

ঢাকা পানি সরবরাহ ও পয়ঃ নিষ্কাশন কর্তৃপক্ষ

নির্বাহী প্রকৌশলীর কার্যালয়

সংগ্রহ বিভাগ-২, ওয়াসা ভবন (৬ষ্ঠ তলা),

৯৮, কাজী নজরুল ইসলাম এভিনিউ, কাওরান বাজার, ঢাকা-১২১৫।

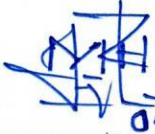
WebSite: www.dwsa.org.bd, Phone: 41010230

মালামালের যৌথ পরিদর্শন রিপোর্ট

চুক্তি নং-	৪৬.১১৩.৪২৮.০০.০০.১০৮/২৫-২৬/CA-২৯;	তারিখঃ ১৩/০৪/২০২৬ ইং।
সরবরাহ আদেশ স্মারক নং-	৪৬.১১৩.৪২৮.০০.০০.১০৮.২০২৬-৮৪৫;	তারিখঃ ১৯/০৪/২০২৬ ইং।
কাজের নাম	Procurement of Different Type HT, LT Cable for Dhaka WASA সংগ্রহ কাজের মালামাল সরবরাহ প্রসঙ্গে।	
সরবরাহকারীর নাম	বিআরবি কেবল ইন্ডাস্ট্রিজ লিমিটেড, বিসিক শিল্পনগরী, কুষ্টিয়া, বাংলাদেশ।	
ক্রয়কারী বিভাগের নাম	সংগ্রহ বিভাগ-২, ঢাকা ওয়াসা।	
ব্যবহারকারী বিভাগের নাম	ঢাকা ওয়াসার এফ. এম. বিভাগ-১/২।	
সরবরাহের স্থান	ঢাকা ওয়াসার ভান্ডার বিভাগ, পাগলা।	
সরবরাহের তারিখ	২৯/০৪/২০২৬ ইং ও ৬/৫/২৬ ইং	যৌথ পরিদর্শনের তারিখঃ ০৬/০৫/২০২৬ ইং।

ক্রমিক নং	মালামালের বিবরণ	একক	চুক্তি অনুযায়ী মালামালের পরিমাণ	একই কিস্তিতে দেয় মালামালের পরিমাণ	Country of Origin
১	1 x 1.5 rm Cable.	মিটার	২০০০	২০০০	Bangladesh
২	1 x 35 rm Cable (Aluminium).	মিটার	৩০০০	৩০০০	
৩	1 x 10 rm NYLT Cable.	মিটার	৫০০	৫০০	
৪	1 x 50 rm LT Cable.	মিটার	৫০০	৫০০	
৫	1 x 70 rm LT Cable.	মিটার	২০০০	২০০০	
৬	1C-2x2.5RM BYA Cable	মিটার	৫০০	৫০০	
৭	3 x 150 +70 sq.mm A2xY LT Cable (Aluminium).	মিটার	৫০০	৫০০	
৮	3 x 70/35 rm LT Cable.	মিটার	১৫০০	১৫০০	
৯	3 x 50 rm HT Cable (Copper).	মিটার	১৫০০	১৫০০	
১০	3 x 50 rm HT Cable (Aluminium).	মিটার	৫০০	৫০০	

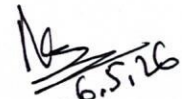
যৌথ পরিদর্শন কমিটি কর্তৃক সমুদয় মালামাল পরিদর্শন করা হইল এবং তা বাহ্যিকভাবে সঠিক পাওয়া গেল। বাহ্যিকভাবে সঠিক পাওয়ায় টেষ্টের জন্য নমুনা সংগ্রহ করা হইল। MIST হইতে প্রাপ্ত টেষ্ট রিপোর্টের ভিত্তিতে সমুদয় মালামাল চূড়ান্তভাবে গ্রহণ/বাতিলের সুপারিশ করা হইবে।


