

**सेन्ट्रल इंस्टीट्यूट ऑफ़ पेट्रोकेमिकल्स
इंजीनियरिंग एण्ड टेक्नोलॉजी**

(पूर्व में सेन्ट्रल इंस्टीट्यूट ऑफ़ प्लास्टिक्स इंजीनियरिंग एण्ड टेक्नोलॉजी)

प्रधान कार्यालय, पी.डी. आई सेल

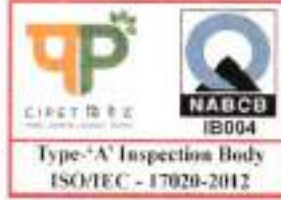
रसायन एवं पेट्रो रसायन विभाग,

रसायन एवं उर्वरक मंत्रालय, भारत सरकार

टी. वी. के. औद्योगिक इस्टेट, गिंदी, चेन्नई - 600 032

दूरभाष : 044-29813708 (Direct) / 044-22254780 (Extn-502)

ई-मेल : pdicipet@gmail.com



**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 : pdicipet@gmail.com

Name of the Inspecting Official : E Naga Durga Prasad W.O Centre: - **Kochi**
Code No.: 1388 Camp at : **M/s.Nandi Polymers India Pvt. Ltd., Tirupati , AP**

PRE DELIVERY INSPECTION REPORT

01	Ref. No. : IB00423240501376	Dated : 24.07.2023
02	Name of the Indenter with detailed address	The Executive Engineer, KWA, P.H.Division, Irinjalakuda-680121.
03	Supply order no & Date Extension if any	(i) Letter No. KWA/PHC/TSR/D5/2893/2022 (ii) Agreement No.23/06/2023 T.Abdussamad, (iii) Proceedings No.KWA/HO/SP-440/2017/TPI dt.02.07.2020 of MD,KWA, Jalabhavan, TVM.
04	Name of the consignee with detailed address	The Executive Engineer, WSP Division, Palakkad, Kerala.
05	Name of the Contractor/Supplier	Sri T Abdussamad, Thammannasery house, Melmuri, Malappuram , Kerala
06	Contractor/Supplier P.O No & Date	PO- TA/FA/38/2023-24 Dt: 15/05/2023
07	Name and address of the manufacturer / inspection site	M/s.Nandi Polymers India Pvt. Ltd., Sy. No. 841/2 , APIIC Industrial Estate, Renigunta Road, Tirupati -517 506, Chittoor (Dist) , A.P
08	Inspection call letter No & Date	NPIPL 02 dated 12/07/2023 and Dt: 23/07/2023
09	PDI assignment No. & date	CIPET/HO/2023242801 dated 13.07.2023
10	Duration of inspection	Started on: 21.07.2023 Completed on: 24.07.2023
11	Any Other Information	BIS Licence No: CM/L-6600053107

DETAILS OF THE STORES

Sl No	Description of the Item	Quantity as per order	Quantity inspected earlier (Cumulative)	Quantity offered for Inspection	Quantity Accepted	Quantity Rejected	Balance Quantity
PE Pipes as per IS: 4984:2016 with ISI Certification Marks.							
01	PE100 PN8 DN 110 SDR 17	9889 Mtrs	NIL	6600 (200 Mtrs x 33 Coils)	6600 (200 Mtrs x33 Coils)	NIL	3289Mtrs
02	PE100 PN8 DN 125 SDR 17	3706 Mtrs	NIL	3706 (12MtrsX308Nos) & (10Mtrs x 1Nos.)	3706 (12MtrsX308Nos) & (10Mtrs X 1Nos.)	NIL	NIL
03	PE100 PN10 DN 125 SDR13.6	1077 Mtrs	NIL	1077 (12 Mtrs x89 Nos.) & (9Mtrs x 1Nos)	NIL	1077	1077
04	PE100 PN8 DN 160 SDR 17	1352 Mtrs	NIL	1352 (12Mtrs x112Nos) & (8Mtrs x 1Nos)	NIL	1352	1352
05	PE100 PN8 DN 180 SDR 17	325 Mtrs	NIL	325 (12 Mtrs x 27 Nos.) & (1 Mtrs x 1 No.)	NIL	325	325

All accepted materials are stamped thus:

1. Certified that the items as detailed above have been inspected. The accepted items may be dispatched to the consignee. The Inspection Document No. : **IB00423240501376/ 1 to 5** dated 24.07.2023 are enclosed.

