

No. SP18-31-0591
Date July 1, 2024

SPECIFICATION

FOR

OPTICAL FIBER FLEXIBLE CABLE

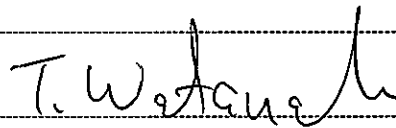
Code: FRC-□S1005-V

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

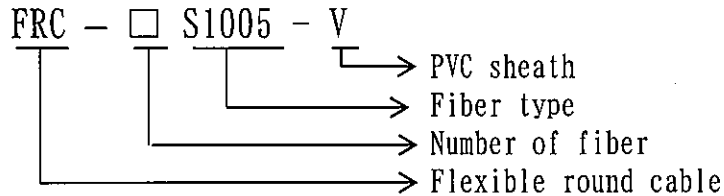
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1. SCOPE

This specification covers Optical Fiber Flexible Cable which is based on Hitachi Metals standard. This cable is designed for festoon installation for various cranes.

2. CODE

The code used in our product type has the following definition.



3. CONSTRUCTION

3.1 Optical Fiber Cord

- (1) Optical fiber shall be Step Index Single-mode Type (SM) made of fused silica and jacketed with coloured copolymer of fluoride.
- (2) Fibrous strength member shall be applied longitudinally over the optical fiber and cover with black PVC sheath.
- (3) Numeral printing shall be made on the PVC sheath for identification of cords.

3.2 Strength Member

Strength member shall consist of stranded steel wires and covered with black PVC.

3.3 Assembly

Optical fiber cords and strength member shall be cabled together with suitable fillers, and covered with suitable binder tape.

3.4 Sheath

Black PVC sheath shall be applied over the assembly.

3.5 Dimension

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

4. Inspection

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

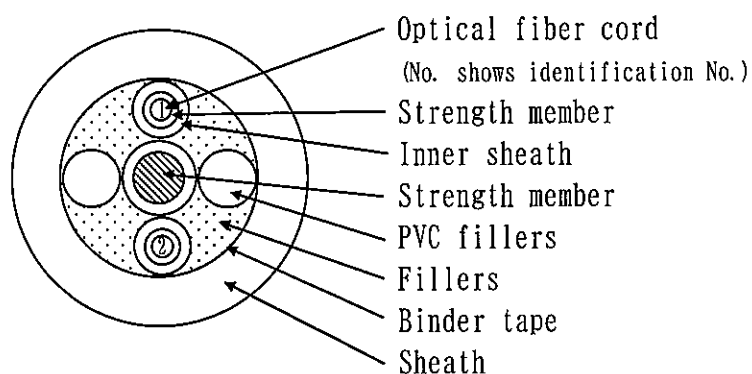
- (1) Constructions and dimensions
- (2) Transmission loss optical fiber

Table 1 : Construction and properties of optical fiber

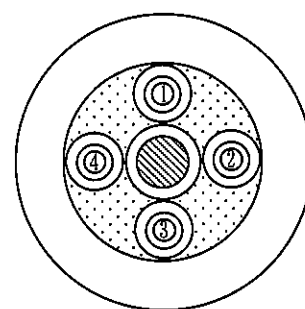
Item	Optical fiber
Type	Single Mode Fiber
Core	$10 \pm 3 \mu\text{m}$
Cladding	$125 \pm 2 \mu\text{m}$
Maximum transmission loss dB/km (at $\lambda = 1.3 \mu\text{m}$)	2.0

Table 2 : Construction and properties

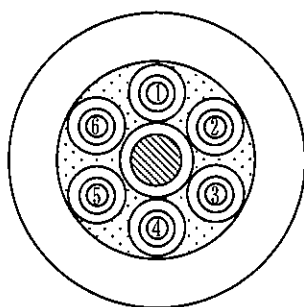
Item			Unit	Construction/Properties						
Number of fiber			—	2	4	6	8	9	10	12
Optical fiber cord	Optical fiber		—	See Table 1						
	Jacket	Covering	—	Polyamide						
		Diam. Approx.	mm	0.9±0.1						
	Sheath	Covering	—	PVC						
		Diam. Approx.	mm	2.8±0.2						
Tension memeber	Material		—	Stranded steel wires						
	Diam. Approx.		mm	2.4						
	Covering		—	PVC (Black)						
	Diam. Approx.		mm	3.2	3.2	3.2	4.6	4.6	5.4	7.3
Sheath	Material		—	PVC (Black)						
	Nominal thickness		mm	2.1				2.2		
Approx. diameter of completed cable			mm	15	15	15	16.5	16.5	18	19
Approx. weight of completed cable			kg/km	220	220	230	270	280	310	360
Permissible maximum pulling tension			N	490						
Permissible bending radius			mm	150	150	150	170	170	180	190



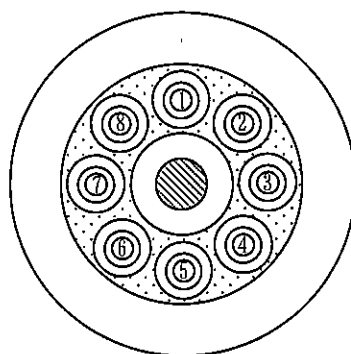
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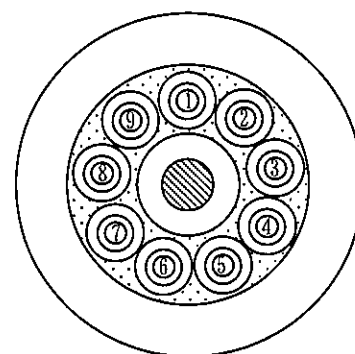
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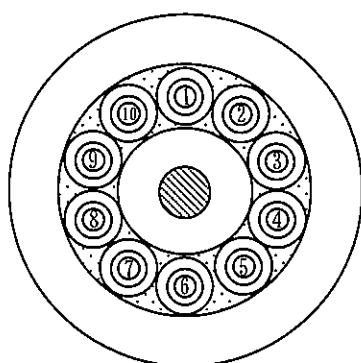
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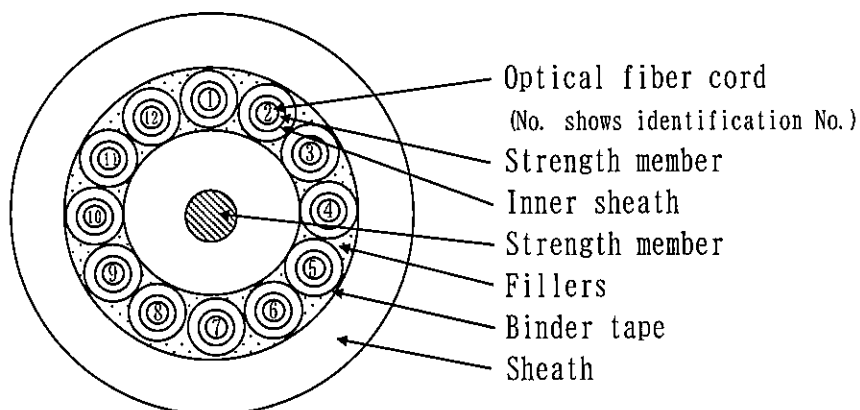
FRC-8S1005-V



FRC-9S1005-V



FRC-10S1005-V



FRC-12S1005-V

Fig 1. Cable Cross Section