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STATEMENT OF THE E-LÄSS NETWORK ON THE USE OF FRP IN SHIP BUILDING

To whom it may concern,

In 2002 a new SOLAS regulation in the fire safety chapter (regulation II-2/17) on “Alternative design and arrangements” opened up for new and unconventional ship design; it allows “an alternative to” the prescriptive SOLAS regulations to be “adopted” if, and only if, it can be proven that the safety level given by the prescriptive code is not “adversely affected.

At the IMO FP56 meeting in London, January 2013, a Correspondence Group was given the task to develop guidelines for the use of FRP composites on SOLAS vessels, in conjunction with the SOLAS regulation 17. A first draft was presented at the IMO SDC1 meeting last January and the work continues this year. From a European, industrial and shipbuilding perspective, it is highly important that this work is supported and given the necessary resources for a positive outcome.

Below you find statements of the level of knowledge as perceived by the E-Lass community:

1. FRP composites offer immense potentials for the efficiency of shipping and will contribute significantly to reduce energy demand and GHG emissions in line with the policy goals of the European Commission and the member states.
2. The approach suggested by SOLAS reg.17 does fully cover large deviations from requirements, including the SOLAS II-2/2.2.1.3 functional requirement on “restricted use of combustible materials”. This is in line with SOLAS II-2/2.3 and with the scope of reg.17 as originally defined.
3. Reaction and resistance to fire challenges for FRP composites in shipbuilding have been shown to be manageable through many research projects, e.g. LASS, SAFEDOR, LASS-c, De-Light Transport, Cargo Xpress, BESST, etc.
4. FRP composite in shipbuilding should today be considered ”Technical projects” and not ”Research projects”.
5. Several classification societies, institutes and other organizations are today capable of reviewing FRP composite constructions and of issuing formal statements with recommendations for the national authorities on whether an alternative design is acceptable or not.

The above statements are based on a common understanding within the E-Lass network. Should you need some more information, we will be happy to support you in this matter.

Yours sincerely,

Tommy Hertzberg
Present chair of E-Lass

Included is a list of organizations supporting the above statements. Please note that several stake holder associations are represented, thereby increasing the number of actual supporting organizations substantially.

About E-Läss: E-Läss (www.e-lass.eu) is a network of about 140 international organizations from academia, research centres, ship owners, classification societies, shipyards, suppliers and service providers working on the field of lightweight marine structures. The network cooperates with other European initiatives such as MESA, Coordination Action within FP7, managed by SEA Europe, the European association of shipyards and ship equipment suppliers.

Organization	Contact	Website
Danish Yachts	Jens Otto Sørensen	www.danishyachts.com
DTU, Technical University of Denmark, Department of Mechanical Engineering	Christian Berggreen	www.mek.dtu.dk
NKH Yacht	Niels Kyhn Hjørnet	www.nkh-yacht.dk
Tuco Marine Group	Jonas Pedersen	www.tuco.dk
DTU, Technical University of Denmark	Grunde Jomaas	www.dtu.dk
Danish Maritime	Alexander B. Kleiman	www.danskemaritime.dk
Furuno Electric Co., Ltd. – European Branch Office	Peter Svan	www.furuno.dk
Aimen Technology center	Fernando Sanchez Troncoso	www.aimen.es
CIMNE, International Center for Numerical Methods in Engineering	Jesus Carbajosa	www.cimne.com
University of Oviedo, Department of Nautical Technology and Science	Horacio Javier Montes Coto	www.uniovi.es
AB VP ULTRA	Håkan Wiklund	www.wsj.n.nu
Deltamarin Ltd	Joonatan Haukilehto	www.deltamarin.com
VTT	Hakkarainen Tuula	www.vtt.fi
Biolaivat ky	Veikko Hintsanen	
LNE	Marquis Damien	www.lne.eu
BALance Technology Consulting GmbH	Markus Lehne	www.bal.eu
Center of Maritime Technologies, CMT	Lars Molter	www.cmt-net.org
Saertex	Jörg Bünker	www.saertex.com
National Technical University of Athens	Nicholas G. Tsouvalis	stl.naval.ntua.gr
Cetena	Carlo Cau	www.cetena.it
SIA”Latitude Yachts”	Kaspars Veidemanis	www.latitude-yachts.com
Damen	Laurent Morel	www.damennaval.com
Rhebergen Composites	Thomas Thon	www.rhebergencomposites.com
Fireco	Björn Höjning	www.fireco.no
Hansen Engineering and Consulting	Ragnar E. Hansen	www.nettocad.no
SINTEF Materials and Chemistry	Rudie Spooren	www.sintef.no/home/SINTEF-Materials-and-Chemistry