2. This inspection report is valid for 30 days, any dispute / discrepancies /claims may be brought to the notice of undersigned within 30 days from the date of issues of this report.

E Naga Durga Prasad
E Naga Durga Prasad, CODE No: 1388
AUTHORISED SIGNATORY

Copy to:

- (1) The Executive Engineer, WSP Division, Palakkad, Kerala.
- (2) M/s Nandi Polymers Pvt. Ltd, Tirupati
- (3) CIPET, Kochi



कन्दल इंस्टीट्यूट ऑफ पेट्रोकेमिकल्स

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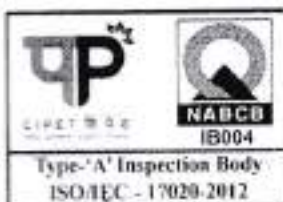
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Name of the Inspecting Official : E Naga Durga Prasad

W.O Centre: Kochi

Code No.: 1388

Camp at : M/s.Nandi Polymers India Pvt. Ltd., Tirupati , AP

INSPECTION DOCUMENT

Dated: 24.07.2023

DOC. NO: **IB00423240501376/1**

Issued to: M/s.Nandi Polymers India Pvt. Ltd

Manufacturer Inspection Call Letter No.: NPIPL 02 dated 12/07/2023, Dated: 23/07/2023

INSPECTION DOCUMENT AS PER IS NO. / QAP NO.: 4984.2016

PART A: PARTICULARS OF STORES OFFERED

- | | |
|---------------------------------------|--|
| a) Description of the items | : HDPE Pipe |
| b) Grade/Variety/Type/Size/Class etc. | : PE100 PN8 DN 110 SDR 17 |
| c) Declared Value, if any | : MFI: 0.33gm/10 min & DENSITY: 956.39 Kg/m ³ |
| d) Quantity | : 6600.00mtrs(33pcx200m) |
| e) Any Other Information | : Batch Number: 2023060400400C |

PART B: SUPPLEMENTARY INFORMATIONS

- a) Reference to sampling procedure IS 4984-2016 (Random Sampling Method)

PART C: RESULTS OF TESTS WITNESSED & THE DOCUMENTS REVIEWED

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result observed
1	6	Pipe Description		
1.1	6.2	Colour	Shall be Black with Blue Strips	confirmed
1.2	6.2.1	Identification of Strips		
		No. of longitudinal strips	Min. : 3	3
		Strip Width (mm)	Min. : 3	4.91
		Strip Depth (mm)	Max. : 0.2	0.16
2	7	Geometric Characteristics of Pipe		Geometric Characteristics of Pipe
2.1	7.1	Visual Appearance	Internal & External surface of pipe shall be smooth, clean free from grooving & other defects.	Satisfactory
		Out of square of pipe end (mm)	Max.: 3	1.82
2.2	7.2	Length(mtr)	Min.200	200.06
2.3	7.4 (Table-3 & 4)	Dimensions		
		Mean Outside Diameter (d _{em}) (mm)	Min. : 110.0 Max.: 110.7	110.03 110.60
		Out of Roundness (Ovality) (mm)	Max.: 2.2	1.76
		Wall Thickness	Min. : 6.50 Max.: 7.30	6.74 7.16
3	8	Performance Requirements		
3.1	8.1	Hydraulic characteristics		
3.1. 1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.		
		Hydrostatic Resistance Test (at 80°C for 48hrs.)	The pipes under test shall show No signs of localized swelling, leakage or weeping & shall not burst during the prescribed test duration.	Confirmed

