

To the attention of Alexey Borisovich Stepanov

Ref: 22-0231

Saint-Rémy-les-Chevreuse, September 8th 2022

APPROVAL of PLYWOOD

<u>Approval Report(s)</u>: MAT-RPT-003106 (rev.1); MAT-RPT-003107 (rev.1) & MAT-RPT-003108 (rev.1)

Approval File : AF3513H03 (rev.1)

On the basis of the results of tests as compiled in the referenced Approval Report(s), it is confirmed that birch plywood of thicknesses 35, 37 & 42 mm comply with the technical requirements of M3513 (rev. 1) and is approved by GTT for use in the construction of LG (Liquified Gas) cargo containment systems according to NO96-L03 & -L03+ design(s).

This plywood product, fabricated by VYATKA PLYWOOD MILL, is to be produced according to a dedicated quality control & production plan. It is to be used as a material component in the manufacture of insulation panels.

Assurance of the quality and conformity of the delivered product, is to be preserved by VYATKA PLYWOOD MILL in accordance with GTT's M 3000.

Any modification to the fabrication procedure or material characteristics shall be submitted to GAZTRANSPORT & TECHNIGAZ for validation prior to acceptance. Complementary tests shall be requested before revalidation of the approval.

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Nathalie REMAUD Supplier Development & Quality Manager

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Page 1 of 1 Certificate No: LR22412960LNG Issue Date: 28/09/2022 Expiry Date: 27/09/2027

Certificate of General Approval for LNG Containment System Component

This certificate is issued to the company below to certify that the undernoted LNG system components has been examined for conformity with Lloyd's Register's "Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk", together with the relevant Gaz Transport & Technigaz (GTT) specifications and have been found to be acceptable.

Manufacturer	Vyatka Plywood Mill, Ltd
Address	Kommuny str., b. 1, Kirov, Kirov region, 610013, Russian Federation
Product Name	Birch Plywood Cleat (thicknesses 35, 37 & 42 mm), roll gluing process
Product Type	Plywood Cleat
Approval Documentation	 35 mm plywood cleat test report MAT-RPT-003106, dated Jan 2022 37 mm plywood cleat test report MAT-RPT-003107, dated Jan 2022 42 mm plywood cleat test report MAT-RPT-003108, dated Jan 2022 LR's Visit report No. SPB2111060, dated 15 Aug 2021
Reference Documentation	Plywood Cleat GTT Specification No. M3513, Rev.01 (December 2014)
Application	The products listed above may be used as indicated on approved drawings for vessels classed with Lloyd's Register in GTT's NO96 L03 & L03+ type membrane LNG containment systems only. If either the GTT reference documentation mentioned above is altered to a later version, or if the product listed above changes in design or composition, this certificate becomes invalid.

Bousser

Dariusz Boryszewski Containment Systems Lead Specialist to Lloyd's Register EMEA A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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中国船级社 CHINA CLASSIFICATION SOCIETY 工厂认可证书

CERTIFICATE OF WORKS APPROVAL

兹证明本证书所述制造厂具备按照下列标准的要求生产本证书所列产品的能力和条件。 This is to certify that the manufacturer stated in the certificate meets the requirements of the standards listed below and is available with the ability and conditions to produce the products described in the certificate.

制造厂/Manufacturer

LLC Vyatsky Plywood Mill

地址/Address

No.1, Kommuny Street, Kirov, 610013, Kirov Region, Russian Federation

产品名称/Product

非金属材料

Non-Metallic Material

货舱承木

Compressed wood for supporting tanks

认可标准/Approval Standard

1. Gaztransport & Technigaz (GTT) specifications listed in remarks

2. 中国船级社《钢质海船入级规范》(2022)及其变更通告 第1篇第3章

Chapter 3, Part One of China Classification Society Rules for Classification of Sea-Going Steel Ships 2022 and its Change Notices

用于/Intended for

船舶与海上设施/Ships and Offshore Installations



本证书根据中国船级社规范和相关规定签发。所有证书页为一个整体,必须同时使用。纸质证书每页均须由本社盖章方为有效,电子证书含数字签。 有效,本证书复印件无效。任何单位和个人均不应摘录或节选本证书的部分内容。有关方对所持证书的真实性有疑问时,可以向我社检验机构咨询。 usly. No certificate is regarded as valid. Any part of the certificate is not to be extracted or abridged by any unit or individual in any form. Related parties who are doubted about the authenticity of the certificate may inquire of the Society or its offices. Form No: W01 联系方式/Contact Us,见本社官方网站/See official web site of the Society(http://www.ccs.org.cn)



产品明细/Product Description

货舱承木/Compressed wood for supporting tanks (M0001)

名称/Name	属性(值)/Value	单位/Unit
材料/Material	Birch Plywood for GTT N096 design Thickness 6.5, 9.0, 12.0, 15.0, 21.0, 24.0, 30.0, 35.0, boxes fabrication	mm

货舱承木/Compressed wood for supporting tanks (M0002)

名称/Name	属性(值)/Value	单位/Unit
材料/Material	Birch Plywood for GTT N096-L03 and N096-L03+ design	
小小小 Material	Thickness 35, 37, 42	mm

