

EC Type Examination (Module B) Certificate

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), designated as a "notified body" under the terms of the Merchant Shipping (Marine Equipment) Regulations 2016 (S.I. 2016 No.1025), as amended, did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU, subject to any conditions in the Design Appraisal Document attached hereto.

Manufacturer	Mustang Survival Corp
Address	7525 Lowland Drive, Burnaby BC, V5J 5L1, Canada
Reference	Regulation (EU) 2020/1170
Regulation Item (No. & Item Designation)	MED/1.6b Immersion Suits & Anti Exposure Suits Designed To Be Worn Without A Lifejacket - Insulated
Product Type	INSULATED IMMERSION SUIT
Product Description	Inherently buoyant insulated immersion suit with inflatable buoyant head support - Types: "MIS210 HR, MIS220 HR, MIS230 HR and MIS240 HR"
Specified Standard	IMO Resolution MSC.81(70) as amended by MSC 226(82) and MSC 323(89)
Trade Name	MIS210 HR, MIS220 HR, MIS230 HR and MIS240 HR

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

This certificate is issued under the authority of the MCA. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to and agreed with the notified body named on this certificate. The manufacturer should notify LRV of any modification or changes to the equipment in order to obtain a valid Certificate.

Should the specified regulations or standards be amended during the period of validity of this certificate, the product is to be re-approved prior being placed on the market and on board vessels to which the amended regulations or standards apply.

The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D,E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

Lloyd's Register Verification Limited (Reg. no. 4929226) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK. A member of Lloyd's Register group.



Lijo Thomas
Senior Surveyor to Lloyd's Register
Verification Ltd
A member of the Lloyd's Register group

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR2137680MB

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

This Certificate is a Renewal and an Amendment of Certificate Number MED 1650111-M1-03

APPROVAL DOCUMENTATION

UL File MQ589 Vol 2 Sec 1 as amended by UL and reported to LR in "Mustang masterlist MIS2x0vHR" file rev 04, dated 25 Jan-21.

TEST REPORTS

Report No:	Title	Date
UL File MQ589 Vol 2 Sec 1 - 1DataSheet1 - Tests 1-13	Donning test, water ingress test, impact test, field of vision test, hand dexterity test, walking test, climbing test, air penetration test, stability test, righting test, swimming and water emergence test, leakage test	-
UL File MQ589 Vol 2 Sec 1 - 1DataSheet2 - Test 1	Donning test (Adult Universal)	12.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet3 - Test 1	Donning Test (Adult Small)	-
UL File MQ589 Vol 2 Sec 1 - 1DataSheet3 - Test 2	Stability (Adult Small)	-
UL File MQ589 Vol 2 Sec 1 - 1DataSheet4 - Test 1	Stability (Child)	-
UL File MQ589 Vol 2 Sec 1 - 1DataSheet5 - Test 1	Air Retention Test (Adult Universal)	06.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet5 - Test 2	Oil Resistance Test (Adult Universal)	11.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet5 - Test 3	Flame Exposure Test (Adult Universal)	05.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet5 - Test 4	Buddy Line Test (Adult Universal)	04.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet5 - Test 5	Retrieval Harness Test Test (Adult Universal)	04.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet6 - Test 1	Temperature Cycling Test Test (Adult Universal)	24.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet6 - Test 2	-30 Degrees Donning Test (Adult Universal)	24.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet6 - Test 3	Body Strength (Adult Universal)	04.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet6 - Test 4	Body Strength (Child)	04.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet6 - Test 5	Body Strength (Adult Small)	05.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet6 - Test 6	Seam Strength (Adult Universal)	10.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet7 - Test 1	Dimensional Verification (Adult Universal)	17.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet7 - Test 2	Measured Buoyancy (Adult Universal)	19.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet7 - Test 3	Adjusted Buoyancy (Adult Universal)	19.08.2009

