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Cables and flexible cords for electrical equipment of ships

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Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry and the Minister of Land, Infrastructure, Transport and Tourism through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japanese Electric Wire & Cable Maker's Association (JCMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS C 3410**:2010 is replaced with this Standard.

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Cables and flexible cords for electrical equipment of ships

Introduction

This Japanese Industrial Standard has been prepared based on IEC 60092-353 : 2011 (Edition 3), IEC 60092-354 : 2014 (Edition 3), IEC 60092-360 : 2014 (Edition 1) and IEC 60092-376 : 2003 (Edition 2), in order to establish a standard for cables and flexible cords for ships reflecting the actual situations in Japan with some modifications of the technical contents.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standards. A list of modifications with the explanations is given in Annex JD. Annex JA, Annex JB and Annex JC are unique to **JIS** and not given in the corresponding International Standards.

1 Scope

This Standard specifies cables, <u>flexible cords and insulated wires</u> used for electrical installations in ships.

NOTE The International Standards corresponding to this Standard and the symbol of degree of correspondence are as follows.

IEC 60092-353 : 2011 Electrical installations in ships — Part 353 : Power cables for rated voltages 1 kV and 3 kV

IEC 60092-354 : 2014 Electrical installations in ships — Part 354 : Single- and three-core power cables with extruded solid insulation for rated voltages $6 \ kV \ (U_m = 7, 2 \ kV) \ up$ to $30 \ kV \ (U_m = 36 \ kV)$

IEC 60092-360 : 2014 Electrical installations in ships — Part 360 : Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables

IEC 60092-376 : 2003 Electrical installations in ships — Part 376 : Cables for control and instrumentation circuits 150/250 V (300 V) (overall evaluation : MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For standards indicated below, only the editions of the indicated year shall be applied and any revisions (including amendments) made thereafter shall not be applied.

JIS C 3005 : 2014 Test methods for rubber or plastic insulated wires and cables

- JIS C 3411:2018 Electrical installations in ships General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications
- NOTE Corresponding International Standard : IEC 60092-350 : 2014 Electrical installations in ships Part 350 : General construction and test methods of power, control and instrumentation cables for shipboard and off-shore applications (IDT)

JIS G 4308 : 2013 Stainless steel wire rods

- IEC 60331-1:2009 Tests for electric cables under fire conditions Circuit integrity — Part 1: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter exceeding 20 mm
- IEC 60331-21:1999 Tests for electric cables under fire conditions Circuit integrity — Part 21: Procedures and requirements — Cables of rated voltage up to and including 0,6/1,0 kV

3 Types and symbols

The types and symbols of cables are as given in Table 1.

The meanings of the letters used in the symbols in this table are as given in Table 2 and Table 3.

Type of cable			Symbol	
				No.
0.6/1 kV	Single core, EP rubber insulated, polyvinyl chlo- ride (PVC) sheathed and stainless steel wire braid armoured cable with PVC protective cov- ering	0.6/1 kV	SPYC(SUS)Y	11
0.6/1 kV	Single core, EP rubber insulated, PVC sheathed, stainless steel wire braid armoured and flame retardant cable with PVC protective covering	0.6/1 kV FA-SPYC	C(SUS)Y	
0.6/1 kV	Double core, EP rubber insulated and PVC sheathed cable	0.6/1 kV	DPY	12
0.6/1 kV	Double core, EP rubber insulated, PVC sheathed and steel wire braid armoured cable	0.6/1 kV	DPYC	
0.6/1 kV	Double core, EP rubber insulated, PVC sheathed and steel wire braid armoured cable with PVC protective covering	0.6/1 kV	DPYCY	
0.6/1 kV	Double core, EP rubber insulated, PVC sheathed and flame retardant cable	0.6/1 kV	FA-DPY	
0.6/1 kV	Double core, EP rubber insulated, PVC sheathed, steel wire braid armoured and flame retardant cable	0.6/1 kV	FA-DPYC	
0.6/1 kV	Double core, EP rubber insulated, PVC sheathed, steel wire braid armoured and flame retardant cable with PVC protective covering	0.6/1 kV	FA-DPYCY	

Fable 1	Types	and	symbols
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