# Gate terminal B.V.

**LNG RECEIVING TERMINAL, MAASVLAKTE ROTTERDAM**

**Vessel Approval and Compatibility**

Procedure Number: GT-OP-PR-002

Type of Document: Procedure

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| Rev | Date | Revision | Prepared by | Verified by | Approved by |

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# 1. Introduction

This procedure defines the steps to be taken for the compatibility study and the approval of a vessel and/or her sister vessel(s)

The Terminal will ensure that all vessels, owners and operators, intending to use its facility, have undergone a process of safety, quality and risk management evaluation prior to being approved to call at the LNG Terminal.

All vessels intending to use the LNG terminal, must comply with all applicable international and national legislation, recognized industry guidelines and best practices

## 2. Scope

The document applies to all LNG vessels intending to call at the LNG Terminal.

## 3. Definitions and Abbreviations

**Cargo:** Exclusively liquefied natural gas (LNG).

**Classification Society:** Any classification society being a member of the International Association of Classification Societies (**IACS**) with previous experience of classing LNG vessels; (Annex 1)

**Compatibility:** The process by which the Terminal and Shipper "Customer" will ensure that a particular LNGC will be able to safely berth, moor, discharge its cargo, unmoor and unberth while at GATE LNG Terminal. It will at a minimum takes into the dimensions and particulars of the LNGC and Terminal, mooring arrangement, ability to safely deploy the shore gangway, unloading arm envelope and communications (ESD and spoken) between the Terminal and LNGC;

**Customer:** A company, which has entered into a contract with the terminal for the purpose of receiving, storing and processing of LNG;

**Customer's LNG:** In respect of a particular Customer, LNG which is discharged at the terminal Receiving Facilities for or on behalf of that Customer;

**Customer's Vessel:** In respect of a particular Customer, an LNG vessel carrying or, where the context so requires, which is proposed or nominated to carry, that Customer's LNG for discharge at the GATE LNG Terminal;

**Deficiencies**

Non-compliance with any of the following:

- International Conventions
- Flag State laws and regulations
- Classification Society rules
- Port State and Local Authorities regulations

**Facility:** The facility for the receiving, ancillary storage, processing and regasification of LNG at GATE LNG terminal;

**GIIGNL:** Groupe International des Importeurs de Gaz Naturel Liquéfié ;

**GLE:** Gas LNG Europe (LNG Ship approval Procedure);

**ISGOTT;** International Safety Guide for Oil Tankers and terminals

**IMO:** The International Maritime Organisation;

**Liquefied Natural Gas** and **LNG:** Natural Gas in a liquid state at or below its boiling point and at a pressure of approximately 1 atmosphere;

**Non-accepted vessel:** A vessel that does not comply with GATE LNG Ship Approval & Compatibility (GT-OP-PR-002), which acceptance period has elapsed, or which is unknown to GATE LNG Terminal;

**Observation:** Non-compliance with SIGGTO, OCIMF and other safety guidelines;

**OCIMF:** Oil Company International Marine Forum;

**Owner:** Vessel's Owner, Charterer, or Technical Operator of the vessel, whoever is responsible for contracting with GATE LNG terminal;

