ওয়াসা

ঢাকা পানি সরবরাহ ও পয়ঃনিষ্কাশন কর্তৃপক্ষ

নির্বাহী প্রকৌশলীর কার্যালয়

সংগ্রহ বিভাগ-২, ওয়াসা ভবন (৬ষ্টতলা),
৯৮, কাজী নজরুল ইসলাম এভিনিউ, কাওরান বাজার, ঢাকা-১২১৫।

মুজিব শতবর্ষ MUJIB 100

উন্নয়নের গণতন্ত্র
শেখ হাসিনার মূলমন্ত্র।

মালামাল পরিদর্শন ও পারফরমেন্স টেষ্ট রিপোর্টের উপর যৌথ পরিদর্শন কমিটির মতামত

চুক্তি নং-	ঃ	৪৬.০৫.০০০০.৪২৮.০৭.০৩৫.২০২২-২৩/eGP-সি১৪;	তারিখ ঃ ১০/১১/২০২২ ইং।
সরবরাহ আদেশ স্মারক নং-	ঃ	৪৬.০৫.০০০০.৪২৮.০৭.০৩৫.২০২২-৩২৬	তারিখ ঃ ০৪/১২/২০২২ ইং।
কাজেরনাম	ঃ	ঢাকা ওয়াসার মড্স জোন সমুহের জন্য HDPE পাইপ ও ফিটিংস সংগ্রহ কাজ।	
সরবরাহকারীরনাম	ঃ	বেঙ্গল প্লাষ্টিক পাইপস্ লিমিটেড জিরাবো, আশুলিয়া, সাভার, ঢাকা বাংলাদেশ।	
ব্যবহারকারী বিভাগের নাম	ঃ	ঢাকা ওয়াসার মডস জোন সমুহ।	
সরবরাহের স্থান	ঃ	ঢাকা ওয়াসার ভান্ডার বিভাগ, পাগলা।	
সরবরাহ সমাপ্তের তারিখ	ঃ	১৭/১০/২০২৩ইং।	যৌথ পরিদর্শনের তারিখঃ ২৬/১০/২০২৩ ইং।

ক্র. নং	মালামালের বিবরণ	চুক্তি অনুযায়ী মালামালের পরিমান	একই কিস্তিতে দেয় মালামালের পরিমান
1	HDPE Pipe -25mm dia (For 3/4" water Connection)	4000 m	4000 m
2	HDPE Pipe -32mm dia (For 1" water Connection)	6000 m	6000 m
3	HDPE Pipe -50mm dia(For 1.5" water Connection)	4200 m	4200 m
4	HDPE Pipe -75mm dia	1800 m	1800 m
5	HDPE Pipe -110mm dia	2500 m	2500 m
6	HDPE Pipe -160mm dia	1400 m	1400 m
7	110mm dia HDPE E.F Bend 90 Degree	70 nos	70 nos
8	HDPE Reducer Tee-E.F-200x110x200mm dia	75 nos	75 nos
9	HDPE Reducer Tee-E.F-200x75x200mm dia	65 nos	65 nos
10	HDPE Reducer Tee-E.F-160x110x160mm dia	65 nos	65 nos
11	HDPE Reducer Tee-E.F-200x160x 200mm dia	50 nos	50 nos
12	HDPE End cap E.F-110mm dia	145 nos	145 nos
13	HDPE End cap E.F-160mm dia	100 nos	100 nos
14	HDPE End cap E.F-200mm dia	75 nos	75 nos
15	HDPE Sleeve E.F-160mm dia	200 nos	200 nos
16	HDPE Sleeve E.F-110mm dia	220 nos	220 nos
17	HDPE Sleeve E.F-315mm dia	110 nos	110 nos
18	HDPE Sleeve E.F-200mm dia	170 nos	170 nos
19	Saddle75mmx25mm (For 3/4" water Connection)	110 nos	110 nos
20	Saddle75mmx32mm (For 1" water Connection)	350 nos	350 nos
21	Saddle75mmx50mm (For 1.5" water Connection)	260 nos	260 nos
22	Saddle110mmx25mm (For 3/4" water Connection)	140 nos	140 nos
23	Saddle110mmx32mm (For 1" water Connection)	880 nos	880 nos
24	Saddle110mmx50mm (For 1.5" water Connection)	350 nos	350 nos
25	Saddle110mmx63mm (For 2" water Connection)	55 nos	55 nos
26	Saddle160mmx25mm (For 3/4" water Connection)	130 nos	130 nos
27	Saddle160mmx32mm (For 1" water Connection)	450 nos	450 nos
28	Saddle160mmx50mm (For 1.5" water Connection)	200 nos	200 nos
29	Saddle200mmx25mm (For 3/4" water Connection)	180 nos	180 nos
30	Saddle200mmx32mm (For 1" water Connection)	195 nos	195 nos
31	Saddle200mmx50mm (For 1.5" water Connection)	140 nos	140 nos
32	Female union ball valve with male adopter-3/4"(For 1" water Connection)	230 nos	230 nos
33	Female union ball valve with male adopter-32mm(For 1" water Connection)	780 nos	780 nos
34	Female union ball valve with male adopter-50mm(For 1.5" water Connection)	450 nos	450 nos

