No. SP23-31-0896
Date Dec. 8, 2023

SPECIFICATION

FOR

6/10KV ETHYLENE PROPYLENE RUBBER INSULATED
POLYCHLOROPRENE SHEATHED FLEXIBLE CABLE

Code : 6/10KV F-RE-PNCT $3\times35mm^2+3\times25/3mm^2$

Quantity

Your Ref. No.

Our Ref. No.

Signed by T. Watanabe

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
—	Dec. 8, 2023	FIRST ISSUE	K. Yamane K. Yamane	N. Ono N. Ono	T. Watanabe T. Watanabe

1. Scope

This specification covers 6/10kV trailing power cable which are based on DIN VDE 0250 part 813 and/or Manufacturer's Standard.

2. Construction

2.1 Power conductors

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

2.1.2 Conductor shielding
Conductor shielding shall consist of a suitable semi-conducting fabric tape and extruded semi-conducting elastomer.

2.1.3 Insulation
Insulation shall consist of an extruded layer of ethylene propylene rubber compound.
Nominal thickness shall be shown in the attached table.
Ave. thick. : not less than the nominal thickness

2.1.4 Insulation shielding
A suitable semi-conducting layer shall be aplied over the insulation.

2.2 Earth conductors

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

2.2.2 Conductor covering
Conductor covering shall consist of extruded semi-conducting elastomer.

2.3 Cabling of cores
Power conductors and earth conductors shall be cabled together.

2.4 Inner sheath
Inner sheath shall consist of extruded layer of black heavy duty black polychloroprene rubber compound.

2.5 Reinforcing layer
Reinforcement consisting of suitable yarn braid shall be applied in the middle of the sheath.

2.6 Outer sheath
Outer sheath shall consist of extruded layer of black heavy duty black polychloroprene rubber compound.

2.7 Dimension
The dimension of the cable shall be in accordance with the attached table.

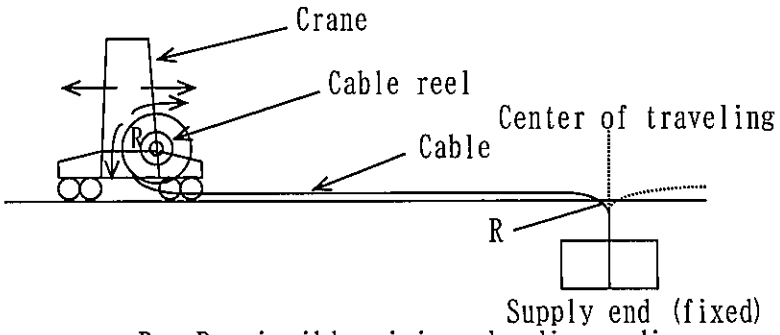
3. Inspection

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 17000V for 5 min.	
Conductor resistance	JIS C 3005 4.4	Not more than the value in the attached Table 2	First shipment
Insulation resistance	JIS C 3005 4.7	Not less than the value in the attached Table 2	

4. Guide to use

4.1 This cable is designed for crane installation of reel system (traveling) as shown below.



R : Permissible minimum bending radius

4.2 When stripping semi-conducting layer over the insulation, conductive material may remain on the surface of insulation.
In that case, please take a following procedure.

- Please completely wipe off the surface of insulation with a clean rug with enough amount of alcohol.
- In case that the above procedure is incomplete, please remove conductive material completely by rubbing with sand paper (#240-400).
- Accordingly, please completely wipe off the surface of insulation with a clean rug with enough amount of A benzene.
- Please clean the insulation as indicated in an arrow in Figure 1 to prevent any adherent on the conductor and do not apply the used rug.
  (Clean the insulation in accordance with a direction from cable terminals to sheath.)

