No.SP 97-31-9005Rev.2
Date Sep. 13, 2023

SPECIFICATION

FOR

3300V, 6600V FLAT TYPE ETHYLENE PROPYLENE RUBBER
INSULATED POLYCHLOROPRENE SHEATHED TRAILING CABLE
Code : 3300V H-3PNCT
6600V H-3PNCT

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 data	Item	Prepared by	Approved by
—	Oct. 29. 1997	FIRST ISSUE	M. Iinuma	R. Koike
1	Dec. 15. 1999	Clerical error was corrected as follows. (1) 3. 5 "A suitable separator tape ····· shielding" → deleted (2) 3. 6 over the inner sheath → over the metallic shielding (3) Fig. 2 (W)(R)(B) → (B)(W)(R)	E. Koishi	R. Koike
2	Mar. 26. 2008	(1) '2. 6 Core identification' was added. (2) Conductor of 14mm² was added. (3) Approx. weight was corrected. (4) The permissible max. pulling tension was corrected. (5) The permissible max. compression force was added in table. (6) '6. Attention' was added. (7) Following comment was added. "The max overall diameter is about 1. 05 times the approx. overall diameter."	T. Yoshimura	T. Take'

1. SCOPE

This specification covers 3300V, 6600V Flat Type Ethylene Propylene Rubber Insulated Polychloroprene Sheathed Trailing Cable, which is reference to Japanese Electrical Facility Regulation and JIS C 3327-1993.

2. CONSTRUCTION

2.1 Conductor

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

2.2 Conductor shielding

A suitable semi-conducting tape shall be applied over the conductor.
The thickness of conductor shielding shall be included in a part of the insulation thickness.

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

2.4 Insulation shielding

A suitable semi-conducting tape shall be applied over the insulation.

2.5 Metallic shielding

Metallic shielding shall be tinned annealed copper wire braid.

2.6 Core identification

The core identification shall be made by the color of the tape which are applied under the metaric shielding.

2.7 Reinforcement

A reinforcement consisting of suitable fabric tape shall be applied over the metallic shielding.

2.8 Assembly

The insulated conductors shall be assembled in parallel.

2.9 Sheath

Sheath shall consist of black polychloroprene compound.
Nominal thickness shall be shown in the attached table.
Ave. thick. : not less than 90% of the nominal thickness
Min. thick. : not less than 80% of the nominal thickness.

2.10 Dimension

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

3. MARKING

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

4. TEST

The following tests shall be performed prior to shipment.

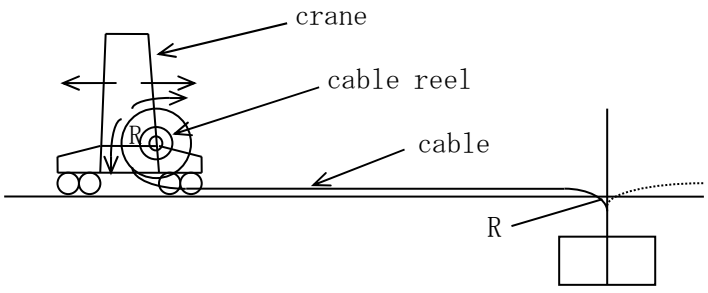
(1) Check of construction and dimension
(2) High voltage test (3300V : 9000/10min, 6600V : 17,000/10min)
(3) Measurement of insulation resistance
(4) Measurement of conductor resistance

Table 1 : Electrical properties

Size (mm^2)	Conductor resistance at 20℃ (ohms/km)	Insulation resistance at 20℃ (Mohm-km)	
		3300V	6600V
14	1.39	500	500
22	0.892	500	500
30	0.661	500	500
38	0.525	500	500
50	0.411	500	500
60	0.329	400	500
80	0.243	400	500
100	0.193	400	500

5. GUIDE TO USE

This cable is designed for crane installation as shown below.



R : Permissible minimum bending radius.

6. Attention

(1) In any case, pulling tension and compression force must not exceed this value. For safety,regular pulling tension should be 1/3 of the permissible max. value. It is necessary to determine the pulling tention considering the compression force.
(2) Compresstion foece = Pulluing tention ／ Bending radius

Table 2 : Dimensions

(Code : 3300V H-3PNCT)

No. of core	Conductor size	Conductor construction	Conductor diam.	Thick. of insulation	Thick. of shield braid	Thick. of reinforcement	Thick. of sheath	Approx. overall diameter	Approx. weight	Permissible min. bending radius	Permissible max. pulling tension	Permissible max. compression force
	mm^2	No./mm	mm	mm	mm	mm	mm	mm	kg/km	mm	kN	kN/m
3	14	88/0.45	4.9	3.0	0.3	1.0	4.6	24 × 52	1860	390	1.6	4.9
	22	7/20/0.45	7.0	3.0	0.3	1.0	4.8	26 × 58	2340	420	2.5	4.9
	30	7/27/0.45	8.1	3.0	0.3	1.0	4.9	27 × 61	2700	440	3.5	4.9
	38	7/34/0.45	9.1	3.0	0.45	1.0	5.1	29 × 65	3190	470	4.4	4.9
	50	19/16/0.45	10.4	3.5	0.45	1.0	5.4	32 × 73	3960	520	5.8	4.9
	60	19/20/0.45	11.6	3.5	0.45	1.0	5.6	33 × 76	4500	530	7.0	4.9
	80	19/27/0.45	13.5	3.5	0.45	1.0	5.8	35 × 82	5430	560	9.4	4.9
	100	19/34/0.45	15.2	3.5	0.45	1.0	6.0	37 × 87	6320	600	11.7	4.9
4	14	88/0.45	4.9	3.0	0.3	1.0	5.1	25 × 67	2500	400	2.1	4.9
	22	7/20/0.45	7.0	3.0	0.3	1.0	5.3	27 × 75	3150	440	3.4	4.9
	30	7/27/0.45	8.1	3.0	0.3	1.0	5.5	28 × 79	3650	450	4.7	4.9
	38	7/34/0.45	9.1	3.0	0.45	1.0	5.7	30 × 85	4300	480	5.9	4.9
	50	19/16/0.45	10.4	3.5	0.45	1.0	6.1	33 × 95	5360	530	7.8	4.9
	60	19/20/0.45	11.6	3.5	0.45	1.0	6.3	35 × 99	6080	560	9.4	4.9
	80	19/27/0.45	13.5	3.5	0.45	1.0	6.6	37 ×107	7370	600	12.5	4.9
	100	19/34/0.45	15.2	3.5	0.45	1.0	6.9	39 ×114	8600	630	15.6	4.9