35	Female adopter set-25mm (For 3/4" water Connection)	200 nos	200 nos
36	Female adopter set-32mm(For 1" water Connection)	630 nos	630 nos
37	Female adopter set-50mm(For 1.5" water Connection)	400 nos	400 nos
38	Female adopter set-63mm(For 2" water Connection)	85 nos	85 nos
39	Female union coupler set-25mm (For 3/4" water Connection)	150 nos	150 nos
40	Female union coupler set-32mm (For 1" water Connection)	630 nos	630 nos
41	Female union coupler set-50mm (For 1.5" water Connection)	370 nos	370 nos
42	Coupler Set-32mm (For 1" water Connection)	880 nos	880 nos
43	Coupler Set-50mm (For 1.5" water Connection)	650 nos	650 nos
44	Coupler Set-63mm (For 2" water Connection)	90 nos	90 nos
45	Male adopter set-25mm (For 3/4" water Connection)	150 nos	150 nos
46	Male adopter set-32mm(For 1" water Connection)	680 nos	680 nos
47	Male adopter set-50mm(For 1.5" water Connection)	450 nos	450 nos
48	Male adopter set-63mm(For 2" water Connection)	35 nos	35 nos
49	Male elbow set-25mm (For 3/4" water Connection)	160 nos	160 nos
50	Male elbow set-32mm(For 1" water Connection)	1210 nos	1210 nos
51	Male elbow set-50mm(For 1.5" water Connection)	590 nos	590 nos
52	Male elbow set-63mm(For 2" water Connection)	35 nos	35 nos
53	Ferrule set-25mm (For 3/4" water Connection)	200 nos	200 nos
54	Ferrule elbow set-32mm(For 1" water Connection)	1620 nos	1620 nos
55	Ferrule elbow set-50mm(For 1.5" water Connection)	560 nos	560 nos

বুয়েট টেষ্ট রির্পোটের উপর যৌথ পরিদর্শন কমিটির মতামত ও স্বাক্ষরঃ

BRTC NO. 1103-08459/ME/2023-24; Date: 13/12/2023, মোতাবেক বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয় হতে প্রাপ্ত টেষ্ট রিপোর্টটি সন্তোষজনক। টেষ্ট রিপোর্ট সন্তোষজনক পাওয়ায় সরবরাহকৃত সমুদয় মালামাল যৌথ পরিদর্শন কমিটি কর্তৃক চুড়ান্তভাবে গ্রহণের সুপারিশ করা হল।

31/12/23

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

31/12/23

লেঃ কর্ণেল মোঃ মাকসুদুল (অবঃ)
প্রধান নিরাপত্তা কর্মকর্তা, নিরাপত্তা ও
গোয়েন্দা বিভাগ,ঢাকা ওয়াসা
ও সদস্য, যৌথ পরিদর্শন কমিটি।

31/12/23

মোঃ ছরোয়ার হোসেন খান
নির্বাহী প্রকৌশলী
ভান্ডার বিভাগ, ঢাকা ওয়াসা ও সদস্য,
যৌথ পরিদর্শন কমিটি।

31-12-2023

মোহাম্মদ তৌহিদ এলাহী
নির্বাহী প্রকৌশলী, মড্স জোন-৫
ঢাকা ওয়াসা ও সদস্য,
যৌথ পরিদর্শন কমিটি।

31.12.2023

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

যন্ত্রকৌশল বিভাগ
বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়
ঢাকা-১০০০, বাংলাদেশ

Department of Mechanical Engineering
Bangladesh University of Engineering and Technology
Dhaka-1000, Bangladesh

