dated.....*(d/m/yr)*.....

(2) and, has/have been subject to quality surveillance during the period
....*(5 year period)*.....by the undersigned certification authority/ notified
body, in accordance with....*(international/national standard)*.....

.....

Signed.....

Designation.....

Date.....

(Official RCA Seal)

AGAOS Form RC/1/1



Revalidation Ref/No:

REVALIDATION CERTIFICATE

The purpose of this document is to certify that the under-noted appliance models:

Model	Description	Gas type/Composition

manufactured at:

by:

(i) continue(s) to comply with the Certification requirements of
AGA Code

as stated on type-test certificate number

dated

(ii) and, has/have been subject to quality surveillance during the period
.....

by the undersigned certification authority in accordance with
Australian Gas Association Certification requirements

Signed:

Designation: **Manager, Certifications**

Date:



THE AUSTRALIAN GAS ASSOCIATION

Technical Office
 2 From Road, PO Box 111, Belmont VIC 3040
 Telephone: (03) 9441 4000 Fax: (03) 9441 4000
 Email: agaos@agaos.com.au www.agaos.com.au

Gas: Australia's Clean Growth Energy



GASTEC Italia SpA

RCA Revalidation Certificate

The purpose of this document is to certify that the under-noted appliance:

Brand	EC Type Examination Certificate No.	Type Approval Model

Manufactured in:
By:

Continue to comply with the following standards:

EN 30-1-1 (1998) - EN 30-2-1 (1998) - EN 60335-1 (05-1995), V1 (08-1998), V2 (07-1999), V3 (07-1999), A₂₁ (05-1991), A₂₂ (05-1992), A₂₃ (05-1992), A₂₄ (10-1992), A₂₅ (04-1993) - EN 60335-2-6 (11-1992), A₁ (04-1992), A₂ (12-1992), A₃ (07-1992)

and are currently being subjected to quality surveillance inspection from the issue of the EC Type Examination Certificate by the undersigned certification authority as stated in option C (point 3 Annex II) of the Directive 90/269/EEC.

Type models covered by EC Type Examination Certificate have been tested according to the above standards using test gases (ISO/G31 (LPG) and HONG KONG TOWN GAS.

San Vendemiano,

GASTEC Italia SpA

vice President

AGAS, P.O. BOX 10100
San Vendemiano (TV) 31040 Italy

AGAS, P.O. BOX 10100
San Vendemiano (TV) 31040 Italy

GASTEC Italia SpA
Via Saverio 22/23
I - 31039 San Vendemiano (TV)
Tel. 0428 411715
Fax 0428 72428
Email: gastece@agastec.it

Example 1

Example 2

IMQ S.p.A.
Via S. Maria
di Salvo 10
00177 Roma
Tel. (06) 5200000

RCA Revalidation Certificate

The purpose of this document is to certify that the under-noted appliance:

Brand	EC Type examination Certificate No.	Issue date	Type Approval

Manufactured in:

By:

continues to comply with the relevant essential requirements of the Directive 90/269/EEC concerning gas appliances and are currently being subjected to quality surveillance inspection during the period of three years from the issue of the present RCA Revalidation Certificate by the unassigned certification body as stated in option D (Article 3 Annex 1) of the Directive 90/269/EEC.

Type models covered by EC Type Examination Certificate have been tested according to the following functional standards using test gas G13 (Towngas):

EN 55-1-1 (1995) - EN 55-2-1 (1995)

The same models have also proved to be in conformity with the following standards concerning the Low Voltage Directive 73/23/EEC:

EN 50335-1 (1995) - A2, A5, A6, A9, A12, A14, A14 and
EN 50335-2-4 (1995) - A1, A2, A3, A32, A33, A34

Issue date:

Replaces and replaces the previous one of:

IMQ S.p.A.