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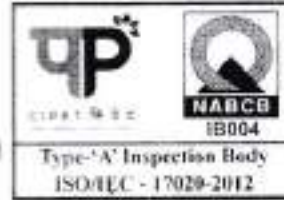
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Page No. 2 of 2

Dated: 24.07.2023

DOCUMENT NO :IB00423240501376/1

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result obtained
3.2	8.2	Longitudinal Reversion Test	Shall not be greater than 3 %.	1.40
3.3	8.3	Carbon Black Content (%)	2.5±0.5	2.63
		Carbon Black Dispersion	The dispersion of carbon black shall be satisfactory.	Satisfactory
3.4	8.4	Melt Flow Rate (g/10min) (at 190°C with 5kgLoad)	0.15 to 1.10	0.33
3.5	8.5	Oxidation Induction Time (OIT) min.	Shall not be less than 20 min.	> 20
3.7	8.7	Density (kg/m ³)	940 to 960	956.39
3.9	8.9	Elongation at Break (%)	≥ 350	>350
		Yield Strength	Min.15Mpa	>15Mpa
4	10	Marking	Mfg.Name, HDPE PIPES, PE100,PN8, DN110,SDR17 IS:4964-2016,IS LOGO, CML NO., BATCH NO.,	Satisfactory

REVIEW OF DOCUMENTS (IF ANY)

Sl.	Clause	Test Parameters	Report No. & Date	Report Issued By	Review & Remark
1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
1.1		Hydrostatic Resistance Test (at 27°C for 100hrs.)			
1.2		Hydrostatic Resistance Test (at 80°C for 165hrs.)			
1.3		Hydrostatic Resistance Test (at 80°C for 1000hrs.)			
2	8.1.2 (Table-5)	Internal Pressure Creep Rupture Test of Joints.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
2.1		Hydrostatic Resistance Test (at 80°C for 48hrs.)			
3	8.6	Overall Migration (mg/ltr)			
4	8.8	Tensile Strength for Butt-fusion			
5	8.10	Slow Crack Growth Rate 80°C for 500 hrs.			
6	---	MFR, Density & OIT	RMTC No.367 Dtd. 22.06.2023	S.S PLASTICS/367	Reviewed OK

PART - D: REMARKS

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2. These witness results relate exclusively to the work ordered or the object (s) or the lot inspected.
3. Lab. Environmental Condition during the witness of tests: Temperature : 27±2°C & Relative Humidity : 65±5%
4. Calibration statuses of equipment/instruments are verified.

E Naga Durga Prasad, CODE No: 1388
AUTHORISED SIGNATORY

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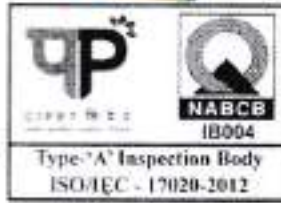
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Name of the Inspecting Official : E Naga Durga Prasad

W.O Centre: Kochi

Code No.: 1388

Camp at : M/s.Nandi Polymers India Pvt. Ltd., Tirupati , AP

INSPECTION DOCUMENT

DOC. NO: IB00423240501376/2

Dated: 24.07.2023

Issued to: M/s.Nandi Polymers India Pvt. Ltd

Manufacturer Inspection Call Letter No.: NPIPL 02 dated 12/07/2023, dated: 23/07/2023

INSPECTION DOCUMENT AS PER IS NO. / QAP NO. : 4984:2016

PART A: PARTICULARS OF STORES OFFERED

f) Description of the Items	: HDPE Pipe
g) Grade/Variety/Type/Size/Class etc.	: PE100 PN8 DN 125 SDR 17
h) Declared Value, if any	: MFI: 0.27gm/10 min & DENSITY: 957.78 Kg/m ³
i) Quantity	: 3706.00mtrs(308pcx12m +1pc x 10m)
j) Any Other Information	: BatchNumber 20230623003008

PART B: SUPPLEMENTARY INFORMATIONS

b) Reference to sampling procedure : IS 4984-2016 (Random Sampling Method)

