

TUV INDIA PRIVATE LIMITED

INSPECTION VISIT REPORT

Number: 8116949912-3 & 100176517 - IVR - 01.07.19 - Md Amanullah - Revision - 00



General:			
TUV SAP & Control Number:	8116949912-3 & 100176517	Branch:	Kolkata
Notification Name / Number with Date:	As per mail dated 28.06.19	Date(s) of Inspection:	29.06.2019 & 01.07.2019
Project Name & Location:	Balance of Plant & Utility Project, LPG Import Terminal Facility Haldia (A872)	Place / Address of Inspection:	Haldia, W.B
TUVIPL Client Name:	M/S KPTL	End User Name:	M/S BPCL
DEC / PMC / EPC Name: (If applicable)	M/S Engineers India Ltd	DEC / PMC / EPC Assignment Number: (If applicable)	A872
Vendor Name & Location:	M/S ARC Insulation & Insulator Pvt Ltd.	P.O. Number: (Client on Vendor)	2300115608
Sub Vendor Name & Location: (If applicable)	Not Applicable	P.O. Number: (If applicable - Vendor on Sub Vendor)	Not Applicable

Stages Of Inspection:

<input type="checkbox"/> Kick Off / Pre Inspection Meeting	<input type="checkbox"/> Material Identification	<input type="checkbox"/> Interim Stages
<input checked="" type="checkbox"/> Document Review	<input checked="" type="checkbox"/> Final Inspection	<input type="checkbox"/> Re-Inspection

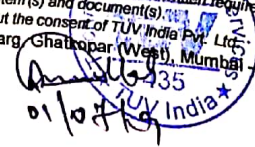
Item Description:

P.O. Item Number	Item Code & Item Description	P.O. Quantity	Offered Quantity
		Unit: -	
	GRE PIPE 200NB	17 Meters	17 Meters
	GRE PIPE 250NB	52.8 Meters	52.8 Meters
	GRE PIPE 300NB	6.7 Meters	6.7 Meters
90 Deg. Elbow	200NB	9 Nos.	9 Nos.
	250NB	29 Nos.	29 Nos.
	300NB	1 No.	1 No.
45 Deg. Elbow	200NB	4 Nos.	4 Nos.
	250NB	7 Nos.	7 Nos.
	300NB	1 No.	1 No.
Equal Tee	200NB	1 No.	1 No.
	250NB	1 No.	1 No.
	300NB	4 Nos.	4 Nos.
Un-equal Tee	250NB	3 Nos.	3 Nos.
	300NB	2 Nos.	2 Nos.
	300NB	3 Nos.	3 Nos.
Flange	200NB	19 Nos.	19 Nos.
	250NB	45 Nos.	44 Nos.
	300NB	2 Nos.	2 Nos.

Reference Documents:

Sr. No.	Document Name	Document Number	Approval Status
1)	PR / MR / ARM	Not Applicable	Not Applicable
2)	QAP / ITP / QCP	ARC/QAP/19-20/01	Approved
3)	Drawing(s)	ARC/FRP/19-20/0004 REV-1	Approved
4)	Procedure(s)	Not Applicable	Not Applicable
5)	Datasheet(s)	Not Applicable	Not Applicable

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 Tel: + 91 22 66477000, Email: inspection@tuv-nord.com Website: www.tuv-nord.com/in
 Form No. : F / INSP / VR / 11 - R8; Revision Date: 28/09/2018