০৬.০৫.২৬

মোঃ মাজহারুল ইসলাম
নির্বাহী প্রকৌশলী
সংগ্রহ বিভাগ-২, ঢাকা ওয়াসা
ও সদস্য-সচিব,
যৌথ পরিদর্শন কমিটি।


০৬.০৫.২৬

মনিরুজ্জামান
সহকারী প্রকৌশলী
সংগ্রহ বিভাগ-২, ঢাকা ওয়াসা
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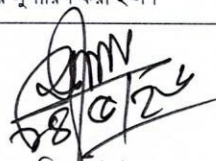

০৬.০৫.২৬

মোঃ আঃ লতিফ
তত্ত্বাবধায়ক প্রকৌশলী
আর.পি.ই. এন্ড এম সার্কেল, ঢাকা ওয়াসা ও
আহ্বায়ক
যৌথ পরিদর্শন কমিটি।

CATS Ref. NO: MIST CATS(EECE)REF: Cable/130; Date: 14/05/2026 হতে প্রাপ্ত টেষ্ট রিপোর্ট সন্তোষজনক। টেষ্ট রিপোর্ট সন্তোষজনক পাওয়ায় সরবরাহকৃত সমুদয় মালামাল যৌথ পরিদর্শন কমিটি কর্তৃক চূড়ান্তভাবে গ্রহণের সুপারিশ করা হ'ল।


১৪.০৫.২৬

মোঃ মাজহারুল ইসলাম
নির্বাহী প্রকৌশলী
সংগ্রহ বিভাগ-২, ঢাকা ওয়াসা
ও সদস্য-সচিব,
যৌথ পরিদর্শন কমিটি।


১৪.০৫.২৬

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সংগ্রহ বিভাগ-২, ঢাকা ওয়াসা
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১৪.০৫.২৬

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যৌথ পরিদর্শন কমিটি।



Centre for Advisory and Testing Services (CATS-MIST)
Dept of Electrical Electronic and Communication Engineering (EECE)
Military Institute of Science and Technology (MIST)

TEST REPORT ON A COPPER AND ALUMINIUM CABLES.

RECEIVED DATE	:	07.05. 2026	TEST SERIAL	:	2026.05.130
MANUFACTURER	:	BRB CABLE INDUSTRIES LIMITED, KUSHTIA.			
CLIENT	:	Dhaka Water Supply And Sewerage Authority (WASA), 98 Kazi Nazrul Islam Ave, Dhaka-1215.			
CLIENT'S REF. NO	:	46.113.428.00.00.108.2026-894	Date:	07.05. 2026	
PROJECT LOCATION	:	--			
SUPPLIER	:	Dhaka Water Supply and Sewerage Authority (WASA), Executive Engineer, Procurement Division- 2, Dhaka-1215.			
MIST CATS (EECE) REF.	:	Cable/130	Date:	14.05. 2026	

The tests are conducted and the report is prepared by the Department of Electrical Electronic and Communication Engineering (EECE) of Military Institute of Science and Technology (MIST), Dhaka-1216, Bangladesh.

Sample Supplied:

Ser. No	Item Name	Ser. No	Sample Nos	Remarks
1.	Copper Cable: 1×1.5 rm, 1×10 rm, 1×50 rm, 1×70 rm, 2×2.5 rm, 3× 70/35 rm and 3×50 rm	--	07	
2.	Aluminium Cable:- 1× 35 rm, 3× 150 +70 sq.mm and 3× 50rm.	--	03	



RVC: NIQM8HTF



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1.0 Introduction

Md. Mazharul Islam, Executive Engineer, Procurement Division- 2, Dhaka Water Supply and Sewerage Authority (WASA), Dhaka-1215 supplied ten (10) samples of cables to CATS, EECE Dept., MIST, Mirpur Cantonment, Dhaka-1216 for performance test. In response to the request the following tests were conducted at the premises of MIST according to IEC standard.

Tests:

1. Physical dimension test
2. DC resistance test
3. Insulation resistance test
4. High voltage withstand test
5. Current Carrying Capacity.