PART C: RESULTS OF TESTS WITNESSED & THE DOCUMENTS REVIEWED

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result observed
1	6	Pipe Description		
1.1	6.2	Colour	Shall be Black with Blue Strips	confirmed
1.2	6.2.1	Identification of Strips		
		No. of longitudinal strips	Min. : 3	3
		Strip Width (mm)	Min. : 3	4.23
		Strip Depth (mm)	Max. : 0.2	0.16
2	7	Geometric Characteristics of Pipe		Geometric Characteristics of Pipe
2.1	7.1	Visual Appearance	Internal & External surface of pipe shall be smooth, clean free from grooving & other defects.	Satisfactory
		Out of square of pipe end (mm)	Max.: 3	1.76
2.2	7.2	Length(mtr)	Min.12	>12
2.3	7.4 (Table-3 & 4)	Dimensions		
		Mean Outside Diameter (d _{om}) (mm)	Min. : 125.0 Max.: 125.8	125.02 125.65
		Out of Roundness (Ovality) (mm)	Max.: 2.5	1.71
		Wall Thickness	Min. : 7.40 Max.: 8.30	7.65 8.16
3	8	Performance Requirements		
3.1	8.1	Hydraulic characteristics		
3.1.1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.		
		Hydrostatic Resistance Test (at 80°C for 48hrs.)	The pipes under test shall show No signs of localized swelling, leakage or weeping & shall not burst during the prescribed test duration.	Confirmed

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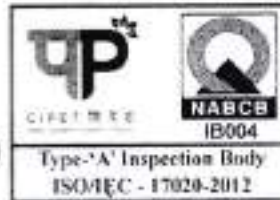
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Dated: 24.07.2023

DOCUMENT NO: IB00423240501376/2

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result obtained
3.2	8.2	Longitudinal Reversion Test	Shall not be greater than 3 %.	1.53
3.3	8.3	Carbon Black Content (%)	2.5±0.5	2.71
		Carbon Black Dispersion	The dispersion of carbon black shall be satisfactory.	Satisfactory
3.4	8.4	Melt Flow Rate (g/10min) (at 190°C with 5kgLoad)	0.15 to 1.10	0.274
3.5	8.5	Oxidation Induction Time (OIT) min.	Shall not be less than 20 min.	> 20
3.7	8.7	Density (kg/m ³)	940 to 960	957.78
3.9	8.9	Elongation at Break (%)	≥ 350	>350
		Yield Strength	Min.15Mpa	>15Mpa
4	10	Marking	Mfg.Name, HDPE PIPES, PE100,PN8, DN110,SDR17 IS:4984-2016,IS LOGO, CML NO., BATCH NO.,	Satisfactory

REVIEW OF DOCUMENTS (IF ANY)

Sl.	Clause	Test Parameters	Report No. & Date	Report Issued By	Review & Remark
1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
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2.1		Hydrostatic Resistance Test (at 80°C for 48hrs.)			
3	8.6	Overall Migration (mg/ltr)	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
4	8.8	Tensile Strength for Butt-fusion			
5	8.10	Slow Crack Growth Rate 80°C for 500 hrs.			
6	---	MFR, Density & OIT	RMTC No.367 Dtd: 22.06.2023	S.S PLASTICS/367	Reviewed OK

PART - D: REMARKS

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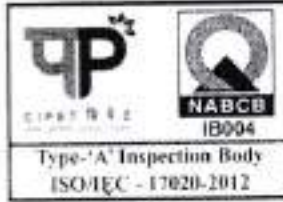
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Name of the Inspecting Official : E Naga Durga Prasad

W.O Centre: Kochi

Code No.: 1388

Camp at : M/s.Nandi Polymers India Pvt. Ltd., Tirupati , AP

INSPECTION DOCUMENT

Dated:24.07.2023

DOC. NO:IB00423240501376/3

Issued to: M/s.Nandi Polymers India Pvt. Ltd

Manufacturer Inspection Call Letter No.: NPIPL 02 dated 12/07/2023, dated:23/07/2023