TUV INDIA PRIVATE LIMITED

INSPECTION VISIT REPORT

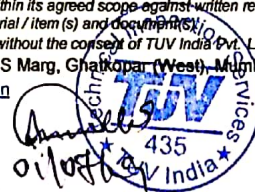
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6)	Others (Specify)	A872-6-44-0005 Rev-1	Not Applicable		
Inspection Activities Carried Out :					
Stages Witnessed:					
1)	Visual checked for overall completeness, cleanliness, surface finish and workmanship and found free from all irregularities and acceptable				
2)	QAP clause no. E:- Dimension checked one in total lot with drawing and found within acceptable tolerance.				
3)	Sample drawn one in Total lot (300NB) as per QAP for physical test from finish pipe for laboratory check testing for confirmation to material grade as per specification requirements.				
4)	QAP clause no. F1 & F2:- Tensile & Pipe stiffness Test one in total Lots checked with QAP and found to meet specification requirements.				
5)	QAP clause no. F3:- Barcol Hardness test witnessed one in total Lots as per spec and found to meet specification requirement.				
6)	QAP clause no. F4:- Acetone smear test witnessed one in total Lots as per spec and found to meet specification requirements.				
7)	QAP clause no. F5:- Hydrostatic test of GRE pipe one in total Lots and observed no leakage, no pressure drop & no deformation @ 24Kg/cm2 for 60 sec.				
Documents Reviewed:					
1)	Witnessed report reviewed and found to meet specification requirements.				
2)	Base, Catalyst & Fiber certificate reviewed and found to meet specification requirements.				
3)	In-process inspection report reviewed and found to meet specification requirements.				
4)	All Calibration certificate reviewed and found in order				
Details of Equipment(s) / Instrument(s) used for measuring / testing During Inspection:					
Sr. No.	Name of Equipment(s) / Instrument(s)	Range	ID	Calibration Valid till Date	Certificate Number with Date
1)	Barcol Hardness tester	0-100 Shore D	VBZH	01.08.2019	1808124/A392/03-kd
2)	Universal Machine	600KN	UTK-60E	05.03.2020	TMC/TS/603/19
3)	Steel scale	0 - 1000mm	ARC-12	01.08.2019	1808124/A392/01-kd
4)	Pressure Gauge	0-40kg/cm2	ARC-03/PG-01	01.08.2019	1808302/A392/07-nd
5)	Measuring Tape	0-15000mm	ARC-16	01.08.2019	1808124/A392/02-kd
6)	Pie Tape.	20 - 300mm	ARC-06	01.08.2019	1808302/A392/05-np
7)	Vernier caliper	0-300mm	GL802800	01.08.2019	JSGC/ARC/CERT/O2/O1/GL802800/18-19
<input checked="" type="checkbox"/> All Measuring instrument(s) / Equipment (s) mentioned above were verified for suitability for intended use, proper identification and calibration status as per NABCB Document BCB 110 (IB)/Mar 2017, Clause No: 5.0(i) to 5(v) OR WI/INSP/63/00 – Found acceptable.					
Discrepancies observed during inspection :					
<i>Not applicable.</i>					
Non Conformity Raised (If Any, Mention TUVIPL NCR Number):					
None					
Conclusion (Acceptable / Provisionally Acceptable / Not Acceptable / Acceptance subject to) & Pending Activities:					
Acceptable.					
Identification of inspected Item(s):					
TUV soft stamped on sticker and applied on witness pipe for identification.					
Attachments:					
<input type="checkbox"/> Inspection records – Total Page Nos.		None		<input type="checkbox"/> NCR Number: None	

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<input checked="" type="checkbox"/> Inspection Photos – Refer Page Nos. 3 & 4	<input type="checkbox"/> Others (Specify) : None
Authorised Signatures:	
TUVIPL Inspector:	Vendor / Sub Vendor Representative (If Applicable):
Name: Md Amanullah & Date: 01.07.19	Name & Date:
Distribution List: <input checked="" type="checkbox"/> TUV Client / End User <input checked="" type="checkbox"/> TUV Executing Branch / TUV Originating Branch <input checked="" type="checkbox"/> Vendor / Sub Vendor	
Revision – 00 (If Applicable) – type Justification. This Document Supersedes IVR No. type Number Dated 00.00.0000	

Photographs

Barcol Hardness checked 	Barcol Hardness checked
Tensile test witnessed 	Tensile test witnessed
Stiffness checked 	Hydrostatic witnessed

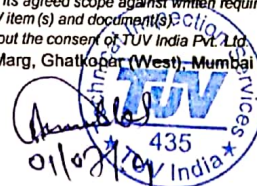
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Dimension checked	Dimension checked
Dimension checked	Visual checked



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ARC INSULATIONS AND INSULATORS PVT LTD.