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UL File MQ589 Vol 2 Sec 1 - 1DataSheet8 - Test 1	Dimensional Verification (Child)	18.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet8 - Test 2	Measured Buoyancy (Child)	26.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet8 - Test 3	Adjusted Buoyancy (Child)	26.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet9 - Test 1	Dimensional Verification (Adult Small)	24.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet9 - Test 2	Measured Buoyancy (Adult Small)	27.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet9 - Test 3	Adjusted Buoyancy (Adult Small)	27.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet10 - Test 1	Dimensional Verification (Adult Oversize)	18.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet10 - Test 2	Measured Buoyancy (Adult Oversize)	25.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet10 - Test 3	Adjusted Buoyancy (Adult Oversize)	25.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet11 - Test 1	Fit Evaluation (Adult Oversize)	31.08.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet12 - Test 1	Thermal Protection Test	xx.06.2009
UL File MQ589 Vol 2 Sec 1 - 1DataSheet13 - Test 1	Infrared Analysis	11.09.2009
UL File MQ589 Vol 2 Sec 1 - 4DataSheet1 - Test 1	Lifting Strap Test (Child)	23.06.2010
UL File MQ589 Vol 2 Sec 1 - 4DataSheet1 - Test 2	Air Retention Test (Child)	23.06.2010
UL File MQ589 Vol 2 Sec 1 - 4DataSheet1 - Test 3	Harness Thickness (Adult Small)	23.06.2010
UL File MQ589 Vol 2 Sec 1 - 4DataSheet1 - Test 4	Buddy Line Test (Child, Adult Small and Adult Universal)	23.06.2010
UL File MQ589 Vol 2 Sec 1 - 4DataSheet2 - Test 1	Lifting Harness Strength (Child)	23.07.2010
UL File MQ589 Vol 2 Sec 1 - 10DataSheet1 - Test 1	Body Strength (Child, tested to Adult Loads)	02.10.2017
UL File MQ589 Vol 2 Sec 1 - 10DataSheet1 - Test 2	Retrieval Harness Strength (Child, tested to Adult Loads)	02.10.2017
UL File MQ589 Vol 2 Sec 1 - 10DataSheet1 - Test 3	Buddy Line Test (Child, tested to Adult Loads)	02.10.2017
UL File MQ589 Vol 2 Sec 1 - 10DataSheet1 - Test 4	Seam Strength (Child, tested to Adult Loads)	04.10.2017
UL File MQ589 Vol 2 Sec 1 - 11DataSheet1 - Test 1	Buddy Line Test (Child, Adult Small and Adult Universal)	21.06.2018
UL Test Record (Tests T1 to T11) - Test 1	Report on Immersion Suits	22.09.2009
UL Test Record (Tests T1 to T11) - Test 10	Add Shenzhen Thread	30.11.2017
UL Test Record (Tests T1 to T11) - Test 11	Buddy Line with Shenzhen thread	03.07.2018
UL Test Record (Tests T1 to T11) - Test 2	Material Info Corrections	01.10.2009
UL Test Record (Tests T1 to T11) - Test 3	Boot Sole Thickness	16.10.2009
UL Test Record (Tests T1 to T11) - Test 4	SOLAS Compliance	23.07.2010
UL Test Record (Tests T1 to T11) - Test 5	Buddy Line not optional	05.11.2010

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UL Test Record (Tests T1 to T11) - Test 6	Add Serial # option	23.07.2010
UL Test Record (Tests T1 to T11) - Test 9	Add Sheifloat foam	16.05.2013
UL Test Report PE Foam Flotation Material Sheifloat File No MQ715	UL Test Report PE Foam Flotation Material Sheifloat File No MQ715	29.05.2012
UL Test Report, File MQ589, Test record 12, Data sheet 1	UL Test report for the acceptance of revised Buddy Line construction with two piece anchor loop with bar-tacks	21.02.2019

CONDITIONS OF CERTIFICATION

- Each immersion suit and its packaging shall be marked with the height/weight range of persons for whom it is approved

