

LABORATORY APPROVAL

Certificate No.: LA-DNV-SE-0436-05776-1 Issued: 2022-06-30

Valid until: 2024-10-31

Issued for:

Testing of Materials for Wind Turbines, Fibre Reinforced Plastics

Issued to:

Material Testing Gurit Americas Inc.

555 Boul. Poirier, Magog, Quebec, J1X7L1, Canada

According to:

DNV-SE-0436:2021-09 Shop approval in renewable energy

Applying:

DNV-SE-0441:2021-10 Type and component certification of wind turbines

Based on the document:

CR-LA-DNV-SE-0436-05776-1

Certification Report, dated 2022-06-30

This laboratory approval is valid for the test methods listed in Annex 1.

Changes in the relevant processes (testing and quality) or in responsible personnel as named in this certificate are to be approved by DNV. See Annex 1 for listing of personnel.

Hellerup, 2022-06-30

For DNV Renewables Certification

Hamburg, 2022-06-30

For DNV Renewables Certification

Bente Vestergaard

Service Line Leader, Type and Component Certification

Bernhard Krüger Project Manager



LABORATORY APPROVAL - ANNEX 1

Certificate No.:

LA-DNV-SE-0436-05776-1 Page 2 of 3

Personnel

Head of Laboratory: Kellen de Souza

The authorized personnel who will sign the test reports:

Kellen de Souza

Dennis Bisson

List of approved test methods

Mechanical and Technological

ASTM C-273	Standard Test Method for Shear Properties of Sandwich Core
ASTM C-297	Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
ASTM C-365	Standard Test Method for Flatwise Compressive Properties of Sandwich Cores
ASTM C-393	Standard Test Method for Core Shear properties of Sandwich core constructions by Beam flexure
ASTM D-1621	Standard Test Method for Compressive Properties of Rigid
ASTM D-1623	Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
ASTM D-2736	Practice for determination of Hydrostatic Compressive Strength of Syntactic Foam (withdrawn standard)
DIN 53421	Testing of Rigid cellular plastics-Compression test (withdrawn standard)
FOR-0934	Peel test of sandwich panel, internal method
FOR-0941	Impact resistance of sandwich panel, internal method
ISO 844	Rigid cellular plastics - Determination of compression properties
ISO 1922	Rigid cellular plastics - Determination of shear properties

Analytical

ASTM C-271 Standard Test Method for Density of Sandwich Core Materials

ASTM C-272 Standard Test Method for Water Absorption of Core Materials for

Sandwich Constructions



LABORATORY APPROVAL - ANNEX 1

Certificate No.:

LA-DNV-SE-0436-05776-1 Page 3 of 3

DIN 53424 Testing of Rigid Cellular Materials; Determination of Dimensional

Stability at Elevated Temperatures with Flexural Load and with

Compressive Load (withdrawn standard)

FOR-0910 Water absorption under hydrostatic pressure, internal method

FOR-0952 Resin Uptake of Rigid cellular plastics, internal method

ISO 845 Cellular plastics and rubbers — Determination of apparent density

ISO 2896 Rigid cellular plastics — Determination of water absorption