	Owner	Bharat Petroleum Corporation Limited (BPCL)	
	PMC	Engineers India Limited (EIL)	
	LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)	
	Sub Contractor	Neel Water	
	Title	GRE PIPE & Fittings	
	P.O.No.	2300115608	
	Sr.NO.	1	
Date:	29.06.2019 & 30.06.2019	Product Name	GRE Pipe & Fittings

Joint Inspection Report

Sr.No.	Description	Specification	Unit	Observation
Pipe Dimension				
1	Internal Diameter	200	mm	200
2	Thickness	7.5	mm	7.5
3	Length	6000	mm	6001
Pipe Dimension				
1	Internal Diameter	200	mm	200
2	Thickness	5.5	mm	5.7
3	Length	6000	mm	6001
Pipe Dimension				
1	Internal Diameter	250	mm	250
2	Thickness	6.5	mm	6.4
3	Length	6000	mm	6002
Pipe Dimension				
1	Internal Diameter	300	mm	300
2	Thickness	8	mm	8.2
3	Length	6700	mm	6703
Flange Dimension Report				
1	NB	200	mm	200
2	Flange OD	343	mm	343
3	PCD	298	mm	298.5
4	Number Of Holes	8	mm	8
5	Hole Dia.	22	mm	22
6	Flange Thickness	25	mm	26
7	Flange Length	200	mm	201
Flange Dimension Report				
1	NB	250	mm	250
2	Flange OD	406	mm	406
3	PCD	362	mm	362
4	Number Of Holes	12	mm	12
5	Hole Dia.	25	mm	26
6	Flange Thickness	25	mm	25
7	Flange Length	250	mm	252
Flange Dimension Report				
1	NB	300	mm	300
2	Flange OD	483	mm	484
3	PCD	432	mm	432
4	Number Of Holes	12	mm	12
5	Hole Dia.	25	mm	25
6	Flange Thickness	37.5	mm	38
7	Flange Length	250	mm	250

Subhadip Roy
Sr. Engineer (Design & Proposal)
For, ARC Insulation & Insulators Pvt. Ltd.

Md. Amanullah
Sr. Inspection Engineer
For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



Owner	Bharat Petroleum Corporation Limited (BPCL)
PMC	Engineers India Limited (EIL)
LSTK Contractor	Kalpitaru Power Transmission Limited (KPTL)
Sub Contractor	Neel Water
Title	GRE PIPE & Fittings
P.O.No.	2300115608
Sr.NO.	2

Date:	29.06.2019 & 30.06.2019	Product Name	GRE Pipe & Fittings
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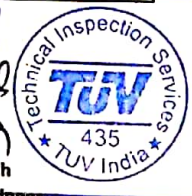
Joint Inspection Report

Sr.No.	Description	Specification	Unit	Observation
Elbow Dimension Report				
1	NB	200	mm	200
2	Elbow Type	90°	mm	90°
3	Length (c/c)	300	mm	300
4	Thk	5.5	mm	5.8
Elbow Dimension Report				
1	NB	250	mm	250
2	Elbow Type	90°	mm	90°
3	Length (c/c)	375	mm	382
4	Thk	6.5	mm	7
Elbow Dimension Report				
1	NB	300	mm	300
2	Elbow Type	90°	mm	90°
3	Length (c/c)	450	mm	450
4	Thk	8	mm	8.1
3	Length	6700	mm	6703
Elbow Dimension Report				
1	NB	200	mm	200
2	Elbow Type	45°	mm	45°
3	Length (c/c)	300	mm	300
4	Thk	5.5	mm	6
Elbow Dimension Report				
1	NB	250	mm	250
2	Elbow Type	45°	mm	45°
3	Length (c/c)	375	mm	375
4	Thk	6.5	mm	7.1
Elbow Dimension Report				
1	NB	300	mm	300
2	Elbow Type	45°	mm	45°
3	Length (c/c)	450	mm	450
4	Thk	8	mm	8
TEE Dimension Report				
1	NB	200	inch	200
2	Tee Type	Equal	mm	Equal
3	Length	730	mm	731
4	Height	365	mm	366
5	Thickness	5.5	mm	6
TEE Dimension Report				
1	NB	250	inch	250
2	Tee Type	Equal	mm	Equal
3	Length	900	mm	900
4	Height	450	mm	286
5	Thickness	6.5	mm	6.8
TEE Dimension Report				
1	NB	300	inch	300
2	Tee Type	Equal	mm	Equal
3	Length	1050	mm	1051
4	Height	525	mm	206
5	Thickness	8	mm	8.2


Subhadip Bose
 Subhadip Bose
 Sr. Engineer (Design & Proposal)
 For, ARC Insulation & Insulators Pvt. Ltd.