INSPECTION DOCUMENT AS PER IS NO. / QAP NO. : 4964:2016

PART A: PARTICULARS OF STORES OFFERED

- | | |
|---------------------------------------|--|
| k) Description of the items | HDPE Pipe |
| l) Grade/Variety/Type/Size/Class etc. | PE100 PN10 DN 125 SDR 13.6 |
| m) Declared Value, if any | MFI: 0.32gm/10 min & DENSITY: 957.06 Kg/m ³ |
| n) Quantity | 1077mtrs(89pcx12m +1pc x 9m) |
| o) Any Other Information | BatchNumber:2023062300400 |

INFORMATIONS

- c) Reference to sampling procedure : IS 4964-2016 (Random Sampling Method)

PART C: RESULTS OF TESTS WITNESSED & THE DOCUMENTS REVIEWED

Sl.	Clause	Tests Witnessed	Specified Requirements,	Result observed
1	6	Pipe Description		
1.1	6.2	Colour	Shall be Black with Blue Strips	confirmed
1.2	6.2.1	Identification of Strips		
		No. of longitudinal strips	Min. : 3	3
		Strip Width (mm)	Min. : 3	4.86
		Strip Depth (mm)	Max. : 0.2	0.16
2	7	Geometric Characteristics of Pipe		Geometric Characteristics of Pipe
2.1	7.1	Visual Appearance	Internal & External surface of pipe shall be smooth, clean free from grooving & other defects.	Satisfactory
		Out of square of pipe end (mm)	Max.: 3	1.62
2.2	7.2	Length(mtr)	Min.12	>12
2.3	7.4 (Table-3 & 4)	Dimensions		
		Mean Outside Diameter (d _{em}) (mm)	Min. : 125.0 Max.: 125.8	125.02 125.60
		Out of Roundness (Ovality) (mm)	Max.: 2.5	1.86
		Wall Thickness	Min. : 9.2 Max.:10.3	9.41 9.92
3	8	Performance Requirements		
3.1	8.1	Hydraulic characteristics		
3.1.1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.		
		Hydrostatic Resistance Test (at 80°C for 48hrs.)	The pipes under test shall show No signs of localized swelling, leakage or weeping & shall not burst during the prescribed test duration.	Confirmed

सेन्ट्रल इंस्टीट्यूट ऑफ़ पेट्रोकेमिकल्स

इंजीनियरिंग एण्ड टेक्नोलॉजी

(पूर्व में सेन्ट्रल इंस्टीट्यूट ऑफ़ प्लास्टिक्स इंजीनियरिंग एण्ड टेक्नोलॉजी)

प्रधान कार्यालय, पी.डी. आई सेन्ट्र

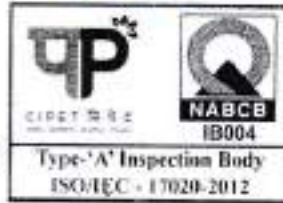
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CENTRAL INSTITUTE OF PETROCHEMICALS
ENGINEERING & TECHNOLOGY

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Page No. 2 of 2

Dated: 24.07.2023

DOCUMENT NO: IB00423240501376/3

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result obtained
3.2	8.2	Longitudinal Reversion Test	Shall not be greater than 3 %.	1.16
3.3	8.3	Carbon Black Content (%)	2.5±0.5	2.70
		Carbon Black Dispersion	The dispersion of carbon black shall be satisfactory.	Satisfactory
3.4	8.4	Melt Flow Rate (g/10min) (at 190°C with 5kgLoad)	0.15 to 1.10	0.32
3.5	8.5	Oxidation Induction Time (OIT) min.	Shall not be less than 20 min.	> 20
3.7	8.7	Density (kg/m ³)	940 to 960	957.06
3.9	8.9	Elongation at Break (%)	≥ 350	<350
		Yield Strength	Min.15Mpa	<15Mpa
4	10	Marking	Mfg.Name, HDPE PIPES, PE100,PN10, DN125,SDR13.6 IS:4984-2016,IS LOGO, CML NO., BATCH NO.,	Satisfactory