Samples

Approximately six (06) meter length cable was supplied for test. The lot size and the mode of sampling were unknown.

2.0 MARK ON THE CABLES

BRB CABLES BANGLADESH DWASA-2026

Ser. No	Description of Cable	Qty.	Remarks
1.	1 × 1.5 rm, BYA, 450/750V	01	
2.	1 × 35 rm, BAYA, 450/750V	01	
3.	1 × 10 rm, NYY, 600/1000V	01	
4.	1 × 50 rm, NYY, 600/1000V	01	
5.	1 × 70 rm, NYY, 600/1000V	01	
6.	2 × 2.5 rm, BYM, 300/500V	01	
7.	3 × 150 sm / 70 rm, NAYY, 600/1000V	01	
8.	3 × 70 sm / 35 rm, NYY, 600/1000V	01	
9.	3 × 50 rm, 2XSEYFGY, 6/10 (12) KV	01	
10.	3 × 50 rm, A2XSEYFGY, 6/10 n(12)KV	01	



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3.0 Test

3.1 Measurement of Dimension

Physical dimension of the cables was measured and the values are given in table- 01 to 10.

3.2 DC Resistance test

DC resistance measured at ambient temperature 30°C and then converted to resistance at 20°C and the results are given in table- 01 to 10.

3.3 Insulation Resistance test

The samples were immersed in saline water at room temperature 30°C. The insulation resistance of the samples was measured after 24 hours at room temperature 30°C. The measured results are given in table- 01 to 10.

3.4 AC High Voltage withstand Test

High Voltage withstand test for the samples carried out applied according to voltage grade AC between the conductor and the ground. The voltage was raised slowly and kept for 5 minutes. No breakdown of insulation during the test. The measured result is given in table- 01 to 10.

3.5 Current Carrying Capacity Test

The rated current of maximum capacity of the cables was passed through the conductor and maintained until the temperature of the conductor and the insulation became stable. Increase in the temperature of the conductor and the insulation were measured at regular interval. The measurement was carried out at room temperature. The recorded maximum temperature rise for conductor as well as in the insulation did not exceed the respective values. The measured values are given in tables - 01 to 10.

Table- 01: Test results of sample Serial No-01

1 × 1.5 rm, BYA, 450/750V				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the core	No	1	
2.	Number of wires in the conductor	No	7	
3.	Diameter of the each wire	mm	0.53	
4.	Dia of stranded conductor	mm	1.59	
5.	Insulation thickness	mm	0.71	
6.	Overall-diameter of the Cable	mm	2.99	
7.	Weight of the cable	kg/km	23	
8.	DC resistance at 20 °C	Ω/Km	12.06	
9.	Insulation resistance core and body	GΩ	6	
10.	High Voltage withstand test 3 kV, 5 minutes	kV	Satisfactory	
11.	Current carrying capacity	A	Satisfactory	





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Table- 02: Test results of sample Serial No-02

1 ×35 rm, BAYA,450/750V				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the core	No	1	
2.	Number of wires in the conductor	No	19	
3.	Diameter of the each wire	mm	1.54	
4.	Dia of Bare conductor	mm	7.65	
5.	Insulation thickness	mm	1.21	
6.	Overall-diameter of the Cable	mm	10.06	
7.	Weight of the cable	kg/km	155.1	
8.	DC resistance at 20 °C	Ω/Km	0.865	
9.	Insulation resistance core and body	GΩ	4.5	
10.	High Voltage withstand test 3 kV, 5 minutes	kV	Satisfactory	
11.	Current carrying capacity	A	Satisfactory	

Table- 03: Test results of sample Serial No- 03

1 ×10 rm, NYY, 600/1000V				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the core	No	1	
2.	Number of wires in the conductor	No	7	
3.	Diameter of the each wire	mm	1.35	
4.	Dia of Bare conductor	mm	4.06	
5.	Insulation sheath thickness	mm	1.01	
6.	Sheath thickness	mm	1.81	
7.	Dia of insulated conductor	mm	6.06	
8.	Overall-diameter of the Cable	mm	9.66	
9.	Weight of the cable	kg/km	182	
10.	DC resistance at 20 °C	Ω/Km	1.82	
11.	Insulation resistance core and body	GΩ	8.2	
12.	High Voltage withstand test 3.5 kV, 5 minutes	kV	Satisfactory	
13.	Current carrying capacity	A	Satisfactory	