Norsk Kompositttforbund	Paal Fischenich	www.kompositttforbundet.no
SINTEF Raufoss Manufacturing	Jon Sandvik	www.sintef.no/home/SINTEF-Raufoss-Manufacturing-AS
SP Fire Research AS	Christian Sesseng	www.sintef.no/Byggforsk/SINTEF-NBL-as/
Gdynia Maritime University	Krzysztof Kołowrocki	www.am.gdynia.pl
Gdynia Maritime University and Polish Maritime Cluster	Marek Grzybowski	klastermorski.com.pl
West Pomeranian University of Technology - ZUT, Faculty of Maritime Technology and Transport	Tadeusz Graczyk	www.zut.edu.pl
Centre for Marine Technology and Engineering (CENTEC), Technical University of Lisbon	Carlos Guedes Soares	www.mar.ist.utl.pt
Ship Design Group	Vasile Giuglea	www.shipdesigngroup.eu
University Dunarea de Jos of Galati, Department of Applied Mechanics	Ionel Chirica	www.mrm.ugal.ro
Blatraden AB	Tord Gustafsson	www.blatraden.se
C Marine AB	Johan Edvardsson	cmarine.se
Chalmers University of Technology	Jonas Ringsberg	www.chalmers.se
Coriolis AB	Mats Hjortberg	www.coriolis.se
Design Limit Sweden AB	Linus Fagerberg	www.designlimit.se
Firetech	Magnus Haara	www.firetech.se
HF Interior Sweden AB	Joachim Götborg	hfinterior.se
Kockums	Ulf Arbin	www.kockums.se
Konsult AB Trifol	Anders Ulfvarson	
KTH Royal Institute of Technology	Ivan Stenius	www.kth.se
Lloyds Register	Fredrik Tholen	www.lr.org
MacGregor Sweden AB	Pontus Dahlström	www.cargotec.com
Stena	Lisa Gustin	www.stena.com
Swerea SICOMP	Kurt Olofsson	www.swerea.se
TBS Yard AB	Lars Tedehammar	www.tbsab.com
TTS Marine AB	Henrik Westermark	www.ttsgroup.com
SP Technical Research Institute of Sweden	Tommy Hertzberg	www.sp.se

Svenska GMK AB	Jonas Holmberg	www.gmkservice.com
DIAB	Peter Norlin	www.diabgroup.com
Swedish Marine Technology Forum	Jacqueline Widström	www.smtf.se
Swedish Defence Materiel Administration, FMV	Patric Hjorth	www.fmv.se
3A Composites International AG	Philipp Angst	www.3acomposites.com
Istanbul Technical University, Faculty of Naval Architecture and Ocean Engineering	Selma Ergin	gidb.itu.edu.tr
BAE Systems Maritime - Naval Ships	Tim Williams	www.baesystems.com
bigHead Bonding Fasteners Ltd	Matthew Stevens	www.bighead.co.uk
Granta Design	James Goddin	www.grantadesign.com
Gurit	Graham Harvey	www.gurit.com
KGPAuto	David MacIver	www.kgpauto.com
Knowledge Transfer Consultant	Stella Job	
Materials KTN	Ajay Kapadia	connect.innovateuk.org/web/composites-in-ships
Morgan Advanced Materials	Allan Beeston	www.morganadvancedmaterials.com
Netcomposites	Joe Carruthers	www.netcomposites.com
Optima Projects Ltd	David Kendall	www.optima-projects.com
Plymouth Business School Plymouth University	Jingjing Xu	www.plymouth.ac.uk
Quaker Chemical	Derek Saville	www.quakerchem.com
TRB Lightweight Structures	Terry Mayston	www.trbls.com
TWI – Technology Engineering	Mark Roughsedge	www.twi-global.com
University of Plymouth, School of Marine Science and Engineering	John Summerscales	www5.plymouth.ac.uk/schools/school-of-marine-science-and-engineering
University of Southampton	Simon Quinn	www.rifi.soton.ac.uk
University of Southampton, Structures and Materials, Engineering Sciences	Ole Thomson	www.southampton.ac.uk/engineering
Wizz Consultancy Ltd	Thomas Royle	www.globial.com/Wizz-Consultancy-Ltd
British Marine Federation Ltd	Udo Kleinitz	britishmarine.co.uk
PSM Instrumentation Limited	Geoff Taylor	www.psmmarine.com
Ctruc	David Kendall	www.optima-projects.com

DSTL	Alan Groves	www.dstl.gov.uk
Green Marine Ltd	Richard Acland	www.greenmarine.co.uk
Princess Yachts International PLC	Andrew Hay	www.princessyachts.com
Composites UK	Sue Halliwell	www.compositesuk.co.uk
Noise Control Engineering	Raymond Fischer	www.noise-control.com
NMMA, National Marine Manufacturers Association	Tom Marhevko	www.nmma.org