REVIEWED / NOTED
 WITNESSED
Md. Anwarul Haque
 01/08/19
 Md. Anwarul Haque
 Sr. Inspection Engineer
 For, TUV Nord



ARC INSULATIONS AND INSULATORS PVT LTD.

	Owner	Bharat Petroleum Corporation Limited (BPCL)	
	PMC	Engineers India Limited (EIL)	
	LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)	
	Sub Contractor	Neel Water	
	Title	GRE PIPE & Fittings	
	P.O.No.	2300115608	
Sr.NO.	3		
Date:	29.06.2019 & 30.06.2019	Product Name	GRE Pipe & Fittings

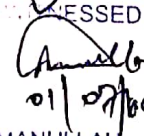

Joint Inspection Report

Sr.No.	Description	Specification	Unit	Observation
TEE Dimension Report				
1	NB 1	250	inch	250
2	NB 2	200	inch	200
3	Tee Type	Unequal	mm	Unequal
4	Length	790	mm	790
5	Height	340	mm	351
6	Thickness	6.5	mm	6.8
TEE Dimension Report				
1	NB 1	300	inch	300
2	NB 2	250	inch	250
3	Tee Type	Unequal	mm	Unequal
4	Length	940	mm	940
5	Height	415	mm	420
6	Thickness	8	mm	8
Hydrotest				
1	Pipe 200 NB	24	BAR	No Leakage Found @ 24 Bar, 1 min Holding
2	Pipe 250 NB	24	BAR	No Leakage Found @ 24 Bar, 1 min Holding
3	Pipe 300 NB	24	BAR	No Leakage Found @ 24 Bar, 1 min Holding
Tensile Strength				
1	Sample 1	136	KN/m	300
2	Sample 2	136	KN/m	340
Barcol Hardness				
1	200 NB	32	-	36
2	250 NB	32	-	41
3	300 NB	32	-	45
Acetone Smear Test				
1	Pipe 2"	No Smear/Smlug	-	No Smear/Smlug
2	Pipe 10"	No Smear/Smlug	-	No Smear/Smlug
3	Pipe 10"	No Smear/Smlug	-	No Smear/Smlug
4	Pipe 8"	No Smear/Smlug	-	No Smear/Smlug
5	Pipe 300 mm	No Smear/Smlug	-	No Smear/Smlug
Stiffness Test				
1	Sample	62	Kpa	538



Subhadip Roy
 Sr. Engineer (Design & Proposal)

For, ARC Insulation & Insulators Pvt. Ltd.

REVIEWED ✓
 NOTED ✓
 APPROVED ✓

 01/07/19
MD. AMANULLAH


Md. Amanullah
 Sr. Inspection Engineer
 For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



	Owner	Bharat Petroleum Corporation Limited (BPCL)	
	PMC	Engineers India Limited (EIL)	
	LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)	
	Sub Contractor	Neel Water	
	Title	GRE PIPE & Fittings	
	P.O.No.	2300115608	
	Sr.NO.	1	
Date:	29.06.2019	Product Name	GRE Pipe

QC Report

Sr.No.	Description	Specification	Unit	Observation		
Pipe Dimension				1	2	3
1	Internal Diameter	200	mm	200	200	200
2	Thickness	7.5	mm	7.6	7.5	7.6
3	Length	6000	mm	6001	6001	6002
Pipe Dimension						
1	Internal Diameter	200	mm	200	200	200
2	Thickness	5.5	mm	5.5	5.7	6
3	Length	6000	mm	6003	6001	6001
Pipe Dimension						
1	Internal Diameter	250	mm	250	250	250
2	Thickness	6.5	mm	6.5	6.4	7
3	Length	6000	mm	6003	6002	6003
Pipe Dimension						
1	Internal Diameter	300	mm	300	300	300
2	Thickness	8	mm	8.2	8.2	8.3
3	Length	6700	mm	6702	6703	6701

Abhishek Kr. Gond
QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.