**SIGTTO:** Society of International Gas Tankers and Terminal Operators;

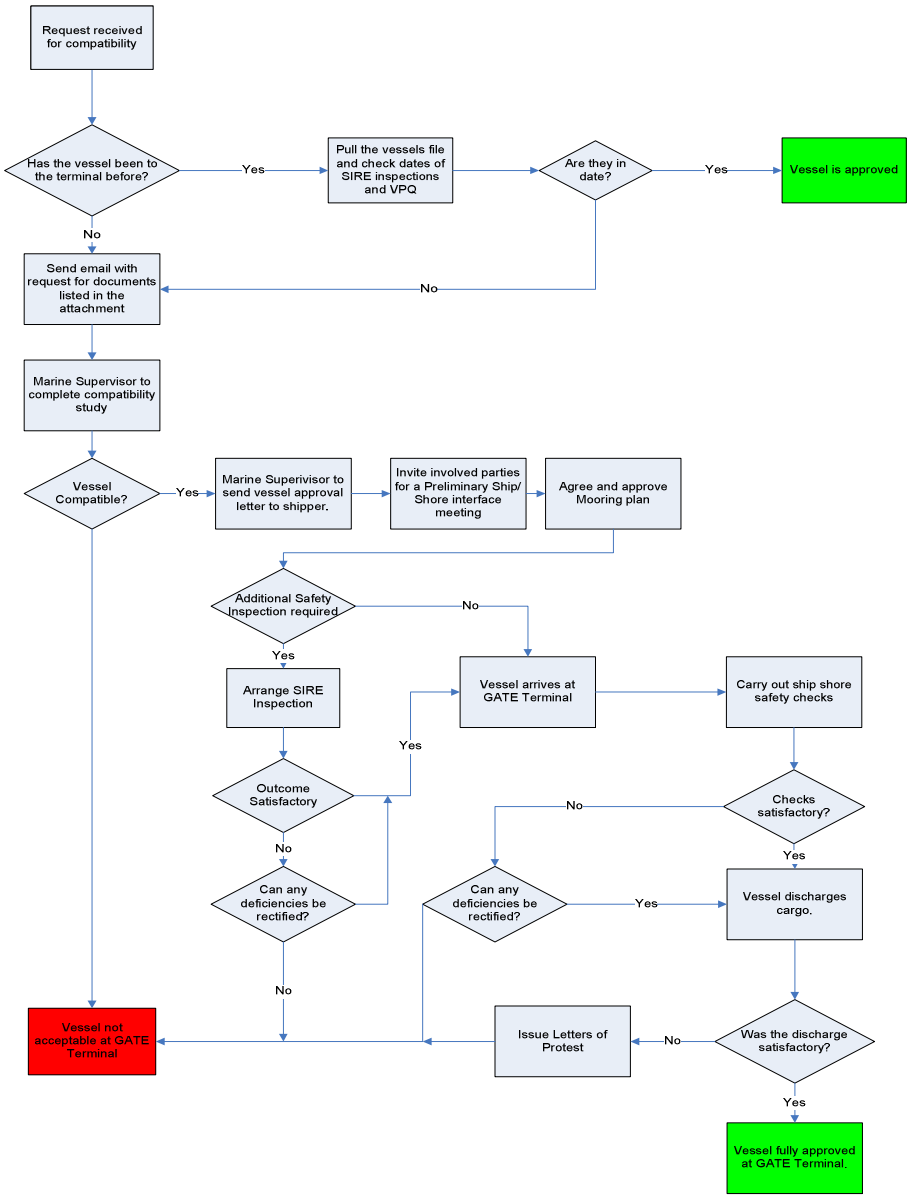
**SIRE:** Ship Inspection Report Programme. This system is a very large database of up-to-date confidential information about tankers, developed by OCIMF as a unique tanker risk assessment tool of value to companies, ship operators, terminal operators and Government bodies concerned with ship safety;

**Vessel:** An LNG carrier which Owner has requested GATE LNG Terminal for vessel approval;

**Vetting:** The process that will evaluate the fitness of LNGC to carry their cargoes to and discharge them. The vetting process takes into account the use of Ship inspections (e.g. SIRE or ship owner), Port State Control inspections, Flag State profile, Class profile, Casualty data, Owners profile, Terminal feedback and for older vessels a Condition Assessment Program certificate or Fatigue analysis against a standard.

GATE is not vetting vessels, but reserves the right to have vessels vetted.

# 4. Compatibility Flow Chart



# 5. Vessel Approval Procedure

The vessel approval and compatibility procedures of Gate terminal is in line with the GLE LNG Ship approval Procedure issued on 29th June 2004.

The objective of the ship approval procedure is to check the compatibility of the ship requesting access in terms of mechanical design, communication and safety; it aims at insuring the safety of the unloading operations pro-actively and sustaining the excellent safety record of the LNG industry.