TEST REPORT OF HDPE PIPE & FITTINGS

30 December 2023

027264

CLIENT : জনাব মোঃ জয়নাল আবদীন
নির্বাহী প্রকৌশলী
সংগ্রহ বিভাগ-২, ঢাকা ওয়াসা, ঢাকা।

CLIENT'S REFERENCE : Memo No. 46.05.0000.428.07.035.2022-358; Dated: 26.10.2023

UNIVERSITY REFERENCE : BRTC NO. 1103-08459/ME/2023-24; Dated: 13.12.2023
[ME Job No. 15871]

SAMPLES SUPPLIED :

1. 25 mm dia. HDPE Pipe (For 3/4" Water Connection) (PN10)
2. 32 mm dia. HDPE Pipe (For 1" Water Connection) (PN10)
3. 50 mm dia. HDPE Pipe (For 1.5" Water Connection) (PN10)
4. 75 mm dia. HDPE Pipe (PN10)
5. 110 mm dia. HDPE Pipe (PN10)
6. 160 mm dia. HDPE Pipe (PN10)
7. 110 mm dia. HDPE E.F Bend 90 Degree (PN10)
8. 200x110x200 mm dia. HDPE Reducer Tee-E.F (PN10)
9. 200x75x200 mm dia. HDPE Reducer Tee-E.F (PN10)
10. 160x110x160 mm dia. HDPE Reducer Tee-E.F (PN10)
11. 200x160x200 mm dia. HDPE Reducer Tee-E.F (PN10)
12. 110 mm Dia. HDPE End Cap E.F (PN10)
13. 160 mm Dia. HDPE End Cap E.F (PN10)
14. 200 mm Dia. HDPE End Cap E.F (PN10)
15. 160 mm dia. HDPE Sleeve E.F (PN10)
16. 110 mm dia. HDPE Sleeve E.F (PN10)
17. 315 mm dia. HDPE Sleeve E.F (PN10)
18. 200 mm dia. HDPE Sleeve E.F (PN10)
19. Saddle 75 mm x 25 mm (For ¾" Water Connection) (PN10)
20. Saddle 75 mm x 32 mm (For 1" Water Connection) (PN10)
21. Saddle 75 mm x 50 mm (For 1.5" Water Connection) (PN10)
22. Saddle 110 mm x 25 mm (For 3/4" Water Connection) (PN10)
23. Saddle 110 mm x 32 mm (For 1" Water Connection) (PN10)
24. Saddle 110 mm x 50 mm (For 1.5" Water Connection) (PN10)
25. Saddle 110 mm x 63 mm (For 2" Water Connection) (PN10)
26. Saddle 160 mm x 25 mm (For ¾" Water Connection) (PN10)
27. Saddle 160 mm x 32 mm (For 1" Water Connection) (PN10)
28. Saddle 160 mm x 50 mm (For 1.5" Water Connection) (PN10)
29. Saddle 200 mm x 25 mm (For 3/4" Water Connection) (PN10)
30. Saddle 200 mm x 32 mm (For 1" Water Connection) (PN10)
31. Saddle 200 mm x 50 mm (For 1.5" Water Connection) (PN10)
32. Female Union Ball Valve with Male Adapter- ¾" (For 1" Water Connection) (PN10)
33. Female Union Ball Valve with Male Adapter- 32 mm (For 1" Water Connection) (PN10)
34. Female Union Ball Valve with Male Adapter- 50 mm (For 1.5" Water Connection) (PN10)
35. Female Adapter Set- 25 mm (For 3/4" Water Connection) (PN10)
36. Female Adapter Set- 32 mm (For 1" Water Connection) (PN10)
37. Female Adapter Set- 50 mm (For 1.5" Water Connection) (PN10)
38. Female Adapter Set- 63 mm (For 2" Water Connection) (PN10)
39. Female Union Coupler Set- 25 mm (For 3/4" Water Connection) (PN10)
40. Female Union Coupler Set- 32 mm (For 1" Water Connection) (PN10)
41. Female Union Coupler Set- 50 mm (For 1.5" Water Connection) (PN10)
42. Coupler Set- 32 mm (For 1" Water Connection) (PN10)
43. Coupler Set- 50 mm (For 1.5" Water Connection) (PN10)
44. Coupler Set- 63 mm (For 2" Water Connection) (PN10)
45. Male Adapter Set- 25 mm (For 3/4" Water Connection) (PN10)
46. Male Adapter Set- 32 mm (For 1" Water Connection) (PN10)
47. Male Adapter Set- 50 mm (For 1.5" Water Connection) (PN10)
48. Male Adapter Set- 63 mm (For 2" Water Connection) (PN10)
49. Male Elbow Set- 25 mm (For 3/4" Water Connection) (PN10)
50. Male Elbow Set- 32 mm (For 1" Water Connection) (PN10)
51. Male Elbow Set- 50 mm (For 1.5" Water Connection) (PN10)
52. Male Elbow Set- 63 mm (For 2" Water Connection) (PN10)
53. Ferrule Set- 25 mm (For 3/4" Water Connection) (PN10)
54. Ferrule Elbow Set-32 mm (For 1" Water Connection) (PN10)
55. Ferrule Elbow Set-50 mm (For 1.5" Water Connection) (PN10)

