



TEST LABORATORY RECOGNITION STATEMENT

No. REC013022Y4


This is to certify that:

<i>Description</i>	Test Laboratory Recognition
<i>Type</i>	Composite Materials Test
<i>Applicant</i>	LINSET & CO Srl Via Turati, 12/A 61032 FANO (PU) ITALY
<i>Manufacturer</i>	LINSET & CO Srl Via Turati, 12/A 61032 FANO (PU) ITALY
<i>Reference standards</i>	RINA RULES FOR RECOGNITION OF TEST LABORATORIES

LINSET & CO Srl has been found in compliance with the requirements of the RINA "RULES FOR RECOGNITION OF TEST LABORATORIES" for the performance of the tests listed in the attachment to this certificate.

Issued at **Ancona** on **May 11, 2023**. This certificate is valid until **January 31 2026**




Paolo Usmiani
RINA

This certificate consists of this page and 1 enclosure

The rules, surveys and activities performed by RINA, reports, certificates and other documents issued by RINA are in no way intended to replace the duties and responsibilities of other parties such as Governments, designers, ship builders, manufacturers, repairers, suppliers, contractors or sub-contractors, owners, operators, charterers, underwriters, sellers or intended buyers of a ship or other product or system surveyed.

These documents and activities do not relieve such parties from any fulfillment, warranty, responsibility, duty or obligation (also of a contractual nature) expressed or implied or in any case incumbent on them according to the law, nor do they confer on such parties any right, claim or cause of action against RINA. With particular regard to the duties of the ship Owner, the services undertaken by RINA do not relieve the Owner of his duty to ensure at all times proper maintenance of the ship and seaworthiness. Likewise, the rules, surveys performed, reports, certificates and other documents issued by RINA are intended neither to guarantee the buyers of the ship, its components or any other surveyed or certified item, nor to relieve the seller of the duties arising out of the law or the contract, regarding the quality, commercial value or characteristics of the item which is the subject of transaction.

In providing the services, as well as other correlated information or advice, RINA, its surveyors, servants or agents operate with due diligence for the proper execution of the activity. However, considering the nature of the activities performed (see art. 2.4 of the General Conditions), it is not possible to guarantee absolute accuracy, correctness and completeness of any information or advice supplied. Therefore, express and implied warranties are specifically disclaimed.

In providing its services, and also in the case of activities carried out by delegation of Governments, neither RINA nor any of its surveyors will be liable for any loss, damage or expense of whatever nature sustained by any person, in tort or in contract, derived from carrying out the services.

However, should any user of RINA's services prove that he has suffered a loss or damage due to any negligent act or omission of RINA, its surveyors, servants or agents, then RINA will pay compensation to such person for his proved loss, up to, but not exceeding, five times the amount of the fees charged for the specific services, information or opinions from which the loss or damage derives or, if no fee has been charged, a maximum of one hundred thousand Euro.

Any liability for indirect or consequential loss, damage or expense is specifically excluded. In any case, irrespective of the amount of the fees charged, the maximum damages payable by RINA will not be more than 1 million Euro.

No report, statement, notation on a plan, review, class certificate, document or information issued or given as part of the services provided by RINA shall have any legal effect or implication other than a representation that, on the basis of the checks made by RINA, the ship, structure, materials, equipment, machinery or any other item covered by such document or information meet the rules issued by RINA. Therefore, RINA cannot be held liable for any act made or document issued by other parties on the basis of the statements or information given by RINA.