The approval procedure mostly rely on the existing international rules and regulations, implemented either by the Flag State of the vessel or by the Port State of the Terminal, and on professional societies recommendations such as ISGOTT, OCIMF, SIGTTO or GIIGNL

## 5.1. Structure of the Procedure

Shippers proposing LNG tankers to unload at Gate terminal shall undergo the following chronological steps for proposed ships:

- Step 1: Preparatory Information exchange;
- Step 2: Ship-Shore Interface study;
- Step 3: Ship safety Inspections;
- Step 4: Unloading Test and Ship Approval;
- Step 5: Ship Approval Follow Up.

## 6. Step 1 – Preparatory information exchange

The main objective of this first step is to gather all necessary material (information, data, drawings…) to study the good matching of ships to berth.

One of the most important steps of this standard is the information exchange between:

- Gate terminal to the Shipper;
- Shipper to Gate terminal.

The documents listed hereunder form the exhaustive list of minimum required documents to be submitted by each party before final approval of the ship; these documents may be circulated either in one batch at the beginning of the procedure or progressively along the progress of the ship approval procedure.

### Step 1.1 Information to be submitted by GATE LNG terminal to the Shipper

After receiving the request from the Shipper who wishes to import LNG using a ship not listed in the Gate Vessel Register, Gate terminal shall send to the Shipper the following documents:

- Master Marine Service Manual
- Gate Populated Compatibility Spreadsheet

Remark: Shipper should receive the Port Information Guide and the Port Bye laws related to marine aspects for port access and berthing directly from Port Authority but can be found following below links:

Port Information Guide

Port Bye Laws

### Step 1.2 Information to be submitted by Shipper to the GATE LNG terminal

Listed below is the information that the Shipper shall send before the preliminary meeting to Gate terminal during the approval procedure application:

- Completely filled in Gate Populated Compatibility Spreadsheet;
- LNG Carrier General Arrangement;
- A OCIMF Vessel Particular Questionnaire less than one year old;
- An Optimoor mooring study or an accepted industry equivalent;
- A Gas Form C;
- An OCIMF TMSA report less than one year old;
- Pump capacity curves and maximum discharge rate;
- Survey Class Status Report less than one (1) month old;
- An OCIMF SIRE Inspection Report available on the OCIMF SIRE website. For LNG Tankers less than twenty (20) years old, the SIRE report shall be less than one (1) year old, and for LNG Tankers more than twenty (20) years old, the SIRE report shall be less than six (6) months old);
- LNG Tanker's certificate of entry with its P&I Club (see Annex 2);
- LNG Tanker's Cargo Tank Gauging Tables;
- LNG Tanker's Custody Transfer Calibration Certification;

- Plan diagram showing all positions and SWL's of mooring bits and closed chocks;
- Copy of certificate showing rated capacity of escort towing bits (The LNGC should be fitted with a escort mooring bit or other suitable set of bits and associated closed chock lead of at least 200t SWL as per OCIMF guidelines);
- Detailed manifold drawing showing dimensions and design of spool pieces and strainer arrangements;
- A photo of the gangway landing area on the vessels Port side, clearly showing the foot print for the gangway pedestal (1.5 meters by 1.5 meter); which should be at 14 and at 22 meters (plus/minus 10mtr) astern of the ships vapour manifold;
- Ship Operational and safety Procedures while alongside; These procedures concerning mooring, cargo transfer and fire fighting pertain to ISM code.
- If the vessel is more than 20 years old a valid CAP cert less than 2 years old.

# 7. Step 2 – Ship / Shore Interface study

In order to verify not only the technical compatibility, but also the operational aspects it is important to make sure that ship and terminal know each other's Ship / Shore Safety Working Procedures to work on the safety way. This is possible by careful scrutiny of all documents exchanged during step 1.
It is the duty of the Marine Supervisor to ensure that sufficient information has been gathered and exchanged in order to perform this study.

The Marine Supervisor will either perform or review the study depending on the role being played and reach a judgment of Compatible, Compatible with recommended mitigation or Incompatible.