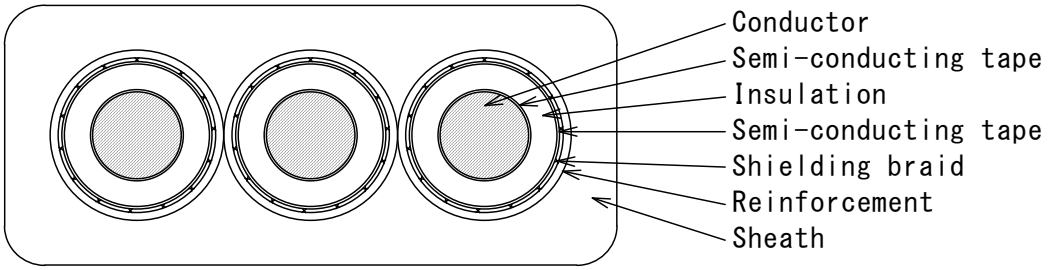
※ The max overall diameter is about 1.05 times the approx. overall diameter.

Table 3 : Dimensions

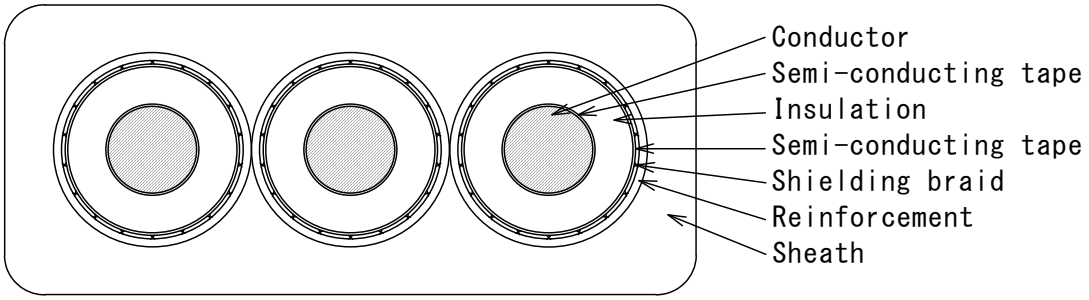
(Code : 6600V H-3PNCT)

No. of core	Conductor size	Conductor construction	Conductor diam.	Thick. of insulation	Thick. of shield braid	Thick. of reinforcement	Thick. of sheath	Approx. overall diameter	Approx. weight	Permissible min. bending radius	Permissible max. pulling tension	Permissible max. compression force
	mm^2	No./mm	mm	mm	mm	mm	mm	mm	kg/km	mm	kN	kN/m
	14	88/0.45	4.9	5.0	0.45	1.0	5.2	29 × 66	2780	470	1.6	4.9
	22	7/20/0.45	7.0	5.0	0.45	1.0	5.4	31 × 72	3350	500	2.5	4.9
	30	7/27/0.45	8.1	5.0	0.45	1.0	5.5	33 × 75	3750	530	3.5	4.9
	38	7/34/0.45	9.1	5.0	0.45	1.0	5.7	34 × 78	4200	550	4.4	4.9
3	50	19/16/0.45	10.4	5.0	0.45	1.0	5.8	36 × 83	4760	580	5.8	4.9
	60	19/20/0.45	11.6	5.0	0.45	1.0	6.0	37 × 86	5330	600	7.0	4.9
	80	19/27/0.45	13.5	5.0	0.45	1.0	6.2	39 × 92	6320	630	9.4	4.9
	100	19/34/0.45	15.2	5.0	0.45	1.0	6.4	41 × 97	7260	660	11.7	4.9
	14	88/0.45	4.9	5.0	0.45	1.0	5.8	31 × 86	3760	500	2.1	4.9
	22	7/20/0.45	7.0	5.0	0.45	1.0	6.1	33 × 93	4540	530	3.4	4.9
	30	7/27/0.45	8.1	5.0	0.45	1.0	6.2	34 × 98	5090	550	4.7	4.9
	38	7/34/0.45	9.1	5.0	0.45	1.0	6.4	35 ×102	5680	560	5.9	4.9
4	50	19/16/0.45	10.4	5.0	0.45	1.0	6.6	37 ×108	6470	600	7.8	4.9
	60	19/20/0.45	11.6	5.0	0.45	1.0	6.8	39 ×112	7240	630	9.4	4.9
	80	19/27/0.45	13.5	5.0	0.45	1.0	7.1	41 ×120	8600	660	12.5	4.9
	100	19/34/0.45	15.2	5.0	0.45	1.0	7.4	43 ×127	9910	690	15.6	4.9

※ The max overall diameter is about 1.05 times the approx. overall diameter.



3300V H-3PNCT　3×60mm^2



6600V H-3PNCT　3×60mm^2

Fig. 1 Cable cross section

3 cores　　4 cores

Note) W : White
R : Red
B : Blue
G : Green

Fig. 2 Core identification