

Application for Approval of Firms engaged in Tightness Testing of Primary and Secondary Barriers of Gas Carriers with Membrane Cargo Containment Systems for Vessels in Service

(Initial*1 Occasional*2 Renewal*3 Withdrawal*4)

To : ClassNK

Date: _____

Name of Firm (Applicant) : _____

Contact & Personnel : _____

Tel: _____

Fax: _____

e-mail _____

@ _____

On the basis of the requirements of *Rules for Approval of Manufacturers and Service Suppliers*, we hereby make an application,

- for Initial Assessment of Firm, attached documents *1,
- for Occasional Assessment of an alteration to the items which have been approved, attached documents*2,

Outline of the alteration:

- to carry out Renewal Assessment and to renew the approval *3,
- to withdraw the approval with the ClassNK Approval Certificate attached *4.

Reason:

1. Name of Firm *1/*2/*3 _____

2. Address of Firm *1/*2/*3 _____

Tel: _____

Fax: _____

e-mail _____

@ _____

3. Areas where service is supplied: _____

4. Approved Number *2/*3/*4 : _____

5. Intended date of field examination *1/*2/*3: _____

6. Attached documents and data *1/*2/*3 (2 copies, relevant documents only in the case of other occasion other than Initial Assessment) :

The documents and data specified in 2.3.-1.(2) of Chapter 2, Part 1 and Chapter 15, Part 3 of NK Rules "Rules for Approval of Manufacturers and Service Suppliers" to be submitted (refer to the next page).

7. Note :

Testing method (15.1 of Chapter 15, Part 3 of “Rules for Approval of Manufacturers and Service Suppliers”):

- Global vacuum testing of primary and secondary barriers
- Acoustic emission(AE) testing
- Thermographic testing

Necessary documents (2.3-1.(2) of Chapter 2, Part 1 of NK Rules)

- Outline of the firm (the location, history, capital, organization and management structure (including subsidiaries), number of employees, main services and their actual records, etc.)
- List of nominated agents, subsidiaries and subcontractors
- Description of equipment and facilities; measuring equipment, outline of workshops and facilities for storing materials and parts, a list of orders to the subcontractors, etc.
- The documents showing that the firm engaged in Global vacuum testing and Thermographic testing has system designer’s (i.e. GTT) approval. The validity date of certificate issued by NK is to be considered for the validity date of system designer’s (i.e. GTT) approval
- Outline including description of service condition or service region of the relevant service
- Quality manual and its supplementary documents, or documented procedures (work procedures, verification procedures, recording and reporting and reporting procedures, training procedures, control procedures of measuring equipment, etc.) specified in the Rules
- List of operators/technicians/inspectors documenting name, qualifications, training and experience within the relevant service area, and training programmes for operators/technicians/inspectors
- Checklists of the relevant services and record formats submitted to the Society
- Documented procedure to examine and evaluate the subcontractor’s quality system and works in case where any parts of the services provided are subcontracted
- A guide for operators of the equipment needed to perform the service being provided
- Documented procedures for communication with the crew prior to commencing work, so that it is safe to decommission the equipment being maintained, and to provide a safe system of work in place
- Copies of approval certificates issued by competent organizations or other classification societies, if any (Evidence of approval/ acceptance by other bodies, if any.)
- Information on the other activities which may present a conflict of interest
- Record of customer claims and of corrective actions requested by certification bodies
- Other documents deemed necessary by the Society

Prior confirmation items to be checked by the applicant: The below (1) through (4) to be satisfied.

