

केन्द्रीय पेट्रोसायन अभियांत्रिकी एवं
प्रौद्योगिकी संस्थान (सिपेट)

(पूर्व में केन्द्रीय प्लास्टिक्स इंजीनियरिंग एवं तकनीकी संस्थान)

मुख्यालय, पीडीआई सेल

रसायन एवं पेट्रो रसायन विभाग

रसायन एवं उर्वरक मंत्रालय, भारत सरकार

टीवीके औद्योगिक इस्टेट, गिंडी, चेन्नई - 600 032.

दूरभाष : 044-29813708 (Direct) / 044-22254780 (Extn.)

ई-मेल : pdiho@cipet.gov.in



**CENTRAL INSTITUTE OF PETROCHEMICALS
ENGINEERING & TECHNOLOGY**

(Formerly Central Institute of Plastics Engineering & Technology)

Head Office, PDI Cell

Department of Chemicals & Petrochemicals

Ministry of Chemicals & Fertilizers, Govt. of India

TVK Industrial Estate, Guindy, Chennai - 600 032.

Phone : 044-29813708 (Direct) / 044-22254780 (Extn.-502)

Email : pdiho@cipet.gov.in

Name of Inspecting Official: Mr D V Sai Surendra

Code No. : 626

W.O. Centre: Kochi

Camp. at : M/s. A N D Valves and Castings India Pvt Ltd

INSPECTION REPORT

1.	Report No : IB00422230502634	:	Date: 04.02.2023
2.	Name of the Indenter / Consignee with detailed address	:	The Executive Engineer, Kerala Water Authority, Office of Executive Engineer, P. H Division, Irinjalakuda. Pin-680121 ✓
3.	Indenter Order No. & Date and Extension (if any)	:	D6-2354/2022 Dt.06.01.2023
4.	Details of the Consignee	:	The Executive Engineer, Kerala Water Authority, Office of Executive Engineer, P. H Division, Irinjalakuda. Pin-680121 Nature of work : JMM -2021-22 – Meloor Grama Panchayath (Phase II) – Providing FHTCs to Rural Households by Augmentation of Existing Water supply schemes.
5.	Name of the Supplier / Contractor	:	Sri Parambi Constructions Dt 05.01.2023
6.	Supplier Order No. & Date (if any)	:	PO.No. --, Dt. 23.12.2022 through M/s Parambi Constructions.
7.	Name and address of the Manufacturer / Inspection site	:	M/s. A N D Valves and Castings India Private Limited, 12 th Km, Palakad Main road, Madukkarai, Coimbatore-641105
8.	Manufacturer / Supplier Inspection Call Letter No. & Date	:	AND/ME/010/22-23 dated 19.01.2023
9.	PDI Cell Assignment No. & Date	:	CIPET/HO/2022236807 dated : 27.01.2023
10.	Date of inspection	:	Initiated on: 01.02.2023 Completed on: 04.02.2023
11.	Any other information	:	Manufacturer BIS License No. CM/L- 6500061705 Brand name : Mercury

DETAILS OF THE STORES

Sl. No.	Description of the items	Quantity as per supplier order in meters	Quantity Inspected earlier (Cumulative) in meters	Quantity offered for Inspection in meters	Quantity Accepted in meter	Quantity Rejected in meter	Quantity Balance In meter
HDPE Pipes as per IS 4984: 2016 with IS Certification Mark							
1	125mm dia PE 100 PN8 HDPE PIPES SDR 17	3361	Nil	3361 (280 nos X 12 meter, 1 X 1 meter)	3361 (280 nos X 12 meter, 1 X 1 meter)	Nil	Nil
2	160mm dia PE 100 PN8 HDPE PIPES SDR 17	2109	Nil	2109 (175 nos X 12 meter, 1 X 9 meter)	2109 (175 nos X 12 meter, 1 X 9 meter)	Nil	Nil

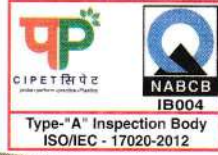


1. Certified that the items as detailed above have been inspected and accepted. The accepted items may be dispatched to the consignee. The Inspection Document Nos Ref.No. IB00422230502634/1-2 dated 04.02.2023 are enclosed.
2. This inspection report is valid for 30 days and any Dispute/discrepancies/claims may be brought to the notice of the undersigned within 30 days from the date of issue of this report.