REVIEW OF DOCUMENTS (IF ANY)

Sl.	Clause	Test Parameters	Report No. & Date	Report Issued By	Review & Remark
1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
1.1		Hydrostatic Resistance Test (at 27°C for 100hrs.)			
1.2		Hydrostatic Resistance Test (at 80°C for 165hrs.)			
1.3	Hydrostatic Resistance Test (at 80°C for 1000hrs.)				
2	8.1.2 (Table-5)	Internal Pressure Creep Rupture Test of Joints.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
2.1		Hydrostatic Resistance Test (at 80°C for 48hrs.)			
3	8.6	Overall Migration (mg/ltr)	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
4	8.8	Tensile Strength for Butt-fusion			
5	8.10	Slow Crack Growth Rate 80°C for 500 hrs.			
6	---	MFR, Density & OIT	RMTC No.367 Dtd: 22.06.2023	S.S PLASTICS/367	Reviewed OK

PART - D: REMARKS

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2. These witness results relate exclusively to the work ordered or the object (s) or the lot inspected.
3. Lab. Environmental Condition during the witness of tests: Temperature : 27±2°C & Relative Humidity : 65±5%
4. Calibration statuses of equipment/instruments are verified.


E. Naga Durga Prasad, CODE No: 1388
AUTHORISED SIGNATORY

केन्द्रीय इंस्टीट्यूट ऑफ़ पेट्रोकेमिकल्स

इंजीनियरिंग एण्ड टेक्नोलॉजी

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Name of the Inspecting Official : E Naga Durga Prasad

W.O Centre: Kochi

Code No.: 1388

Camp at: M/s.Nandi Polymers India Pvt. Ltd., Tirupati, AP

INSPECTION DOCUMENT

DOC. NO: **IB00423240501376/4**

Dated: 24.07.2023

Issued to: M/s.Nandi Polymers India Pvt. Ltd

Manufacturer Inspection Call Letter No.: NPIPL 02 dated 12/07/2023, dated: 23/07/2023

INSPECTION DOCUMENT AS PER IS NO. / QAP NO. : 4984:2016

PART A: PARTICULARS OF STORES OFFERED

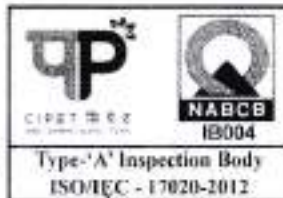
p) Description of the items	: HDPE Pipe
q) Grade/Variety/Type/Size/Class etc.	: PE100 PN8 DN 160 SDR 17
r) Declared Value, if any	: MFI: 0.27gm/10 min & DENSITY: 952.96 Kg/m ³
s) Quantity	: 1352mtrs(112pcx12m +1pc x 8m)
t) Any Other Information	: Batch Number: 20230823004008

PART B: SUPPLEMENTARY INFORMATIONS

d) Reference to sampling procedure : IS 4984-2016 (Random Sampling Method)

PART C: RESULTS OF TESTS WITNESSED & THE DOCUMENTS REVIEWED

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result observed
1	6	Pipe Description		
1.1	6.2	Colour	Shall be Black with Blue Strips	confirmed
1.2	6.2.1	Identification of Strips		
		No. of longitudinal strips	Min. : 3	3
		Strip Width (mm)	Min. : 3	5.64
		Strip Depth (mm)	Max. : 0.2	0.16
2	7	Geometric Characteristics of Pipe		Geometric Characteristics of Pipe
2.1	7.1	Visual Appearance	Internal & External surface of pipe shall be smooth, clean free from grooving & other defects.	Satisfactory
		Out of square of pipe end (mm)	Max.: 4	1.96
2.2	7.2	Length(mtr)	Min.12	>12
2.3	7.4 (Table-3 & 4)	Dimensions		
		Mean Outside Diameter (d _{em}) (mm)	Min. : 160.0 Max.: 161.0	160.05 160.80
		Out of Roundness (Ovality) (mm)	Max.: 3.2	1.95
		Wall Thickness	Min. : 9.5 Max.: 10.6	9.81 10.38
3	8	Performance Requirements		
3.1	8.1	Hydraulic characteristics		
3.1.1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.		
		Hydrostatic Resistance Test (at 80°C for 48hrs.)	The pipes under test shall show No signs of localized swelling, leakage or weeping & shall not burst during the prescribed test duration.	Confirmed