 MIS210 HR - CHILD, for weight range 20-50 kg & height 99-150cm;
 MIS220 HR- ADULT SMALL, for weight range 50-91 kg & height 147-173cm;
 MIS230 HR –ADULT UNIVERSAL, for weight range 50-136 kg & height 150-191cm;
 MIS240 HR –ADULT OVERSIZE, for weight range 102-170 kg & height range <230 cm.
- The measured buoyancy of the immersion suit designs are;

 MIS210 HR - CHILD, 98 N;
 MIS220 HR- ADULT SMALL, 128.5 N;
 MIS230 HR –ADULT UNIVERSAL, 139 N;
 MIS240 HR –ADULT OVERSIZE, 161.8 N;
- Alterations/modifications to the Type Approved immersion suits shall be authorized, agreed and tracked by Lloyd's Register through the agreed master list update process. The product shall be in compliance with SOLAS and Flag State Administration (of the vessel on which the immersion suit is installed) requirements at all times
- The immersion suit is to be fitted with retro-reflective material in accordance with IMO Resolution A.658 (16), as it may be amended
- Instruction for use shall be provided with each Immersion Suit as prescribed by SOLAS Regulation III/35 one or more additional copies shall be provided for inclusion in the Vessel's Training Manual
- As prescribed by SOLAS Regulation III/36 and where applicable, Immersion Suit shall be maintained as prescribed by manufacturer's instructions
- Each immersion suit and its packaging shall be permanently and clearly marked at least with: identification of the manufacturer and the model designation, the weight and height range of persons suitable to wear the immersion suit, simple donning instructions and approval information
- Each immersion suit shall be supplied with an explanatory leaflet containing instructions for care and maintenance of the immersion suit. When carrying out the inspection of immersion suits as required by SOLAS regulation III/20.7.2 consideration should be given to IMO MSC/Circ.1047 on Guidelines for Monthly Shipboard Inspection of Immersion Suits and Anti-exposure Suits by the Ship's Crew
- An approved light and whistle meeting the requirements of LSA Code regulations II/2.2.3 and II/2.2.1.14, respectively, are to be fitted. The light is to be tested and meet the requirements of IMO Res. MSC.81 (70), I/10.3 and 10.4 and is attachment have to be to the satisfaction of the attending Surveyors
- The on board arrangements and installation of this product are not part of this design appraisal or certificate. All such arrangements are to be to the satisfaction of the Surveyors attending on board

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11. If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply
12. The manufacturer shall keep a copy of the EC type-examination certificate, its annexes and additions together with the technical documentation at the disposal of the national authorities for at least 10 years after the wheel mark has been affixed on the last product manufactured and in no case for a period shorter than the expected life of the marine equipment concerned.
13. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place
14. Production tests are to be conducted in accordance with the applicable requirements of IMO Resolution MSC.81 (70), Part 2 and be recorded by the manufacturer in accordance with either the approved Production Quality Assurance system (Module D) or Product Quality Assurance (Module E) or witnessed by the Notified Body as required by the Product Verification (Module F) of the Marine Equipment Directive. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state) or those acting on behalf of that Administration
15. Each item, batch or lot of the equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity" after a conformity assessment module is in place
16. Should a change of Place of Production from that stated below be required, i.e. where the final stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained
17. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place

PLACE OF PRODUCTION

Sheico (Cambodia) Co. Ltd.
Manhattan (Svay Rieng) Spec Econ ZN
Bavet Commune, National Rd #1
Chantrea District
Svay Rieng
Cambodia



Lijo Thomas
Senior Specialist
Fire & Safety, Statutory Discipline Team
UK&I Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Verification
LRV EC Distinguishing No. 0038

**NOTIFIED BODY CERTIFICATE
TRANSFER OF RESPONSIBILITY**



Certificate No: 0525-MED-DE-LR2137680MB

This certificate transfers Lloyd's Register Verification Ltd. (0038)
Certificate No: LR2137680MB
Issued on: 29 November 2020
to the responsibility of EU Notified Body No. 0525
(Lloyd's Register Deutschland GmbH)

Date of Original Certificate: 29 November 2020
Date of Current Certificate: 31 December 2020
Date of Certificate Expiry: 28 November 2025

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