REVIEWED / NOTED
% WITNESSED

MD AMANULLAH

Md. Amanullah
Sr. Inspection Engineer
For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



	Owner	Bharat Petroleup Corporation Limited (BPCL)	
	PMC	Engineers India Limited (EIL)	
	LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)	
	Sub Contractor	Neel Water	
	Title	GRE PIPE & Fittings	
	P.O.No.	2300115608	
	Sr.NO.	2	
Date:	29.06.2019	Product Name	GRE Flange

QC Report

Sr.No.	Description	Specification	Unit	Observation		
Flange Dimension Report				1	2	3
1	NB	200	mm	200	200	200
2	Flange OD	343	mm	343	343	343
3	PCD	298	mm	298.5	298.5	298.5
4	Number Of Holes	8	mm	8	8	8
5	Hole Dia.	22	mm	22	22	22
6	Flange Thickness	25	mm	25	26	25
7	Flange Length	200	mm	200	201	201
Flange Dimension Report						
1	NB	250	mm	250	250	250
2	Flange OD	406	mm	407	406	406
3	PCD	362	mm	362	362	362
4	Number Of Holes	12	mm	12	12	12
5	Hole Dia.	25	mm	25	26	26
6	Flange Thickness	25	mm	26	25	25
7	Flange Length	250	mm	250	252	252
Flange Dimension Report						
1	NB	300	mm	300	300	300
2	Flange OD	483	mm	483	484	484
3	PCD	432	mm	432	432	432
4	Number Of Holes	12	mm	12	12	12
5	Hole Dia.	25	mm	26	25	26
6	Flange Thickness	37.5	mm	38	38	37
7	Flange Length	250	mm	251	250	250

Abhishek Kr. Gond
 QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.

REVIEWED / NOTED
~~WITNESSED~~

 01/07/19
MD AMANULLAH
 Md. Amanullah

Sr. Inspection Engineer
 For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



Owner	Bharat Petroleum Corporation Limited (BPCL)
PMC	Engineers India Limited (EIL)
LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)
Sub Contractor	Neel Water
Title	GRE PIPE & Fittings
P.O.No.	2300115608
Sr.NO.	3

Date: 01.07.2019 Product Name GRE BEND 90°

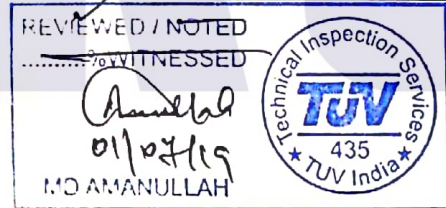
QC Report

Sr.No.	Description	Specification	Unit	Observation		
Elbow Dimension Report				1	2	3
1	NB	200	mm	200	200	200
2	Elbow Type	90°	mm	90°	90°	90°
3	Length (c/c)	300	mm	300	300	300
4	Thk	5.5	mm	6	5.8	6
Elbow Dimension Report						
1	NB	250	mm	250	250	250
2	Elbow Type	90°	mm	90°	90°	90°
3	Length (c/c)	375	mm	380	382	385
4	Thk	6.5	mm	6.9	7	7
Elbow Dimension Report						
1	NB	300	mm	300	300	300
2	Elbow Type	90°	mm	90°	90°	90°
3	Length (c/c)	450	mm	450	450	450
4	Thk	8	mm	8	8.1	8.5



Abhishek K. Gond
QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.