J. S. 04/02/23
AUTHORIZED SIGNATORY
(Mr D V Sai Surendra & 626)

पेट्रोसायन अभियांत्रिकी एवं
औद्योगिकी संस्थान (सिपेट)

केन्द्रीय प्लास्टिक्स इंजीनियरिंग एवं तकनीकी संस्थान
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Name of Inspecting Official: Mr D V Sai Surendra
Code No. : 626

W.O. Centre: Kochi

Camp. at : M/s. A N D Valves and Castings India Pvt Ltd

INSPECTION DOCUMENTS

Inspection Document NO.: IB00422230502634/1

Dated: 04.02.2023

Issued to : M/s. The Executive Engineer, Kerala Water Authority, Office of Executive Engineer, P. H Division, Irinjalakuda. Pin-680121

Manufacturer / Supplier Inspection Call Letter No. & Date: AND/ME/010/22-23 dated 19.01.2023

Test report as per IS 4984:2016 (Latest Amendment)

PART - A: PARTICULARS OF STORES

a) Description of the items	: HDPE Pipe
b) Grade/Variety/Type/Size/Class etc.	: 125mm PE 100 PN8 SDR 17
c) Declared Value, if any	: Nil
d) Quantity	: 3361 (280 nos X 12 meter, 1 X 1 meter)
e) Item omitted from the original scope of work if any	: Nil
f) Any Other Information	: Batch Numbers : 20221126002A, 20221126002B, 20221127002A, 20221127002B.

PART B: SUPPLEMENTARY INFORMATION

a) Reference to sampling procedure : As per IS:4984 -2016 with latest amendment (Random Sampling)

PART C: RESULTS OF WITNESSED TESTS & REVIEW OF DOCUMENTS

Sl. No.	Clause No.	Tests Witnessed	Unit	Specified Requirements	Observed Results	
1	6.2	Colour of pipe	----	Black	Black	
2	6.2.1	Dimension of Blue Stripes				
		Width	mm	Min. 3.0	3.34	
		Depth	mm	Max. 0.2	0.19	
3	7.1	Visual Appearance	----	The Internal & External surfaces shall be smooth, clean and free from grooving and other defects. Ends shall be cleanly cut and shall be square with the axis of the pipe	Satisfactory	
		Out of Squareness	mm	Max. 3.0	1.52	
	7.2	Length of straight pipe	Mtrs	--	Not Applicable	
4	7.4.1.1 Table-3	Dimensions of Pipe				
		Outside Diameter				
		Minimum	mm	125.0	125.16	
		Maximum	mm	125.8	125.40	
	7.4.1.1 Table-4	Wall Thickness				
		Minimum	mm	7.4	7.44	
	Maximum	mm	8.2	7.90		
	7.4.1.2	Ovality	mm	Max. 2.5	1.38	
5	8	Performance Requirement				
	8.1.1 Table-5	Hydraulic Characteristic (IPCR) Acceptance Test 48 hrs at 80°C @ 5.7 MPa Induced Stress	----	The sample shall show no signs of localized swelling, leakage or weeping and shall not burst during the Test Duration	No Sign of Failure Observed during test duration.	
	8.2	Longitudinal Reversion Test	%	Max ± 3 %	1.08	
	8.3	Carbon Black Content	%	2.5 ± 0.5	2.54	
		Carbon Black Dispersion	----	Satisfactory	Satisfactory	
	8.4	Melt Flow Rate (190°C/5kgf)	g/10min	0.20 to 1.10	0.251	
	8.5	Oxidation Induction Time	minutes	≥ 20.0	22.06	
8.7	Base Density at 27°C	kg/m ³	930 to 960	950.8		
8.9	Elongation at Break	%	≥ 350	584		
6	10	Marking on Pipe	----	MERCURY HDPE PIPE PE100 PN8 SDR17 DN125 IS 4984 2016 CM/L 6500061705	Marking are as per Standard	

Review of Documents (if any)

Sl. No.	Clause No.	Tests Parameters/ Documents	Certificate/ Report No. & Date	Report Issued by	Review/ Remarks
1.	5.2, 6.1.1 Table 2	Raw material property Grade: Sabic P6006AD	Batch no. 25012912 dt 22.09.2022	Sabic	Reviewed & Confirmed
2.	8.1.1 Annex E	Internal Pressure Creep Rupture Test of Pipe (at 27°C for 100 h)	Report No: PTL/GEN/04117, Dated : 03.08.2022	M/s Pioneer Testing Laboratory, New Delhi	Reviewed & Confirmed
3.	Do	Internal Pressure Creep Rupture Test of Pipe (at 80°C for 165 h)			
4.	Do	Internal Pressure Creep Rupture Test of Pipe (at 80°C for 1000 h)			
5.	8.6	Overall Migration			
6.	8.1.2	Internal Pressure Creep Rupture Test of Joint Pipe (at 80° C for 48 h)			
7.	8.10	Slow Crack Growth Rate Test			
8	8.5	Oxidation Induction Time	Sample submitted for Test report Date 03.02.2023	CIPET-Madurai	----

PART - D: REMARKS

- This Inspection document shall not be reproduced except in full without the written approval of the PDI Cell at CIPET Head Office.
- These witness result stated above relate Exclusive to the work order of the object(s) or the lot inspection.
- Lab. Environmental Condition during the witness or Tests: Temperature 27± 2 °C & R.H. 65±5%.
- Calibration Status of equipment's/Instruments are verified.