SAMPLES SUPPLIER : Bengal Plastic Pipes Limited
SAMPLE CONDITION : Signed and Unsealed
TEST CONDUCTED BY : DEPARTMENT OF MECHANICAL ENGINEERING, BUET, DHAKA-1000

Professor and Head
Mechanical Engg. Dept.

যান্ত্রিক প্রকৌশল বিভাগ
বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়
ঢাকা-১০০০, বাংলাদেশ

Department of Mechanical Engineering
Bangladesh University of Engineering and Technology
Dhaka-1000, Bangladesh

027265

CLIENT'S REFERENCE :
UNIVERSITY REFERENCE :

Memo No. 46.05.0000.428.07.035.2022-358; Dated: 26.10.2023
BRTC NO. 1103-08459/ME/2023-24; Dated: 13.12.2023
[ME Job No. 15871]

TEST RESULT

TEST OF DIMENSION
Standard Used: ISO 4427-2:2007 (E)

Sample ID	Outer dia. (mm)			Wall thickness (mm)			Remarks
	Max.	Min.	Avg.	Max.	Min.	Avg.	
25 mm dia. HDPE Pipe (PN10)	25.6	25.2	25.4	2.7	2.5	2.6	Conforms to the requirement of the Standard.
32 mm dia. HDPE Pipe (PN10)	32.7	32.2	32.5	3.1	2.6	2.8	Mean OD is OK. Max. wall thickness is 0.8 mm higher than the specified max. value.
50 mm dia. HDPE Pipe (PN10)	50.7	50.0	50.4	3.7	3.3	3.5	Mean OD is OK. Max. wall thickness is 0.3 mm higher than the specified max. value.
75 mm dia. HDPE Pipe (PN10)	75.8	75.2	75.4	5.0	4.7	4.9	Conforms to the requirement of the Standard.
110 mm dia. HDPE Pipe (PN10)	111.1	110.4	110.7	7.6	7.1	7.3	Conforms to the requirement of the Standard.
160 mm dia. HDPE Pipe (PN10)	161.3	160.5	160.8	10.8	10.2	10.5	Conforms to the requirement of the Standard.

TEST OF OVALITY
Standard Used: ISO 4427-2:2007 (E)

Sample ID	Measured Ovality (mm)	Specified Maximum Ovality (mm)	Remarks
25 mm dia. HDPE Pipe (PN10)	0.6	1.2	Conforms to the requirement of the standard.
32 mm dia. HDPE Pipe (PN10)	1.1	1.3	Conforms to the requirement of the standard.
50 mm dia. HDPE Pipe (PN10)	0.7	1.4	Conforms to the requirement of the standard.
75 mm dia. HDPE Pipe (PN10)	0.7	1.6	Conforms to the requirement of the standard.
110 mm dia. HDPE Pipe (PN10)	0.8	2.2	Conforms to the requirement of the standard.
160 mm dia. HDPE Pipe (PN10)	0.8	3.2	Conforms to the requirement of the standard.

TEST OF HYDROSTATIC PRESSURE
Standard Used: ISO 4427-2:2007 (E)

Sl. No	Sample ID	Test Temp. and Duration	Circumferential Hoop Stress Generated (MPa)	Applied Pressure (MPa)	Observations	Remarks
1	25 mm dia. HDPE Pipe (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr.	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
2	32 mm dia. HDPE Pipe (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
3	50 mm dia. HDPE Pipe (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
4	75 mm dia. HDPE Pipe (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
5	110 mm dia. HDPE Pipe (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
6	160 mm dia. HDPE Pipe (PN10)	Room temp. (27°C), 100 hr.	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
7	110 mm dia. HDPE E.F Bend 90 Degree (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.