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Table- 04: Test results of sample Serial No-04

1 ×50 rm, NYY, 600/1000V				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the core	No	1	
2.	Number of wires in the conductor	No	19	
3.	Diameter of the each wire	mm	1.83	
4.	Dia of stranded conductor	mm	9.16	
5.	Dia of insulated conductor	mm	11.95	
6.	Insulation thickness	mm	1.41	
7.	Insulation sheath thickness	mm	1.80	
8.	Overall-diameter of the Cable	mm	15.6	
9.	Weight of the cable	kg/km	645	
10.	DC resistance at 20 °C	Ω/Km	0.386	
11.	Insulation resistance core and body	GΩ	3.3	
12.	High Voltage withstand test 3.5 kV, 5 minutes	kV	Satisfactory	
13.	Current carrying capacity	A	Satisfactory	

Table- 05: Test results of sample Serial No-05

1 ×70 rm, NYY, 600/1000V				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the core	No	1	
2.	Number of wires in the conductor	No	19	
3.	Diameter of the each wire	mm	2.17	
4.	Dia of stranded conductor	mm	10.86	
5.	Insulation sheath thickness	mm	1.81	
6.	Insulation thickness	mm	1.42	
7.	Dia of insulated conductor	mm	13.66	
8.	Overall-diameter of the Cable	mm	17.31	
9.	Weight of the cable	kg/km	858	
10.	DC resistance at 20 °C	Ω/Km	0.267	
11.	Insulation resistance core and body	GΩ	5.5	
12.	High Voltage withstand test 3.5 kV, 5 minutes	kV	Satisfactory	
13.	Current carrying capacity	A	Satisfactory	



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Table- 06: Test results of sample Serial No-06

2 × 2.5 rm, BYM, 300/500V				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the cores	No	2	
2.	Number of wires in the conductor	No	7	
3.	Diameter of the each wire	mm	0.68	
4.	Dia of stranded conductor	mm	2.03	
5.	Dia of insulated conductor	mm	3.62	
6.	Insulation thickness	mm	0.81	
7.	Insulation sheath thickness	mm	1.21	
8.	Overall-diameter of the Cable	mm	10.42	
9.	Weight of the cable	kg/km	171	
10.	DC resistance at 20 °C	Ω/Km	7.40	
11.	Insulation resistance core and body	GΩ	4.34	
12.	High Voltage withstand test 2.2 kV, 5 minutes	kV	Satisfactory	
13.	Current carrying capacity	A	Satisfactory	

Table- 07: Test results of sample Serial No-07

3 ×150 sm/70 rm, NAYY, 600/1000V					
S/L No	Description of Test	Unit	Finding Values		Remarks
			150 sm	70 rm	
1.	Number of the cores	No	3	1	
2.	Number of wires in the conductor	No	37	19	
3.	Diameter of the each wire	mm	2.36	2.17	
4.	Dia of stranded conductor	mm	12.6/19	10.86	
5.	Dia of insulated conductor	mm	16.2/22.6	13.65	
6.	Insulation thickness	mm	1.82	1.41	
7.	Insulation sheath thickness	mm	2.61		
8.	Overall-diameter of the Cable	mm	46.04		
9.	Weight of the cable	kg/km	2966		
10.	DC resistance at 20 °C	Ω/Km	0.205	0.444	
11.	Insulation resistance core and body	GΩ	4.3	4.2	
12.	High Voltage withstand test 3.5 kV, 5 minutes	kV	Satisfactory		
13.	Current carrying capacity	A	Satisfactory		



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Table- 08: Test results of sample Serial No-08