DOCUMENT NO: IB00423240501376/4

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result obtained
3.2	8.2	Longitudinal Reversion Test	Shall not be greater than 3 %.	1.40
3.3	8.3	Carbon Black Content (%)	2.5±0.5	2.87
		Carbon Black Dispersion	The dispersion of carbon black shall be satisfactory.	Satisfactory
3.4	8.4	Melt Flow Rate (g/10min) (at 190°C with 5kgLoad)	0.15 to 1.10	0.27
3.5	8.5	Oxidation Induction Time (OIT) min.	Shall not be less than 20 min.	> 20
3.7	8.7	Density (kg/m ³)	940 to 960	952.96
3.9	8.9	Elongation at Break (%)	≥ 350	<350
		Yield Strength	Min.15Mpa	<15Mpa
4	10	Marking	Mfg.Name, HDPE PIPES, PE100,PN8, DN160,SDR17 IS:4984-2016,IS LOGO CML NO., BATCH NO.,	Satisfactory

REVIEW OF DOCUMENTS (IF ANY)

Sl.	Clause	Test Parameters	Report No. & Date	Report Issued By	Review & Remark
1		Internal Pressure Creep Rupture Test of Pipe.			
1.1	8.1.1 (Table-5)	Hydrostatic Resistance Test (at 27°C for 100hrs.)	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
1.2		Hydrostatic Resistance Test (at 80°C for 165hrs.)			
1.3		Hydrostatic Resistance Test (at 80°C for 1000hrs.)			
2	8.1.2	Internal Pressure Creep Rupture Test of Joints.			
2.1	(Table-5)	Hydrostatic Resistance Test (at 80°C for 48hrs.)	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
3	8.6	Overall Migration (mg/ltr)			
4	8.8	Tensile Strength for Butt-fusion			
5	8.10	Slow Crack Growth Rate 80°C for 500 hrs.			
6	---	MFR, Density & OIT	RMTC No.367 Dt: 22.06.2023	S.S PLASTICS/367	Reviewed OK

PART - D: REMARKS

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2. These witness results relate exclusively to the work ordered or the object (s) or the lot inspected.
3. Lab. Environmental Condition during the witness of tests: Temperature : 27±2°C & Relative Humidity : 65±5%
4. Calibration statuses of equipment/instruments are verified.


E Naga Durga Prasad, CODE No: 1388
AUTHORISED SIGNATORY



Name of the Inspecting Official : E Naga Durga Prasad

W.O Centre: Kochi

Code No.: 1388

Camp at : M/s.Nandi Polymers India Pvt. Ltd., Tirupati , AP

INSPECTION DOCUMENT

Dated: 24.07.2023

DOC. NO:IB00423240501376/5

Issued to: M/s.Nandi Polymers India Pvt. Ltd

Manufacturer Inspection Call Letter No.: NPIPL 02 dated 12/07/2023, dated: 23/07/2023

INSPECTION DOCUMENT AS PER IS NO. / QAP NO. : 4994:2016

PART A: PARTICULARS OF STORES OFFERED

- | | |
|---------------------------------------|--|
| u) Description of the items | : HDPE Pipe |
| v) Grade/Variety/Type/Size/Class etc. | : PE100 PN8 DN 180 SDR 17 |
| w) Declared Value, if any | : MFI: 0.26gm/10 min & DENSITY: 950.95 Kg/m ³ |
| x) Quantity | : 325mtrs(27pcx12m+1pcx1m) |
| y) Any Other Information | : Batch Number:2023060200400C |

z) PART B: SUPPLEMENTARY INFORMATIONS

- e) Reference to sampling procedure IS 4994-2016 (Random Sampling Method)