Md. Amanullah
Sr. Inspection Engineer
For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



Owner	Bharat Petroleum Corporation Limited (BPCL)
PMC	Engineers India Limited (EIL)
LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)
Sub Contractor	Neel Water
Title	GRE PIPE & Fittings
P.O.No.	2300115608
Sr.NO.	4
Date:	01.07.2019
Product Name	GRE BEND 45°

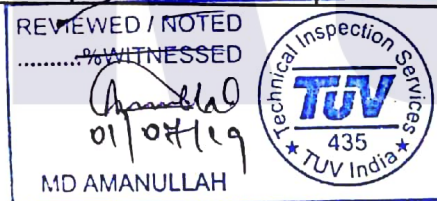
QC Report

Sr.No.	Description	Specification	Unit	Observation		
				1	2	3
Elbow Dimension Report				1	2	3
1	NB	200	mm	200	200	200
2	Elbow Type	45°	mm	45°	45°	45°
3	Length (c/c)	300	mm	300	300	300
4	Thk	5.5	mm	6	6	5.8
Elbow Dimension Report						
1	NB	250	mm	250	250	250
2	Elbow Type	45°	mm	45°	45°	45°
3	Length (c/c)	375	mm	375	375	375
4	Thk	6.5	mm	7	7.1	6.9
Elbow Dimension Report						
1	NB	300	mm	300	300	300
2	Elbow Type	45°	mm	45°	45°	45°
3	Length (c/c)	450	mm	450	450	450
4	Thk	8	mm	8.1	8	8



Abhishek Kr. Gond
QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.



Md. Amanullah
Sr. Inspection Engineer
For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



Owner	Bharat Petroleum Corporation Limited (BPCL)
PMC	Engineers India Limited (EIL)
LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)
Sub Contractor	Neel Water
Title	GRE PIPE & Fittings
P.O.No.	2300115608
Sr.NO.	5

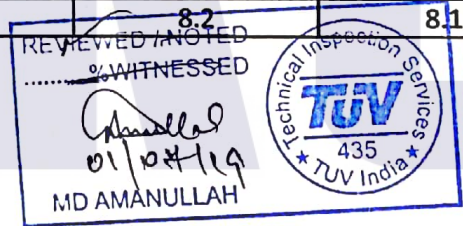
Date: 01.07.2019 Product Name: GRE EQUAL TEE

QC Report

Sr.No.	Description	Specification	Unit	Observation		
TEE Dimension Report				1	2	3
1	NB	200	inch	200	200	200
2	Tee Type	Equal	mm	Equal	Equal	Equal
3	Length	730	mm	730	731	731
4	Height	365	mm	365	366	365
5	Thickness	5.5	mm	6	6	5.8
TEE Dimension Report						
1	NB	250	inch	250	250	250
2	Tee Type	Equal	mm	Equal	Equal	Equal
3	Length	900	mm	900	900	901
4	Height	450	mm	286	286	287
5	Thickness	6.5	mm	6.7	6.8	6.8
TEE Dimension Report						
1	NB	300	inch	300	300	300
2	Tee Type	Equal	mm	Equal	Equal	Equal
3	Length	1050	mm	1052	1051	1051
4	Height	525	mm	205	206	206
5	Thickness	8	mm	8	8.2	8.1


Abhishek Kr. Gond
 QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.



Md. Amanullah
 Sr. Inspection Engineer
 For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



Owner	Bharat Petroleum Corporation Limited (BPCL)
PMC	Engineers India Limited (EIL)
LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)
Sub Contractor	Neel Water
Title	GRE PIPE & Fittings
P.O.No.	2300115608
Sr.NO.	6

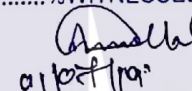
Date: 01.07.2019 **Product Name** GRE REDUCER TEE


QC Report

Sr.No.	Description	Specification	Unit	Observation		
TEE Dimension Report						
1	NB 1	250	inch	250	250	250
2	NB 2	200	inch	200	200	200
3	Tee Type	Unequal	mm	Unequal	Unequal	Unequal
4	Length	790	mm	790	790	790
5	Height	340	mm	345	351	350
6	Thickness	6.5	mm	7	6.8	6.8
TEE Dimension Report						
1	NB 1	300	inch	300	300	300
2	NB 2	250	inch	250	250	250
3	Tee Type	Unequal	mm	Unequal	Unequal	Unequal
4	Length	940	mm	940	940	940
5	Height	415	mm	420	423	425
6	Thickness	8	mm	8	8.2	8


Abhishek Kr. Gond
 QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.

