

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Insulation Materials for Gas Carriers

with type designation(s)
LNG Plywood / RIGA Shiplly

Issued to

Latvijas Finieris AS
RIGA, Latvia

is found to comply with
Gaztransport & Technigaz Specification Nr. M3010, Plywood, Rev. 3, March 2015

Application :

For use in MARK III type LNG carriers built under GTT's license.

Issued at **Høvik** on **2016-05-19**

for **DNV GL**

This Certificate is valid until **2018-06-30**.

DNV GL local station: **Riga**

Approval Engineer: **Gisle Hersvik**

Arnstein Gloppen
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Examination Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-022182-1**
Certificate No: **TAK00000A6**

Product description

LNG Plywood / RIGA Shipply:

Plywood made from birch bonded with phenolic resin glue, thickness 9 mm (type A), 12 mm (type A, D), 15 mm (type B), 18 mm (type A) and 92 mm (type C).

Place of production

"Latvijas Finieris" AS, Mill Lignums, Finiera iela 6, Riga LV-1016, Latvia

"Latvijas Finieris" AS, Mill Furniers, Bauskas iela 59, Riga LV-1004, Latvia

"Latvijas Finieris" AS, Mill Verems RSEZ SIA, Lejas Ančupani, Veremu pagasts, Rezeknes rajons LV-4604, Latvia

"Latvijas Finieris" AS, Mill Hapaks, Finiera iela 2, Riga LV, Latvia

DNV GL local office: Riga

Responsibility

The Company (stated on the front page of this Certificate) takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

Plywood for use in LNG Mark III insulation elements, for minimum temperature of cargo of -163°C'.

The products are only approved for use in MARK III type LNG carriers built under licence from GAZTRANSPORT & TECHNIGAZ SA (GTT). Deliveries to actual shipbuilding projects shall be in compliance with the:

- "Plywood", GTT Document no. M3010 Rev. 3, March 2015
 - GTT Document no. MH1010A Rev. 7, MH1010B Rev. 8, MH1010C Rev. 7 and MH1010D Rev. 0.
- The testing earlier included to the MH-documents is now in the revision B of the M-document.

The product shall have a valid approval from GTT.

Type Examination documentation

- 1.
- 2.
- 3.
- 4.
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Tests carried out

Type Testing carried out in accordance with **Type Examination documentation**.

The Type Test results on which this Type Examination is based are found in the documents:

- GTT Approval File AF3010H08 Rev. 01, "Plywood Latvijas Finieries - Lignums, Furniers and Hapaks mills - M3010 Rev3" of 2015-07-22.
- GTT Approval File AF3010H05 Rev. 02, "Plywood Latvijas Finieries - Verems mills - Mark III" of 2015-08-06.

Marking of product

Product/package shall be marked with the *manufacturer's name*; **"Latvijas Finieris" AS, Latvia** and *type designation*.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV GL Type Examination Certificate.

Periodical Assessment

The scope of the Periodical Assessment is to verify that the conditions stipulated for the Type Examination is complied with and that no alterations are made to the product design or choice of materials.

Survey to be performed after two (2) years (Certificate Retention) and at renewal after four (4) years (Certificate Renewal).

The main elements of the Periodical Assessment are:

- Ensure that **Type Examination documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Examination documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV GL Type Examination Certificate.

END OF CERTIFICATE