

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Insulation Materials for Gas Carriers

with type designation(s)
Birch Plywood; SVEZA Gas N096

Issued to
SVEZA Ust-Izhora, JSC
St.Petersburg, Russian Federation

is found to comply with
Gaztransport & Technigaz Specification Nr. M3502, Plywood, Rev. A, January 2007

Application :

For use in N096 type LNG carriers built under GTT's license.

Issued at **Høvik** on **2016-12-22**

This Certificate is valid until **2021-12-21**.

DNV GL local station: **St. Petersburg**

Approval Engineer: **Gisle Hersvik**

for **DNV GL**

Martin Strande
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.

Product description

SVEZA Gas NO96: Plywood made from birch bonded with phenolic resin glue, thickness 6.5, 9, 12, 15, 21, 24, 30 and 35 mm.

Application/Limitation

Plywood for use in the thermal insulation of Liquefied Gas cargo containment systems, for minimum temperature of about -160 °C.

The products are only approved for use in NO96 type Liquefied Gas carriers built under licence from GAZTRANSPORT & TECHNIGAZ SA (GTT). Deliveries to actual shipbuilding projects shall be in compliance with the "Plywood", GTT Specification Nr. M3502 Rev. A, Jan 2007.

The product shall have a valid approval from GTT.

Type Examination documentation

1. Assessment Report from DNV GL St. Petersburg of 2016-12-08.
2. Application for Type Examination of 2016-01-13, Quality Manual "FSF SVEZA Gas NO96 plywood manufacturing" Rev. 1 2016-09-23, ISO 9001-Certificate
3. GTT Approval Letter of 2016-10-10, GTT Approval File; AF3502H07 PLYWOOD SVEZA - UST-IZHORA MILL – NO96 of 2016-10-04 and GTT Reports;
 - MAT-RPT-001625, Rev. 01; M3502 REVA - 9MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-02.
 - MAT-RPT-001654, Rev. 01; M3502 REVA - 6.5MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-02.
 - MAT-RPT-001655, Rev. 01; M3502 REVA - 12MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-02.
 - MAT-RPT-001656, Rev. 01; M3502 REVA - 15MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-02.
 - MAT-RPT-001657, Rev. 01; M3502 REVA - 21MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-04-25.
 - MAT-RPT-001658, Rev. 01; M3502 REVA - 24MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-02.
 - MAT-RPT-001659, Rev. 01; M3502 REVA - 30MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-09.
 - MAT-RPT-001660, Rev. 01; M3502 REVA - 35MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-05-09.
 - MAT-RPT-001661, Rev. 01; M3502 REVA - PLYWOOD BOXES - SVEZA UST-IZHORA MILL of 2016-06-09.
 - MAT-RPT-001709, Rev. 01; M3502 REVA - 30MM PLYWOOD - SVEZA UST-IZHORA MILL of 2016-07-25.

Tests carried out

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

Marking of product

Product/package shall be marked with the *manufacturer's name and address* 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 2 and 3.5 years (Certificate Retention) and at renewal after 5 years (Certificate Renewal).

The main elements of the Periodical Assessment are:

- Ensure that **Type Examination documentation** is available.



Job Id: **262.1-024650-1**
Certificate No: **TAK00000MD**

- 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