J-17:04/02/23

पेट्रोसायन अभियांत्रिकी एवं
गैसी संस्थान (सिपेट)

केन्द्रीय प्लास्टिक्स इंजीनियरिंग एवं तकनीकी संस्थान

द्व्यालय, पीडीआई सेल

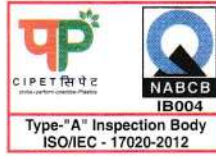
सायन एवं पेट्रो रसायन विभाग

रसायन एवं उर्वरक मंत्रालय, भारत सरकार

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W.O. Centre:Kochi
Camp. at : M/s. A N D Valves and Castings India Pvt Ltd

INSPECTION DOCUMENTS

Inspection Document NO.: IB00422230502634/D

Dated: 04.02.2023

Issued to : M/s. The Executive Engineer, Kerala Water Authority, Office of Executive Engineer,P. H Division,Irinjalakuda. Pin-680121

Manufacturer / Supplier Inspection Call Letter No. & Date: AND/ME/010/22-23 dated 19.01.2023

Test report as per IS 4984:2016 (Latest Amendment)

PART - A: PARTICULARS OF STORES

a) Description of the items	: HDPE Pipe
b) Grade/Variety/Type/Size/Class etc.	: 160mm PE 100 PN8 SDR 17
c) Declared Value, if any	: Nil
d) Quantity	: 2109(175 nos X 12 meter ,1 X 9 meter)
e) Item omitted from the original scope of work if any	: Nil
f) Any Other Information : Batch Numbers	: 20230106002A,20230106002B,20230107002A,20230107002B

PART B: SUPPLEMENTARY INFORMATION

a) Reference to sampling procedure : As per IS:4984 -2016 with latest amendment (Random Sampling)

PART C: RESULTS OF WITNESSED TESTS & REVIEW OF DOCUMENTS

Sl. No.	Clause No.	Tests Witnessed	Unit	Specified Requirements	Observed Results
1	6.2	Colour of pipe	----	Black	Black
2	6.2.1	Dimension of Blue Stripes			
		Width	mm	Min. 3.0	3.42
		Depth	mm	Max. 0.5	0.18
3	7.1	Visual Appearance	----	The Internal & External surfaces shall be smooth, clean and free from grooving and other defects. Ends shall be cleanly cut and shall be square with the axis of the pipe	Satisfactory
		Out of Squareness	mm	Max. 4.0	1.74
		Length of straight pipe	Mtrs	--	Not Applicable
4	7.4	Dimensions of Pipe			
		Outside Diameter			
	7.4.1.1 Table-3	Minimum	mm	160.0	160.14
		Maximum	mm	161.0	160.52
	7.4.1.1 Table-4	Wall Thickness			
		Minimum	mm	9.5	9.54
	Maximum	mm	10.6	9.96	
	7.4.1.2	Ovality	mm	Max 3.2	1.24
5	8	Performance Requirement			
	8.1.1 Table-5	Hydraulic Characteristic (IPCR) Acceptance Test 48 hrs at 80°C @ 5.7 MPa Induced Stress	----	The sample shall show no signs of localized swelling, leakage or weeping and shall not burst during the Test Duration	No Sign of Failure Observed during test duration.
	8.2	Longitudinal Reversion Test	%	Max ± 3 %	0.92
	8.3	Carbon Black Content	%	2.5 ± 0.5	2.57
		Carbon Black Dispersion	----	Satisfactory	Satisfactory
	8.4	Melt Flow Rate (190°C/5kgf)	g/10min	0.20 to 1.10	0.250
	8.5	Oxidation Induction Time	minutes	≥ 20.0	20.06
8.7	Base Density at 27°C	kg/m ³	930 to 960	949.9	
8.9	Elongation at Break	%	≥ 350	650	
6	10	Marking on Pipe	----	MERCURY HDPE PIPE PE100 PN8 SDR17 DN160 IS 4984 2016 CM/L 6500061705	Marking are as per Standard

Review of Documents (if any)

Sl. No.	Clause No.	Tests Parameters/ Documents	Certificate/ Report No. & Date	Report Issued by	Review/ Remarks
1.	5.2, 6.1.1 Table 2	Raw material property Grade: Sabic P6006AD	Batch no. 25012912 dt 22.09.2022	Sabic	Reviewed & Confirmed
2.	8.1.1 Annex E	Internal Pressure Creep Rupture Test of Pipe (at 27°C for 100 h)	Report No: PTL/GEN/04117, Dated : 03.08.2022	M/s Pioneer Testing Laboratory , New Delhi	Reviewed & Confirmed
3.	Do	Internal Pressure Creep Rupture Test of Pipe (at 80°C for 165 h)			
4.	Do	Internal Pressure Creep Rupture Test of Pipe (at 80°C for 1000 h)			
5.	8.6	Overall Migration			
6.	8.1.2	Internal Pressure Creep Rupture Test of Joint Pipe (at 80° C for 48 h)			
7.	8.10	Slow Crack Growth Rate Test	Sample submitted for Test report Date 03.02.2023	CIPET- Madurai	----
8.	8.5	Oxidation Induction Time			

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- Lab. Environmental Condition during the witness or Tests: Temperature 27± 2 °C & R.H. 65±5%.
- Calibration Status of equipment's/Instruments are verified.

(Handwritten signature)