REVIEWED / NOTED
WITNESSED

 MD AMANULLAH


Md. Amanullah
 Sr. Inspection Engineer
 For, TUV Nord

ARC INSULATIONS AND INSULATORS PVT LTD.



Owner	Bharat Petroleum Corporation Limited (BPCL)
PMC	Engineers India Limited (EIL)
LSTK Contractor	Kalpataru Power Transmission Limited (KPTL)
Sub Contractor	Neel Water
Title	GRE PIPE & Fittings
P.O.No.	2300115608
Sr.NO.	6

Date: 29.06.2019

QC Report

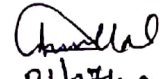
Sr.No.	Description	Specification	Unit	Observation
Hydrotest				
1	Pipe 200 NB	24	BAR	No Leakage Found @ 24 Bar, 1 min Holding
2	Pipe 250 NB	24	BAR	No Leakage Found @ 24 Bar, 1 min Holding
3	Pipe 300 NB	24	BAR	No Leakage Found @ 24 Bar, 1 min Holding
Tensile Strength				
1	Sample 1	136	KN/m	300
2	Sample 2	136	KN/m	340
Barcol Hardness				
1	200 NB	32	-	36
2	250 NB	32	-	41
3	300 NB	32	-	45
Acetone Smear Test				
1	Pipe 200 NB	No Smear/Smlug	-	No Smear/Smlug
2	Pipe 250 NB	No Smear/Smlug	-	No Smear/Smlug
3	Pipe 300 NB	No Smear/Smlug	-	No Smear/Smlug
4	Elbow Sample	No Smear/Smlug	-	No Smear/Smlug
5	Tee Sample	No Smear/Smlug	-	No Smear/Smlug
Stiffness Test				
1	Sample	62	Kpa	538

The above test confirms to IS, AWWA & ASTM Standards



Abhishek Mondal
 QC Engineer

For, ARC Insulation & Insulators Pvt. Ltd.

REVIEWED / NOTED
% WITNESSED

 01/07/19
MD AMANULLAH

Md. Amanullah
 Sr. Inspection Engineer
 For, TUV Nord

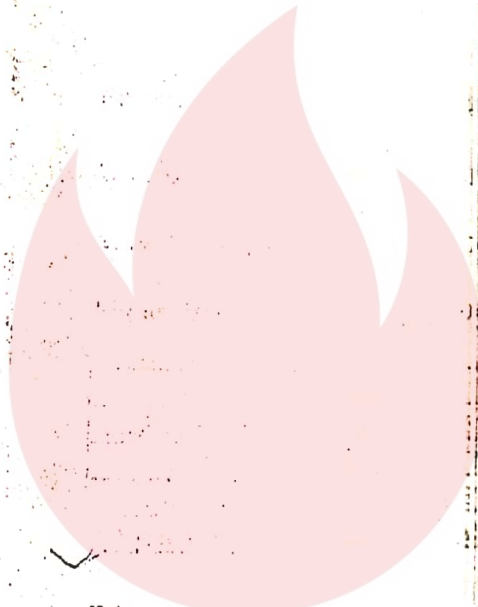


F02 (QAD-P-03)

CERTIFICATE OF ANALYSIS

Product :- Epotec YD-128 DRM
Lot No. :- VL12190253
Manufacturing Date :- 24.04.2019
Expiry Date :- 23.04.2021

Parameter	Test Method	Unit	Specification	Result
Epoxy Equivalent Weight	ASTM D 1652-11E1	g/eq	185-194	186.0
Colour	ASTM D 1209-05(2011)	APHA	100 MAX	20
Viscosity @ 25° C	ASTM D 2196-18E1	cPs	11000-14000	11450
Hydrolysable Chlorine	ASTM D 1726-11	wt%	0.05 MAX	0.026



Note

1. Grasim chemicals ltd. (Epoxy Division) certified that the above reported results are correct and the product meets the designated specifications.
2. Grasim chemicals ltd. (Epoxy Division) makes no other warranty, either express or implied, including any warranty of merchantability or fitness for Particular purpose as the conditions of application are beyond our control. Grasim chemicals ltd. (Epoxy Division) also recommends that the product be stored as suggested and in its original packing.
3. The above results pertain to the lot tested and are not to be construed of the product.
4. This certificate was generated electronically and is valid without signature.