批准的图纸/Approved Drawings

图纸批准号/ Drawings Approval No.: HB22PWA00007

产品认可试验报告/ Approval Test Report

试验报告编号/ Test Report No. : MAT-RPT-003106 试验报告日期/ Test Report Date : 2022-01-05
试验报告编号/ Test Report No. : MAT-RPT-003107 试验报告日期/ Test Report Date : 2022-01-05
试验报告编号/ Test Report No. : MAT-RPT-003108 试验报告日期/ Test Report Date : 2022-01-05
试验报告编号/ Test Report No. : MAT-RPT-002742 试验报告日期/ Test Report Date : 2020-07-20
试验报告编号/ Test Report No. : MAT-RPT-002179 试验报告日期/ Test Report Date : 2018-07-23
试验报告编号/ Test Report No. : MAT-RPT-002181 试验报告日期/ Test Report Date : 2018-07-26
试验报告编号/ Test Report No. : MAT-RPT-002182 试验报告日期/ Test Report Date : 2018-07-23
试验报告编号/ Test Report No. : MAT-RPT-002183 试验报告日期/ Test Report Date : 2018-07-26
试验报告编号/ Test Report No. : MAT-RPT-002186 试验报告日期/ Test Report Date : 2018-07-30
试验报告编号/ Test Report No. : MAT-RPT-002184 试验报告日期/ Test Report Date : 2018-07-26
试验报告编号/ Test Report No. : MAT-RPT-002180 试验报告日期/ Test Report Date : 2018-07-23
试验报告编号/ Test Report No. : MAT-RPT-002185 试验报告日期/ Test Report Date : 2018-07-26

认可后的产品检验方式/Method of Product Inspection after Approval

按规范只认可不进行产品检验的产品/The product approved only in term of the rules: 认可后的产品检验由制造厂按本社批准的产品检验计划进行检验,经检验合格后由制造厂签发合格证明,并连同该产品的本社认可证书复印件一并交付用户,制造厂对产品符合公约、法规、本社规范和本社认可的标准规定负责。

认可后的产品检验方式/Method of Product Inspection after Approval

After approval, product inspection should be carried out by the Manufacturer in accordance with the product inspection scheme approved by the Society. Upon satisfactory inspection, and the Quality Certificate issued by the Manufacturer should be provided to the purchaser together with the copy of the approval certificate issued by the Society. The manufacturer should take responsibility for the product being in compliance with the convention, statutory regulation, the Society rules and the standard accepted by the Society.

认可保持条件/Maintenance Requirements of Approval

1. 工厂认可后,如果图纸、技术文件、工艺规程有较大改变,应征得本社同意。若改变涉及或影响到产品的设计、主要制造材料、关键工艺或产品的特性、特征,则与特性有关的图纸和技术文件应经过本社审批,并在检验机构认为必要时,经本社检验人员到厂进行检查和见证有关试验,其结果应能证实仍符合认可条件。

After works approval, if there are any major changes to the drawings, technical documents, specifications, prior consent should be obtained from the survey office of the Society. If the changes involve or affect product design, major construction materials, key workmanship or product

characteristics and properties, drawings and technical documents related to properties are to be examined and approved by the Society and, where deemed necessary by the survey office, the surveyor to the Society will go to the manufacturer to inspect or witness relevant tests and the results of the tests should be able to demonstrate compliance with the approval conditions

2. 工厂的质量管理体系应保持有效运行,并且与认可时一致。如果质量管理体系发生改变,应经原体系认证机构审核 并报本社批准。

The quality management system of the factory shall be ensure effective operation, and shall be the same as the situation of approval. If there are any changes to the quality management system, auditing of the original certification organization for quality management system and the society's approval shall be obtained.

3. 工厂认可证书获得者应接受本社每年一次的定期审核,定期审核日为认可证书期满之日对应的每一周年日,检查工 作应在定期审核日的前后三个月内进行。Those who have obtained the certificate of works approval shall receive periodical audit done by the Society on an annual basis. The date of periodical audit shall be each anniversary date which corresponds to the date of expiry of the relevant certificate and the periodical audit shall be done within a time span of three months before and after the annual surveillance date.

4. 在认可证书有效期内,本社检验人员可在未经事先通知的情况下对工厂的产品制造过程进行审核,以验证产品的生产是否符合业经本社批准的图纸和文件。工厂应予以配合。

Within the validity of the approval certificate, the surveyor to the Society may pay unannounced audit to the manufacturing process of the product in order to confirm whether it is in compliance with the drawings and documents approved by the Society. The factory should provide an active cooperation and necessary for the surveyor.

5.认可证书有效期内,如果出现可能导致本社暂停或撤消认可的情况,工厂应及时采取有效的纠正措施。 Within the validity of the approval certificate, if cases occur that may cause the Society to suspend or withdraw the certificate, the manufacturer should take corrective actions in a prompt and effective manner.

备注/Remarks

1, The product is approved as insulation plywood, used in GTT N096, N096-L03 and N096-L03+ LNG containment system.

2, Refer to GTT specification M3502 Rev.A and M3513 Rev.1 for approval ratings.

3, GTT approval certificate No.18-0574, 21-0057, 22-0231 reviewed and accepted as part of approval documents.

4, The declaration of asbestos-free submitted by manufacturer has been reviewed by the Society. However, liability of the manufacturer to guarantee the products are asbestos-free to purchaser under contract will not be exempted.

5. This Certificate is modified from and supersedes the previous Works Approval Certificate No. HB22PWA00001.

中国船级社汉堡分社 CCS Hamburg Branch