



Marine & Offshore
Division

Certificate number: 42373/A0 BV

File number: ACM204/2342/1

Product code: 7401H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

JSC SVEZA Ust-Izhora
SAINT-PETERSBURG - RUSSIAN FEDERATION

for the type of product

THERMAL INSULATION MATERIALS FOR LIQUEFIED GAS TANKS

Birch Plywood SVEZA Gas NO96.

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships NR467 Part D, Ch 9, Sec 4.

IMO IGC Code.

GAZTRANSPORT & TECHNIGAZ Specifications M3000 and M3502.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 06 Dec 2021

For BUREAU VERITAS,

At BV ST PETERSBURG, on 06 Dec 2016,

Valery Azovtsev



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 October 2014

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Birch Plywood SVEZA Gas NO96

Birch Plywood type A or type B used for the construction of insulating boxes and connecting elements of GazTransport & Technigaz NO96 membrane type LNG containment system.

- Plywood of nominal thickness 6.5 mm, containing 5 plies.
- Plywood of nominal thickness 9 mm, containing 7 plies.
- Plywood of nominal thickness 12 mm, containing 9 plies.
- Plywood of nominal thickness 15 mm, containing 11 plies.
- Plywood of nominal thickness 21 mm, containing 15 plies.
- Plywood of nominal thickness 24 mm, containing 18 plies.
- Plywood of nominal thickness 30 mm, containing 21 plies.
- Plywood of nominal thickness 35 mm, containing 25 plies.

2. DOCUMENTS AND DRAWINGS :

2.1 Quality Manual, FQS TI 24-02-2016 rev.1 "FSF SVEZA Gas NO96 plywood manufacturing according to GTT M3502 specification" issued by NAO SVEZA Ust-Izhora on 23.09.2016.

2.2 GazTransport & Technigaz specifications:

- M3000 Specifications for GTT Materials - Guidelines, rev. 06, January 5th 2016
- M3502 Plywood, rev. A (Jan 2007)

2.3 Approval File n° AF3502H07 rev. 01 issued by GazTransport & Technigaz on 04/10/2016.

3. TEST REPORTS :

Type tested in accordance with GazTransport & Technigaz M3502 specification:

- MAT-RPT-001625 rev.01 issued by GazTransport & Technigaz on 2nd May 2016.
- MAT-RPT-001654 rev.01 issued by GazTransport & Technigaz on 2nd May 2016.
- MAT-RPT-001655 rev.01 issued by GazTransport & Technigaz on 2nd May 2016.
- MAT-RPT-001656 rev.01 issued by GazTransport & Technigaz on 2nd May 2016.
- MAT-RPT-001657 rev.01 issued by GazTransport & Technigaz on 25th April 2016.
- MAT-RPT-001658 rev.01 issued by GazTransport & Technigaz on 2nd May 2016.
- MAT-RPT-001659 rev.01 issued by GazTransport & Technigaz on 9th May 2016.
- MAT-RPT-001660 rev.01 issued by GazTransport & Technigaz on 9th May 2016.
- MAT-RPT-001661 rev.01 issued by GazTransport & Technigaz on 9th June 2016.
- MAT-RPT-001709 rev.01 issued by GazTransport & Technigaz on 25th July 2016.

4. APPLICATION / LIMITATION :

Plywood Boards are intended to be used as part of the LNG containment system GazTransport & Technigaz NO96.

Minimum service temperature: - 160°C.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 The plywood of thicknesses 6.5, 9, 12, 15, 21, 24, 30 and 35 mm is to be supplied by **JSC SVEZA Ust-Izhora** in compliance with the type described in this certificate.

This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

JSC SVEZA Ust-Izhora has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.2 - Production, testing and inspection to comply with GazTransport & Technigaz Approval File n° AF3502H07.

6. MARKING OF PRODUCT :

Each batch of product or packaging, is to be marked for purpose of its traceability.

7. OTHERS :

7.1 - It is the manufacturer's responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This Type Approval Certificate is based on the Approval letter ref. 16-0677 issued by Gaztransport & Technigaz on October 10th 2016.

***** END OF CERTIFICATE *****