(1) Quality System (1.2 of Chapter 1, Part 3 of NK Rules)

- To maintain quality required to the services to be provided, the supplier’s management is to establish and maintain a documented quality system below that is in conformity with the requirements in the Rules.
 - Training
 - Documented Procedures to Control, Calibrate and Maintain for Measuring and Testing Equipment
 - Work Procedures
 - Subcontracting Control
 - Quality Verification Measures
 - Documented Procedures, etc. for Reporting to the Society
 - Relationship between Service Suppliers and Equipment Manufacturers

- The supplier is to have a documented quality system complying with the most recent version of the ISO

9000 series and covering at least the following:

- Code of conduct for the relevant activity
- Maintenance and calibration of equipment
- Training programmes for operators, technicians and inspectors
- Supervision and verification to ensure compliance with operational procedures
- Recording and reporting of information
- Quality management of subsidiaries, agents and subcontractors
- Job preparation
- Periodic review of work process procedures, complaints, corrective actions and issuance, maintenance and control of documents

(2) Working procedure (15.2.1 of Chapter 15, Part 3 of NK Rules)

Suppliers engaged in the global vacuum testing

- To carry out the testing in accordance with cargo containment system designer's procedures as approved by the Society

Suppliers engaged in acoustic emission (AE) testing

- To have documented procedures based upon recognized national or international industrial standards to perform ultrasonic leak test using AE sensors for the secondary barrier of membrane cargo containment systems
- The procedures following 1.2.4 are to include details of personnel responsibilities and qualification, instrumentation, test preparation, test method, signal processing, evaluation and reporting
- The differential pressure during testing should not exceed the containment system designer's limitations.

Suppliers engaged in thermographic testing

- To carry out the testing in accordance with cargo containment system designer's procedures as approved by the Society

(3) Qualifications of Personnel

Common (1.3 of Chapter 1, Part 3 of NK Rules)

Qualifications of Personnel

- The personnel is to have adequate experience and be familiar with the operation of any necessary equipment
- Operators/technicians/inspectors are to have had a minimum of one year tutored on-the-job training. Where it is not possible to perform internal training, a program of external training may be considered as acceptable

Supervision

- The supplier is to provide supervision for all services provided. The responsible supervisor is to have had a minimum of two years of experience as an operator/technician/inspector within the activity for which the supplier is approved
- For a supplier consisting of one person, that person is to meet the requirements of a supervisor

Personnel Records

- The supplier is to keep records of the approved operators/technicians/inspectors.
- The record specified in the above is to contain information on age, formal education, training and experience for the services for which they are approved.

Suppliers engaged in acoustic emission (AE) testing (15.3.1 of Chapter 15, Part 3 of NK Rules)

- Operators carrying out AE testing are to have the following competence and experience:
 - Operators are to be certified to a recognized national or international industrial standard (e.g., Level I, ISO-9712 (as amended) or SNT-TC-1A (as amended))
 - Operators are to have adequate knowledge of ship structures sufficient to determine sensor placement.
- Supervisors carrying out AE testing are to have the following competence and experience:
 - Supervisors are to be certified to a recognized national or international industrial standard (e.g., Level II, ISO-9712 as amended or SNT-TC-1A as amended)
 - Supervisors are to have had one year of experience as an operator.

Suppliers engaged in thermographic testing (15.3.1 of Chapter 15, Part 3 of NK Rules) Operators carrying out AE testing are to have the following competence and experience:

- Operators are to be certified to a recognized national or international industrial standard (e.g., Level I, ISO-9712 (as amended) or SNT-TC-1A (as amended))
- Operators are to have adequate knowledge of ship structures sufficient to determine sensor placement.
- Supervisors carrying out AE testing are to have the following competence and experience:
 - Supervisors are to be certified to a recognized national or international industrial standard (e.g., Level II, ISO-9712 as amended or SNT-TC-1A as amended)
 - Supervisors are to have had one year of experience as an operator.

(4) Reporting (15.6 of Chapter 15, Part 3 of NK Rules)

- Reports for global vacuum testing of primary and secondary barriers are to contain the following:
 - Date of test
 - Identity of test personnel
 - Vacuum decay data for each tank
 - Summary of test results.
- Reports for acoustic emission testing are to contain the following:
 - Date of test
 - Supervisor and operator(s) certifications
 - Description of time and pressure of each cycle of the test
 - List and sketch detailing location of possible defects.
- Report for thermographic testing is to contain the following:
 - Date of test
 - Supervisor and operator(s) certifications
 - Differential pressures of all phases
 - List and sketch detailing location of thermal indications
 - Thermographic images of all phases of testing for thermal indications
 - Evaluation of thermal images indicating possible leaks.