		REFERENCE STANDARDS
01	LABORATORY OF MECHANICAL TESTS	
01:01	Shear properties of sandwich core materials	IST-CQ-K-ASTM C273
01:02	Flatwise tensile strength of sandwich constructions	IST-CQ-K-ASTM C297
01:03	Flatwise compressive properties of sandwich cores	IST-CQ-K-ASTM C365
01:04	Sandwich beam flexural and shear stiffness	IST-CQ-K-ASTM D7250
01:05	Facing properties of sandwich constructions by long beam flexure	IST-CQ-K-ASTM D7249
01:06	Core shear properties of sandwich constructions by beam flexure	IST-CQ-K-ASTM C393
01:07	Compressive Properties of Rigid Cellular Plastics	IST-CQ-K-ASTM D1621
01:08	Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics	IST-CQ-K-ASTM D1623
01:09	Tensile properties of plastics	IST-CQ-K-ASTM D638
01:10	Tensile Properties of Polymer Matrix Composite Materials	IST-CQ-K-ASTM D3039
01:11	Compressive properties of rigid plastics	IST-CQ-K-ASTM D695
01:12	Compressive Properties of Polymer Matrix Composite Materials Using a Combined Loading Compression (CLC) Test Fixture	IST-CQ-K-ASTM D6641
01:13	Shear strength of plastics by punch tool	IST-CQ-K-ASTM D732
01:14	In-Plane Shear Response of Polymer Matrix Composite Materials by Tensile Test of a $\pm 45^\circ$ Laminate	IST-CQ-K-ASTM D3518
01:15	Shear Properties of Composite Materials by V-Notched Rail Shear Method	IST-CQ-K-ASTM D7078
01:16	Flexural properties of unreinforced and reinforced plastics	IST-CQ-K-ASTM D790 (A)
01:17	Short-beam strength of polymer matrix composite materials	IST-CQ-K-ASTM D2344
01:18	Single lap shear adhesive joints by tension loading (FRP)	IST-CQ-K-ASTM D5868
01:19	Tension testing of metallic materials	IST-CQ-K-ASTM E8
01:20	Young's modulus, tangent modulus, and chord modulus	IST-CQ-K-ASTM E111
01:21	Poisson's ratio at room temperature	IST-CQ-K-ASTM E132
02	LABORATORY OF THERMAL ANALYSIS TESTS	
02:01	Glass Transition Temperature (DMA Tg) of Polymer Matrix Composites by Dynamic Mechanical Analysis (DMA)	IST-CQ-K-ASTM D7028
02:02	Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position by Dynamic Mechanical Analysis (DMA)	IST-CQ-K-ASTM D648
02:03	Standard Test Method for Transition Temperatures and Enthalpies of Fusion and Crystallization of Polymers by Differential Scanning Calorimetry	IST-CQ-K-ASTM D3418
02:04	Heat of Reaction of Thermally Reactive Materials by Differential Scanning Calorimetry	IST-CQ-K-ASTM E2160
02:05	Linear thermal expansion of solid materials by TMA	IST-CQ-K-ASTM E831

		REFERENCE STANDARDS
02:06	Assignment of the glass transition temperature by TMA	IST-CQ-K-ASTM E1545
03	LABORATORY OF CHEMICAL-PHYSICAL TESTS	
03:01	Density of sandwich core materials	IST-CQ-K-ASTM C271
03:02	Water absorption of core materials	IST-CQ-K-ASTM C272
03:03	Measurement of thickness of sandwich cores	IST-CQ-K-ASTM C366 (A)
03:04	Water absorption of plastics	IST-CQ-K-ASTM D570 (A-B-C)
03:05	Gel time and peak temperature of thermosetting resins	IST-CQ-K-ASTM D2471
03:06	Constituent content of composite materials	IST-CQ-K-ASTM D3171 (G)
03:07	Density and Specific Gravity (Relative Density) of Plastics by Displacement	IST-CQ-K-ASTM D792
03:08	Physical dimensions of solid plastics specimens	IST-CQ-K-ASTM D5947 (A)
03:09	Specular gloss	IST-CQ-K-ASTM D523
03:10	Abrasion resistance of coatings by the taber abraser	IST-CQ-K-ASTM D4060
03:11	Pull-off strength of coatings by portable adhesion testers	IST-CQ-K-ASTM D4541 (B)
03:12	Color and color-difference by tristimulus (filter) colorimetry	IST-CQ-K-ASTM E1347
03:13	Scratch test (Clemen)	IST-CQ-K-ISO 1518

General conditions for the recognition:

- The initial conditions verified by RINA at the time of the assessment are to be maintained
- Any changes to the initial conditions are to be promptly communicated to RINA, which reserves the right to repeat the relevant assessment
- RINA personnel are to be allowed to witness during the performances of activities, upon their request
- The activities are to be carried out in compliance with RINA Rules and /or other applicable Rules
- Laboratory recognized to perform tests on composite material samples relevant only to vessel intended to be classed by RINA.