Ing. Paolo Gianoglio
(Certification Manager)



AGENZIA ITALIANA PER LA SICUREZZA

Re-Validation Certificate

J I A 更新保証書

The purpose of this document is to certify that the under-noted appliance model(s) 本保証書の目的は、下記の製品、(メーカー名)の(工場名)で製造された(型名)が、

(品名)
(型名)

manufactured at (工場名)
by (メーカー名)

(1) continues to comply with
(1) (適用規格) (保証番号)、(発行日)に適合し、
(適用規格) JIA C 001-95, Inspection Standard for Gas Cooking Appliances
as stated on type-test certificate number
(保証番号)
dated (発行日、日/月/年)
(Gas Type (ガス種)) : LPG (the appliance is suitable for LPG to include the 20% butane / 20% propane mix distributed in New Area)

(2) and, has/have been subjected to quality surveillance during the period
(2) (有効期間) の間、(適用規格) に基づく品質監視を受けている事を証明することである。
(3 year period)
(有効期間、3年間) to
by the undersigned certification authority/authorized body, in accordance with
(適用規格) JIA I 001-95, follow-up Standard

Signed (署名)

Title General Manager
(肩書) Product Certificate Dept.
JIA (Japan Gas Appliances Inspection Association)

Date (日付)



Example 3

Example 4

APPENDIX 4(a)

Basic safety assessment of gas appliance not connected to a flue (Type-U) (for example cookers and dryers)

I	II
<i>CORE (C) REQUIREMENTS & TESTS¹²</i> <i>(all type-U models)</i>	<i>MODEL-SPECIFIC (S) REQUIREMENTS & TESTS¹²</i> <i>(where applicable for type-U models)</i>
CU1 General construction and marking	SU1 Construction of grill and/ or oven
CU2 Correctness of installation/ users instructions	SU2 Operation of integral gas governor
CU3 Correctness of inlet gas connections	SU3 Operation of thermostat(s)
CU4 Soundness of gas circuit	SU4 Operation of fan pressure switch
CU5 Design and operation of gas burner tap(s)	SU5 Electrical insulation resistance
CU6 Ignition of burner(s)	
CU7 Thermal input to burner(s)	
CU8 Combustion performance	
CU9 Flame stability	
CU10 Appliance surface temperatures	
CU11 Operation of flame failure device	

Note 12: In order to determine requirements and develop test methods reference shall be made to relevant international/ national safety standards (e.g. EN, JIA etc.) against which the gas appliance model gained type approval in the country of origin (section 3.3.1 refers). Only those gas types normally distributed in Hong Kong (i.e. Towngas or LPG (70% C_4H_{10} :30% C_3H_8)) shall be used for the purpose of the above safety/ performance tests.
Disposable LPG cylinder for cooking appliances shall comply with regulation 7 of the Gas Safety (Gas Supply) Regulations Cap 51.

APPENDIX 4(b)

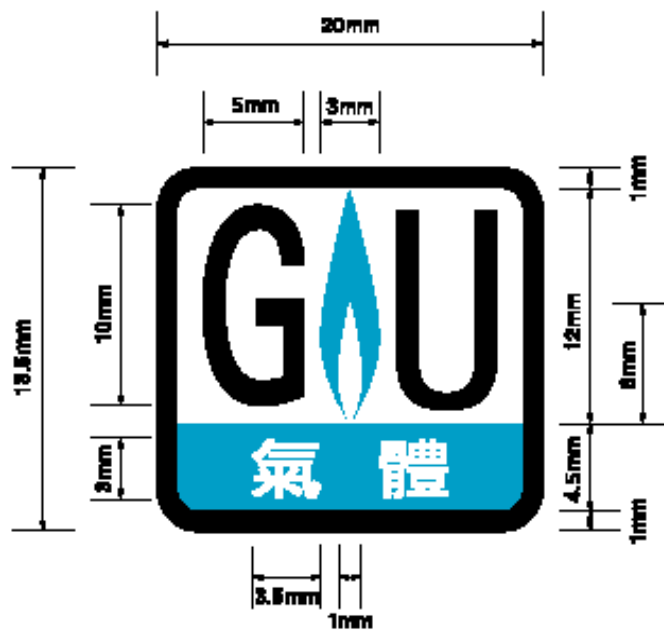
Basic safety assessment of gas appliance connected to a flue (Type-F)
(for example water heaters)

