



MARINE DIVISION

Certificate number: 20420/B0 BV

File number: ACE 01/138/02

Product code: 2505H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to

WILSON CABLES PRIVATE LIMITED

Singapore - SINGAPORE

for the type of product

INSTRUMENTATION AND COMMUNICATION CABLES

150/250 V

Shipboard Flame Retardant LSOH Instrumentation and Control Cables,

Type: Mlx-200y

(x and y are depending on type)

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships.

IEC 60092-350/351/359/376, IEC 60228, IEC 60332-1, IEC 60332-3-22 (Cat.A), IEC 60754-1/2, IEC 61034-1/2.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 29 Oct 2018

For BUREAU VERITAS,

At BV SINGAPORE, on 29 Oct 2013,

Shivananda Upadhya



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Mix-200y are flame retardant, low smoke and halogen free Marine and Offshore Cables for Control and Instrumentation Circuits.

1.1 - Specifications:

Rated voltage:	150/250 V according to IEC 60092-376
Temperature class:	90°C
Flame retardant:	IEC 60332-1 and IEC 60332-3-22 (Cat. A)
Halogen Free:	IEC 60754-1/2
Low smoke:	IEC 61034-1/2

1.2 - Construction:

Conductor:	Plain or tinned annealed copper - Class 2
Insulation:	Cross-Linked PolyEthylene - XLPE
Individual Screen:	Polyester tape + Tinned copper wires drain + Aluminium backed Mylar foil (MIP Type)
Collective Screen:	Polyester tape + Tinned copper wires drain + Aluminium backed Mylar foil (All Types)
Inner Sheath/Covering:	Extruded Halogen Free Thermoplastic compound - SHF1 or lapped tape
Braid:	Plain copper (C) or Tinned copper (T) or Steel (Q) wires braiding or None
Outer Sheath:	Halogen Free Thermoplastic compound - SHF1

1.3 - Product Range:

Type	Number of Core/ Pair / Triple/ Quad	Cross-Sect. (mm ²)	Individual Screen	Collective Screen	Braid	
MIM-200	2C to 37C	0.5 to 1.5		X		
MIM-200C				X	X	
MIM-200T						
MIM-200Q						
MIC-200	1P to 30P 1T, 1Q				X	
MIC-200C					X	X
MIC-200T						
MIC-200Q						
MIP-200	2P to 30P		X	X		
MIP-200C			X	X	X	
MIP-200T						
MIP-200Q						

2. DOCUMENTS AND DRAWINGS:

WILSON CABLES PRIVATE LIMITED:

Specification for Shipboard Cables for Instrumentation and Control Circuits, Ref. Company Standard 8: 2008.

3. TEST REPORTS:

In-house Laboratory:

Test Report No. EWCS-07-002 dated 2007-03-15 (IEC 60332-3-22 Cat. A) and Type Test Report dated 03.05.06

Test Reports witnessed by LR's Surveyor.

Routine tests report for renewal, performed on MIC-200C type.

Electrical Research and Development Association (ERDA):

Test Report No. ICAB/11/1797-2 dated 28-11-2006.

4. APPLICATION / LIMITATION:

4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.

4.2 - Approval valid for units having to comply with IMO Resolution A649 (The "MODU Code").

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 -The **Mix-200y** are to be supplied by **WILSON CABLES PRIVATE LIMITED** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 -**WILSON CABLES PRIVATE LIMITED** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

WILSON CABLES PRIVATE LIMITED
142 Gul Circle, Jurong Industrial Estate
Singapore 629602
SINGAPORE

6. MARKING OF PRODUCT:

The cable shall be marked on the surface outer sheath, in a durable legible and visible manner, with the following information through the length of cable:

- 1) - Voltage grade.
- 2) - Cable symbol and temperature class.
- 3) - Number of conductors and conductor size.
- 4) - Applicable standard(s) to flame retardant
- 5) - Manufacturer's name or trade mark.
- 6) - Year of manufacture.

7. OTHERS:

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the cables at any time and that **WILSON CABLES PRIVATE LIMITED, Jurong Industrial Estate, Singapore 629602, SINGAPORE** will accept full responsibility for informing shipbuilders, ship-owners or their sub-contractors of the proper methods of use and general maintenance of the cables and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate N° 20420/A2 BV issued on 24/02/2010 by the Society.

***** END OF CERTIFICATE *****