The process used is a comparative one. The ship and terminal specifications are compared side by side to determine if they are mutually compatible.
After the document analysis a Vessel Approval Letter will be sent to the Shipper giving the preliminary results of the document study (see Annex 3)

### Step 2.1 Document analysis

After having closely examined the aforementioned information, Gate terminal performs an interface study to establish a technical ship acceptability. Conclusions of this interface study are then transmitted to the Shipper. In particular the following minimum criteria are checked:

- Physical and technical compliance with terminal dimension;
- Nautical and safety aspects;
- Compliance with Terminal Communication and ESD system;
- Certification of gauge tables[1] and Custody Transfer Measurement[2].

[1] Certification of gauge tables shall be approved by national authorities (i.e. custom authority) and by Gate terminal before the first unloading. This certification shall be carried out by a qualified organism (for instance the Japanese NKKK)
[2] Custody Transfer Measurement system specifications and methods shall comply with the GIIGNL LNG custody transfer handbook recommendations.

### Step 2.2 Preliminary Ship / Shore Interface Meeting

Pursuing the document analysis a Preliminary Ship / Shore Interface Meeting, attended by at least representatives of the Ship Owner, Shipper and Gate terminal is called to examine berth, Ship-Shore interfaces, safety and communication items. (Pilots, Linehandlers Tug companies and Local Ship Agent will also be invited)

The agenda of the meeting will be as follows:

1. General Measures of Nautical Management (Nautical Admission Policy)
2. Discussion about the mooring arrangement (Optimoor Calculation Note)
3. Discussion of the Towing arrangement for the tugboats (Towing procedure)
4. Overview of the Ship Shore Interface Procedure
5. Discussion about the technical Interfaces
    a. E-link: instrumentation link

b. Manifold configuration: loading arms, connection, flange surface, joints …
c. Process: cooldown procedure, unloading procedure
d. Custody Transfer Method
e. Bunkers and other supplies
f. Miscellaneous

**Step 2.3 Mooring Plan**

During above mentioned meeting the mooring plan will be agreed and approved by all parties involved. A copy of this mooring plan will be handed over to the pilots and the linehandlers during this meeting or, if they are not present, they will be forwarded to them before the vessel arrives.

## 8. Step 3 – Ship Safety Inspections

Gate terminal reserves the right for a ship inspection (SIRE inspection) prior to the first berthing. This inspection is performed by a Terminal endorsed inspector.

Ship acceptance by Gate terminal following such inspection shall be without prejudice to the responsibility of the parties as specified in the relevant contracts for the ship to comply with all applicable rules and regulations and/or for any and all consequences of any such non compliance.

A list of remarks and/or deficiencies, if any, is handed over to the ship master at an exit meeting held onboard. The list of above remarks and/or deficiencies is sent to the Shipper who shall forward them to the ship owner and/or the Charterer. Upon receipt and review of the implementation schedule of the corrective actions, Gate terminal shall decide whether the ship can be received at the terminal.

Shipper shall promptly notify Gate Terminal or procure that Gate terminal is notified if any of its LNG ships, pre-approved or approved according this Ship Approval Procedure, has been rejected or has failed a ship safety inspection at another LNG terminal.

Shipper shall provide Gate terminal with all relevant technical details and information in that respect.

# 9. Step 4 – Unloading Test and Ship Approval

Depending on the outcome of the previous steps, a ship may either be approved for an Unloading test, or rejected. In the event that a Customer's LNGC is rejected, the Customer shall be entitled, at its own cost and risk, to request that Customer's LNGC undergo a further inspection in accordance with applicable agreements.

### Step 4.1 Unloading Test

To verify a good matching of the ship to berth and confirm or not the authorization, the ship shall undergo the Unloading test.

The unloading test primary objective is to assess the actual understanding of the Terminal interface by the crew of the Customer's LNGC.

Immediately before starting the LNG cargo unloading, a pre-discharge meeting shall be held on-board. During this meeting

- a review and validation of the SSSP shall be completed in order to have a duly implemented document, including mooring, fire fighting, cargo transfer, cargo tank management, unloading communication and operational procedures'
- a finalised version of the SSSP shall be signed by the Master and the Terminal; and
- the Master and Gate terminal shall check the Ship and Shore Safety Interface according to ISGOTT Ship Shore Safety Check List (SSSCL).