30.12.23

30/12/2023

প্রকৌশল বিভাগ
বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়
ঢাকা-১০০০, বাংলাদেশ

Department of Mechanical Engineering
Bangladesh University of Engineering and Technology
Dhaka-1000, Bangladesh

CLIENT'S REFERENCE :
UNIVERSITY REFERENCE :

Memo No. 46.05.0000.428.07.035.2022-358; Dated: 26.10.2023
BRTC NO. 1103-08459/ME/2023-24; Dated: 13.12.2023
[ME Job No. 15871]

027266

TEST RESULT

Sl No	Sample ID	Test Temp. and Duration	Circumferential Hoop Stress Generated (MPa)	Applied Pressure (MPa)	Observations	Remarks
8	200x110x200 mm dia. HDPE Reducer Tee-E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
9	200x75x200 mm dia. HDPE Reducer Tee-E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
10	160x110x160 mm dia. HDPE Reducer Tee-E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
11	200x160x200 mm dia. HDPE Reducer Tee-E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
12	110 mm Dia. HDPE End Cap E.F (PN10)	Room temp. (27°C), 100 hr.	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
13	160 mm Dia. HDPE End Cap E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
14	200 mm Dia. HDPE End Cap E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
15	160 mm dia. HDPE Sleeve E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
16	110 mm dia. HDPE Sleeve E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
17	315 mm dia. HDPE Sleeve E.F (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
18	200 mm dia. HDPE Sleeve E.F (PN10)	Room temp. (27°C), 100 hr.	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
19	Saddle 75 mm x 25 mm (For ¾" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
20	Saddle 75 mm x 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
21	Saddle 75 mm x 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
22	Saddle 110 mm x 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
23	Saddle 110 mm x 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
24	Saddle 110 mm x 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
25	Saddle 110 mm x 63 mm (For 2" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
26	Saddle 160 mm x 25 mm (For ¾" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.

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...-১০০০, বাংলাদেশ

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CLIENT'S REFERENCE : Memo No. 46.05.0000.428.07.035.2022-358; Dated: 26.10.2023
UNIVERSITY REFERENCE : BRTC NO. 1103-08459/ME/2023-24; Dated: 13.12.2023
[ME Job No. 15871]

027267

TEST RESULT

Sl No.	Sample ID	Test Temp. and Duration	Circumferential Hoop Stress Generated (MPa)	Applied Pressure (MPa)	Observations	Remarks
27	Saddle 160 mm x 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
28	Saddle 160 mm x 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
29	Saddle 200 mm x 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
30	Saddle 200 mm x 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr.	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
31	Saddle 200 mm x 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr.	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
32	Female Union Ball Valve with Male Adapter- ¾" (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
33	Female Union Ball Valve with Male Adapter- 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
34	Female Union Ball Valve with Male Adapter- 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
35	Female Adapter Set- 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
36	Female Adapter Set- 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
37	Female Adapter Set- 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
38	Female Adapter Set- 63 mm (For 2" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
39	Female Union Coupler Set- 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
40	Female Union Coupler Set- 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
41	Female Union Coupler Set- 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
42	Coupler Set- 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
43	Coupler Set- 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
44	Coupler Set- 63 mm (For 2" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.

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বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়
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[ME Job No. 15871]

027268

TEST RESULT

Sl No	Sample ID	Test Temp. and Duration	Circumferential Hoop Stress Generated (MPa)	Applied Pressure (MPa)	Observations	Remarks
45	Male Adapter Set- 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
46	Male Adapter Set- 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
47	Male Adapter Set- 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
48	Male Adapter Set- 63 mm (For 2" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
49	Male Elbow Set- 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
50	Male Elbow Set- 32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
51	Male Elbow Set- 50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
52	Male Elbow Set- 63 mm (For 2" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
53	Ferrule Set- 25 mm (For 3/4" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
54	Ferrule Elbow Set-32 mm (For 1" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.
55	Ferrule Elbow Set-50 mm (For 1.5" Water Connection) (PN10)	Room temp. (27°C), 100 hr	12.4	1.55	No leakage was observed	Conforms to the requirement of the standard.

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