3×70sm/35 rm, NYY, 600/1000V					
S/L No	Description of Test	Unit	Finding Values		Remarks
			70 sm	35 rm	
1.	Number of the cores	No	3	1	
2.	Number of wires in the conductor	No	19	19	
3.	Diameter of the each wire	mm	2.24	1.53	
4.	Dia of insulated conductor	mm	12.1/15.01	10.06	
5.	Insulation thickness	mm	1.41	1.2	
6.	Insulation sheath thickness	mm	2.01		
7.	Overall-diameter of the Cable	mm	32.45		
8.	Weight of the cable	kg/km	2938		
9.	DC resistance at 20 °C	Ω/Km	0.267	0.523	
10.	Insulation resistance core and body	GΩ	5.2	5	
11.	High Voltage withstand test 3.5 kV, 5 minutes	kV	Satisfactory		
12.	Current carrying capacity	A	Satisfactory		

Table- 09: Test results of sample Serial No-09

3×50 rm, 2xSEYFGY, 6/10 (12) kV				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the cores	No	3	
2.	Number of wires in the conductor	No	19	
3.	Diameter of the each wire	mm	1.87	
4.	Cabelac Insulation thickness	mm	0.8	
5.	Dia of stranded conductor	mm	8.01	
6.	Insulation thickness	mm	3.4	
7.	Dia of insulated conductor	mm	16.02	
8.	Copper tap	mm	0.06	
9.	Dia Over screen	mm	17.72	
10.	Core stranded dia	mm	38.28	
11.	Inner Sheath thickness	mm	1.8	
12.	Dia Over Inner Sheath	mm	44.21	
13.	Size of steel flat wire	mm	4×0.81	
14.	Dia Over steel flat wire	mm	45.81	
15.	Dia Over steel strap	mm	46.11	
16.	Overall-diameter of the Cable	mm	52.50	
17.	Weight of the cable	kg/km	4780	
18.	DC resistance at 20 °C	Ω/Km	0.38	
19.	Insulation resistance core and body	GΩ	220	
20.	High Voltage withstand test 22 kV, 5 minutes	kV	Satisfactory	
21.	Current carrying capacity	A	Satisfactory	

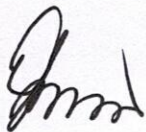


Table- 10: Test results of sample Serial No-10

3×50 rm, A2xSEYFGY, 6/10 (12) kV				
S/L No	Description of Test	Unit	Finding Values	Remarks
1.	Number of the cores	No	3	
2.	Number of wires in the conductor	No	19	
3.	Diameter of the each wire	mm	1.87	
4.	Dia of stranded conductor	mm	8.02	
5.	Cabelac Insulation thickness	mm	0.80	
6.	Insulation thickness	mm	3.45	
7.	Dia of insulated conductor	mm	16.02	
8.	Copper tap	mm	0.06	
9.	Dia Over screen	mm	17.72	
10.	Core stranded dia	mm	38.29	
11.	Inner Sheath thickness	mm	1.61	
12.	Dia Over Inner Sheath	mm	44.21	
13.	Size of steel flat wire	mm	4×0.81	
14.	Dia Over steel flat wire	mm	45.80	
15.	Dia Over steel strap	mm	46.1	
16.	Overall-diameter of the Cable	mm	52.51	
17.	Weight of the cable	kg/km	3901	
18.	DC resistance at 20 °C	Ω/Km	0.64	
19.	Insulation resistance core and body	GΩ	200	
20.	High Voltage withstand test 22 kV, 5 minutes	kV	Satisfactory	
21.	Current carrying capacity	A	Satisfactory	

4.0 Comments

- Physical dimensions of the supplied samples are within acceptable limit.
- DC resistance of the supplied samples at 20 °C are less than its allowable maximum value and hence satisfactory.
- The insulation resistance of the supplied cables are satisfactory.
- The cables withstood the high voltage test.
- Current Carrying Capacity of the supplied samples are satisfactory.



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**** The overall performance of the supplied cables found satisfactory.**

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