PART C: RESULTS OF TESTS WITNESSED & THE DOCUMENTS REVIEWED

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result observed
1	6	Pipe Description		
1.1	6.2	Colour	Shall be Black with Blue Strips	confirmed
1.2	6.2.1	Identification of Strips		
		No. of longitudinal strips	Min. : 3	3
		Strip Width (mm)	Min. : 3	4.26
		Strip Depth (mm)	Max. : 0.2	0.16
2	7	Geometric Characteristics of Pipe		Geometric Characteristics of Pipe
2.1	7.1	Visual Appearance	Internal & External surface of pipe shall be smooth, clean free from grooving & other defects.	Satisfactory
		Out of square of pipe end (mm)	Max.: 4	1.98
2.2	7.2	Length(mtr)	Min.12	>12
2.3	7.4 (Table-3 & 4)	Dimensions		
		Mean Outside Diameter (d _{nom}) (mm)	Min. : 180.0 Max.: 181.1	180.02 180.80
		Out of Roundness (Ovality) (mm)	Max.: 3.6	1.79
		Wall Thickness	Min. : 10.60 Max.: 11.80	10.81 11.36
3	8	Performance Requirements		
3.1	8.1	Hydraulic characteristics		
3.1.1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.		
		Hydrostatic Resistance Test (at 80°C for 48hrs.)	The pipes under test shall show No signs of localized swelling, leakage or weeping & shall not burst during the prescribed test duration.	Confirmed

सन्तल इन्स्टीट्यूट ऑफ़ पेट्रोकेमिकल्स

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Page No. 2 of 2

Dated: 24.07.2023

DOCUMENT NO: IB00423240501376/5

Sl.	Clause	Tests Witnessed	Specified Requirements.	Result obtained
3.2	8.2	Longitudinal Reversion Test	Shall not be greater than 3 %.	1.15
3.3	8.3	Carbon Black Content (%)	2.5±0.5	2.62
		Carbon Black Dispersion	The dispersion of carbon black shall be satisfactory.	Satisfactory
3.4	8.4	Melt Flow Rate (g/10min) (at 190°C with 5kgLoad)	0.15 to 1.10	0.32
3.5	8.5	Oxidation Induction Time (OIT) min.	Shall not be less than 20 min.	> 20
3.7	8.7	Density (kg/m ³)	940 to 960	950.95
3.9	8.9	Elongation at Break (%)	≥ 350	<350
		Yield Strength	Min.15Mpa	<15Mpa
4	10	Marking	Mfg.Name, HDPE PIPES, PE100,PN8, DN180,SDR17 IS-4984-2016,IS LOGO, CML NO., BATCH NO.,	Satisfactory

REVIEW OF DOCUMENTS (IF ANY)

Sl.	Clause	Test Parameters	Report No. & Date	Report Issued By	Review & Remark
1	8.1.1 (Table-5)	Internal Pressure Creep Rupture Test of Pipe.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
1.1		Hydrostatic Resistance Test (at 27°C for 100hrs.)			
1.2		Hydrostatic Resistance Test (at 80°C for 165hrs.)			
1.3		Hydrostatic Resistance Test (at 80°C for 1000hrs.)			
2	8.1.2 (Table-5)	Internal Pressure Creep Rupture Test of Joints.	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
2.1		Hydrostatic Resistance Test (at 80°C for 48hrs.)			
3	8.6	Overall Migration (mg/ltr)	002217 & Dt 17/08/2022	CIPET, Vijayawada	Reviewed
4	8.8	Tensile Strength for Butt-fusion			
5	8.10	Slow Crack Growth Rate 80°C for 500 hrs.			
6	---	MFR, Density & OIT	RMTC No.367 Dtd: 22.06.2023	S.S PLASTICS/367	Reviewed OK

PART - D: REMARKS

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