I	II
<i>CORE (C) REQUIREMENTS & TESTS¹³</i> <i>(all type-F models)</i>	<i>MODEL SPECIFIC (S) REQUIREMENTS & TESTS¹³</i> <i>(where applicable for type-F models)</i>
<p>CF1 General construction and marking.</p> <p>CF2 Correctness of installation/users instructions</p> <p>CF3 Correctness of inlet gas and water connections</p> <p>CF4 Soundness of gas and water circuits</p> <p>CF5 Ignition of burner(s)</p> <p>CF6 Thermal input to burner(s) (max./ min. settings)</p> <p>CF7 Combustion performance</p> <p>CF8 Flame stability</p> <p>CF9 Appliance surface temperatures</p> <p>CF10 Operation of flame failure device</p> <p>CF11 Maximum hot water temperature</p> <p>CF12 Design of flue terminal and evacuation of combustion products.</p>	<p>SF1 Operation of integral gas governor</p> <p>SF2 Soundness of combustion circuit test (<i>room-sealed models</i>)</p> <p>SF3 Operation of air-proving device (<i>fanned-draught models</i>)</p> <p>SF4 Design and operation of re-ignition devices</p> <p>SF5 Electrical insulation resistance</p>

Note 13: In order to determine requirements and develop test methods reference shall be made to relevant international/ national safety standards (e.g. EN, JIA etc.) against which the gas appliance model gained type approval in the country of origin (section 3.3.1 refers). Only those gas types normally distributed in Hong Kong (i.e. Towngas or LPG (70% C_4H_{10} :30% C_3H_8)) shall be used for the purpose of the above safety/ performance tests.

APPENDIX 5

GU MARK



100% cyan



100% black

APPENDIX 6

Local Quality Assurance of Approved Gas Appliances

1. Section 6.3.2 states that the purpose of local quality assurance of an approved gas appliance is to supplement formal quality surveillance undertaken by an RCA in the country of origin. Since it is the duty of all importers (or local manufacturers) to satisfy themselves concerning the quality and safety of *each* batch of gas appliances received, suitable local control measures should be introduced by suppliers in this regard.
2. Such control measures shall include the importer (or local manufacturer) arranging for a HOKLAS laboratory to select and undertake periodic inspection of a sample of each model of gas appliance¹⁴ taken from a current batch. The frequency of inspection of a particular model shall be assessed by the importer (or local manufacturer) having regard to the manufacturer's past and current quality performance. Where the importer (or local manufacturer) has a high level of confidence based upon the manufacturer's *proven quality* performance then the interval between inspections should not exceed 12 months, unless there is no shipment received within that 12-month period. Thus, the importer (or local manufacturer) applying for a model to retain approval listing for a further 5 years, will need to submit the required satisfactory inspection reports prepared by HOKLAS laboratories as evidence of local quality assurance (Section 6.2 refers).

Note 14: Where a gas appliance is produced having a number of model descriptions, because of one or more cosmetic (i.e. not functional) variations, one local quality inspection certificate suitably endorsed to include other related model descriptions may be submitted to the Gas Authority.

3. A quality inspection of a gas appliance should confirm items which can be checked visually, for example:-
 - 3.1 general construction and marking;
 - 3.2 presence of correct sets of installation/ user instructions;
 - 3.3 presence of designated safety devices;
 - 3.4 correctness of gas, water and electrical connections; and
 - 3.5 operation of gas taps and flame stability.
4. A quality inspection should also confirm the safe operation of a gas appliance by testing¹⁵:-
 - 4.1 the soundness of the gas circuit at normal working pressure (and water connections where applicable);
 - 4.2 operation of ignition device(s);
 - 4.3 the measurement of thermal input (high and low where thermostatic control is installed);
 - 4.4 combustion performance under normal operating conditions;
 - 4.5 operation of flame failure device(s); and
 - 4.6 integrity of electrical insulation (where applicable).

Note 15: Test methods to be employed by HOKLAS laboratories may be developed locally in agreement with GasSO in order to ensure practicality of quality inspections.