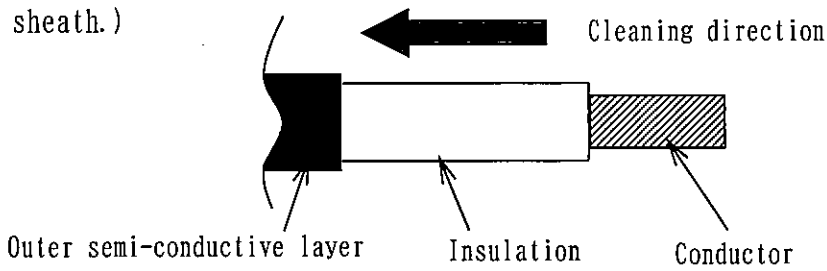


Figure 1. Cleaning direction of the insulation

Table 1 : Dimensions

(Code : 6/10KV F-RE-PNCT 3×35mm²+3×25/3mm²)

Item		unit	Specified Value	
Rated Voltage (U_0 / U)		kV	6 / 10	
Type of cable		—	3×35mm²+3×25/3mm²	
Use of conductor		—	Power conductor	Earth conductor
Metal Conductor	No. of conductor	—	3	3
	Nominal cross-section area	mm²	35	25/3
	Construction	No./mm	7/59/0.32	7/22/0.26
	Diam. (Approx.)	mm	8.0	4.2
Nominal thickness of insulation		mm	2.8	—
Nominal thickness of sheath		mm	2.8	
Diam. of completed cable		mm	42.8～46.8	
Approx. weight of completed cable		kg／km	3160	

Table 2 : Characteristic

Item		unit	Specified Value	
Use of conductor		—	Power conductor	Earth conductor
Metal Conductor	Max. conductor resistance (20℃)	Ω／km	0.565	2.52
	Min. insulation resistance (20℃)	MΩ·km	500	—
Permissible minimum bending radius		mm	750	
Permissible maximum tensile strength		kN	4.0	
Permissible maximum compression force (F) from the drum		kN/m	4.9*	

*: F = Cable tension / Drum radius (Bending radius)

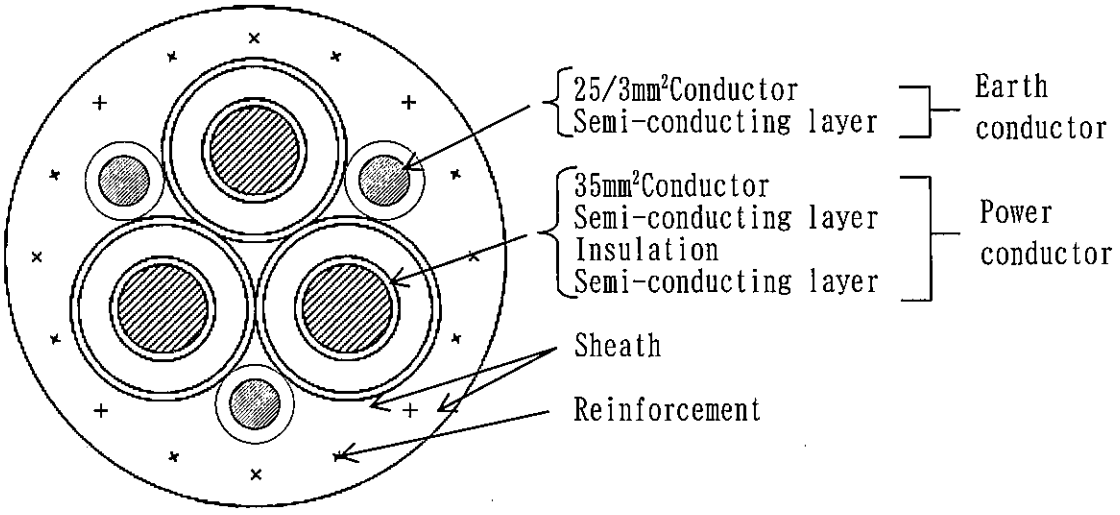


Figure 2. Cable cross section