### Step 4.2 Conclusion of the ship approval procedure

Depending on the findings of the Unloading Test, the terminal shall decide if:

- The ship will not be accepted in future at the Terminal;
- The ship will be accepted in future for another Unloading test pending to implementation of corrective actions listed by the Terminal
- The ship will be accepted in future without being subjected to further tests for a three year approval period

## 10. Step 5 – Ship approval follow up

Before and during each call at the Terminal, Shipper shall provide instant assistance to the Terminal, to clarify and/or solve any urgent issues that may arise before or during each call of one of the Shipper's LNGC.

This Shipper's instant assistance can preferably be implemented by notifying the Terminal for each call of who will be the Shipper's representative for that specific call. The Shipper shall provide the Terminal all necessary and relevant details on how the Terminal can reach Shipper's representative via telephone, mobile phone, e-mail etc.

This Shipper's representative shall be on continuous standby before and during the ship's call, and be empowered to make all necessary "ad hoc" operational decisions on behalf of the Shipper, e.g. regarding arising safety or security issues, LNG cargo off-spec issues, ship's chandler's issues, bunkering or waste handling issues, etc.

During the approval period, Gate terminal shall be kept informed of any modifications brought to the ship related to either technical, safety and managerial issues.

Based on these modifications, Gate terminal shall verify whether the ship needs a new approval.

## ANNEXES

### Annex 1: Classification Societies: I.A.C.S. MEMBERS

- DNV. Det Norske Veritas
- LRS. Lloyd's Register of Shipping
- BV. Bureau Veritas
- ABS. American Bureau of Shipping
- GL. Germanischer Lloyd
- NKK. Nippon Kaiji Kyokai
- RS. Russian Maritime Register of Shipping
- CCS. China Classification Society.
- KR. Korean Register of Shipping
- RINA. Registro Italiano Navale

**Annex 2: Protection and Indemnity Clubs**

PARTIES TO THE POOLING AGREEMENT

Club separate management companies:

- American Club (America) Ship owners Claims Bureau Inc
- Britannia (England) Tindall Riley (Britannia) Ltd
- Gard (Norway) Gard Services AS
- Japan Club (Japan)
- London (England) A. Bilbrough & Co. Ltd.
- North of England (England) North Insurance Management Ltd
- Ship-owners P&I (Luxembourg) The Ship-owners' Protection Ltd
- Skuld (Norway)
- Standard (Bermuda) Charles Taylor & Co. Ltd.
- Steamship Mutual (Bermuda) Steamship Insurance
- Management Services Ltd
- Swedish Club (Sweden)
- United Kingdom (Bermuda) Thomas Miller P&I Ltd.
- West of England (Luxembourg) West of England Ship Owners
- Insurance Services Ltd.

## Annex 3: Vessel Approval & Compatibility Letter

| | |
|---|---|
| Date: | |
| Vessel: | |
| Attention: | |
| Company: | |
| Address: | |

| Compatibility/Approval Item | Satisfactory / Unsatisfactory | Remarks |
|---|---|---|
| Physical dimensions | | |
| Gangway Landing area | | |
| ESDS System Primary | | |
| Secondary | | |
| ESDS Location | | |
| Unloading Arm Envelope | | |
| Manifold Connections | | |
| Optimoor Port Side | | |
| Mooring Equipment | | |
| SIRE/VPQ (max12 months) | | |
| CAP (LNGC's >20 years) | | |
| Class Status | | |
| P&I Club Entry | | |
| Full Approval* | | * See Note |

*Full approval will only be issued following ship safety inspection on arrival at the Gate Terminal and on satisfactory completion of cargo operations

The above vessels' particulars have been inspected and are deemed to be compatible with the Gate Terminal, but require clearance when nominated for business. Furthermore, the vessel will only be accepted subject to terminal safety inspection on arrival alongside.

Regards

Peter-Jan Capello
Marine Supervisor
Gate Terminal B.V.