

No.SP 24-31-0905

Date Feb.21, 2024

SPECIFICATION

FOR

600V FLEXIBLE CABLE FOR SPREADER SYSTEM (YARD CRANE)

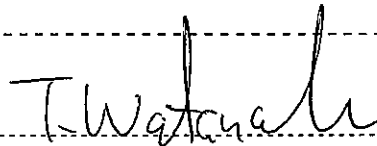
Code : 600V SPD (Y) -2PNCT 10×6mm²

Quantity

Your Ref. No.

Our Ref. No.

Signed by



Takanobu Watanabe
Manager

Engineering Dept. I
Electric Wire & Cable Business Unit

Proterial, Ltd.

Issue and revision record

REV. No.	Issue date	Item	Prepared by	Reviewed by	Approved by
-	Feb. 21, 2024	FIRST ISSUE	<i>K. Yamane</i> K. YAMANE	<i>N. Ono</i> N. ONO	<i>T. Watanabe</i> T. WATANABE

1. SCOPE

This specification covers 600V Flexible Cable for spreader system (yard crane), which is reference to Japanese Electrical Facility Regulation and Manufacturers Standard.

2. CONSTRUCTION

2.1 Conductor

Conductor shall be stranded flexible conductor consisting of tinned annealed copper wires and tinned steel wires.

A suitable separator tape shall be applied over the conductor.

2.2 Insulation

Insulation shall consist of ethylene propylene rubber compound.

Nominal thickness shall be shown in the attached table.

Ave. thick. : not less than 90% of the nominal thick.

Min. thick. : not less than 80% of the nominal thick.

2.3 Proofed tape

Rubber filled textile tape shall be applied over the insulation.

2.4 Core identification

The core identification shall be made by the number printed on the proofed tape as shown in the attached figure.

2.5 Cabling of cores

The insulated conductors shall be cabled. Suitable fillers and binder may be applied at manufacture's discretion, if necessary.

2.6 Sheath

Sheath shall consist of black rubber compound.

Nominal thickness shall be shown in the attached table.

Ave. thick : not less than 90% of the nominal thick.

Min. thick : not less than 85% of the nominal thick.

A straight line shall be marked on the surface of the sheath.

2.7 Dimension

The dimensions of the cable shall be in accordance with the attached table.

2.8 Marking

Manufacture's name and year of manufacture shall be marked by suitable methods.

3. INSPECTION

Inspection shall be made on the following items prior to shipment.

Properties	Standard to comply with	Requirements	Test interval
Construction and dimensions	JIS C 3005 4.3	To comply with clause 2 and the attached Table 1	Every shipment
Withstand voltage test	JIS C 3005 4.6	To withstand AC 3000V for 1 min.	First shipment
Conductor resistance	JIS C 3005 4.4	Not more than the value in the attached Table 2	
Insulation resistance	JIS C 3005 4.7	Not less than the value in the attached Table 2	

4. GUIDE TO USE

(1) This cable is designed to be chiefly suitable for spreader installation with the yard cranes under the following conditions.

- ① Height of stroke: $\leq 30\text{m}$
- ② Hoist speed: $\leq 100\text{m/minutes}$
- ③ Diameter of basket: $1000\text{mm} \leq$
- ④ Diameter of corn: $600\text{mm} \leq$

(2) The cable must be installed into the basket in a clockwise rotation when viewed from the top of the crane.

(3) Lubricant such as grease must be applied on surface of cable.

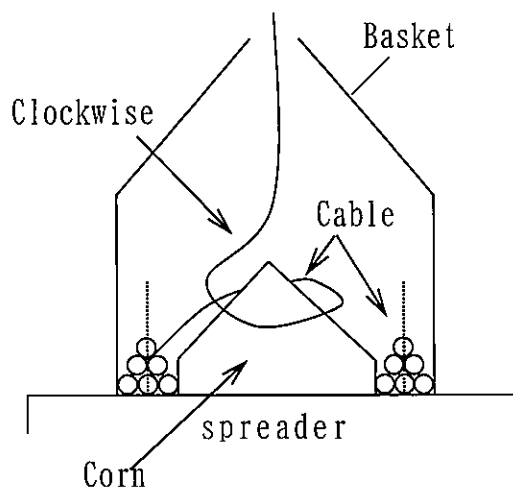


Table : Dimensions
(Code : 600V SPD (Y) -2PNCT 10×6mm²)

Item		Unit	Specified value
No. of conductor		—	10
Conductor	Nominal cross-section area	mm ²	6
	Construction	No. /mm	3/0. 3TST+84/0. 3TA*
	Diameter (Approx.)	mm	3.3
Nominal thickness of insulation		mm	1.0
Nominal thickness of sheath		mm	2.9
Approx. diameter of completed cable		mm	30
Maximum diameter of completed cable		mm	31.5
Approx. weight of completed cable		kg/km	1260

* TST : Tinned steel wire
TA : Tinned annealed copper wire

Table 2 : Characteristic

Item	Unit	Specified value
Maximum conductor resistance at 20°C	Ω/km	3.39
Minimum insulation resistance at 20°C	MΩ·km	400
Permissible minimum bending radius	mm	180

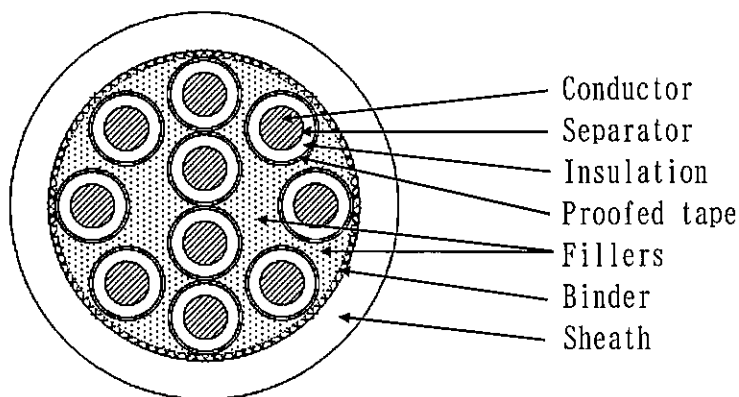


Fig.1 Cross-section of cable

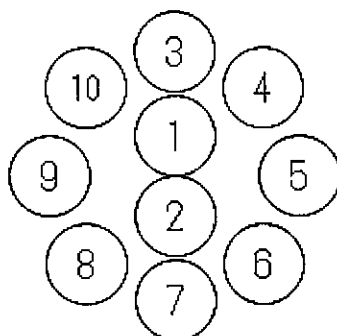


Fig.2 Core identification