[Handwritten Signature]

WITNESSED
[Handwritten Signature]
MD AMANULLAH

Grasim Industries Limited (Chemical Division) Works address: Plot No.1, GIDC, PO Vilayat, Dist. Bharuch, Gujarat 392012	Grasim Industries Limited (Chemical Division) Off. Address: 3rd floor, Skyline Building, Old NH-8, Bharuch, Gujarat 392001	Website www.grasim.com CIN L17124MP1947PLC000410
---	--	---

Regd. Office P.O. Birlagram, Nagda # 456 331 (M.P.)

TEST CERTIFICATE

T.C.No.: 433
Date: 06.04.2019

Product Description : DR SE 1043 24-2400 BP48D
Glass : " ECR "
Material : 609472
Packing List No. : 90088132 dtd. 06.04.2019
Quantity : 6049.93 Kgs.

TEST RESULTS

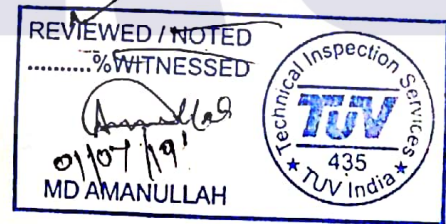
Sl. No.	Test	Standard Value	Observed Value
1.	Filament diameter, micrometer	From 23.5 up to but not including 24.5	24.2
2.	Tex (gms/Km)	2400 ± 8%	2450
3.	As per clause 6.3 of IS 11320	The glass fibre rovings shall have proper stiffness of strands and dispersion property and shall be free from unevenness of binder, contamination, combination of monofilaments with larger diameters etc.	Conforms
4.	Tensile breaking load, N	Over 940	1068
5.	As per clause 6.5 of IS 11320	The rovings shall be free from oil and grease spots and any other contamination and shall be uniform in colour.	Conforms
6.	Moisture content (% by Mass)	0.3 % Max	0.05
7.	Loss on ignition, (% by Mass)	0.5 ± 0.20	0.55
8.	Cross breaking strength, reinforced polyester rod, MPa	Dry-585 Minimum Wet-490 Minimum	765 676
9.	Conductivity of water extract, mS/m	12.5 Max	0.78

The above tests conform to IS – 11320:1997
for GOA GLASS FIBRE LTD;

Authorised Signatory



F18 - 34 - 3



Note: This is a system generated test certificate and hence, no signature is required

Goa Glass Fibre Ltd.

218/ 220, NH - 17, Colvale Village, Bardez, Goa - 403513.
Tel: +91-832-2299884/ 85 / 86 | FAX: +91 - 832 - 2299887 | Email: info@binaniglassfibre.com / Binani_goa@sanchamet.in | www.binani.com

CIN:U26102WB1996PLC 080099

Received - 11/4/19
A.S.

Arvind PD Composites Pvt. Ltd.

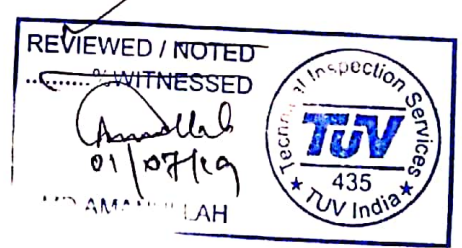
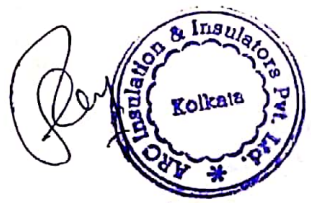


Certificate of Conformity

Manufacturer	: Arvind PD Composites Pvt Ltd
Customer	: P. K. INDUSTRIES
Invoice No	: GDP8000297
Customer Order Qty (Kgs)	: 1500.00
Date of Delivery	: 8/20/18 12:00:00 AM
Quantity Delivery (Kgs)	: 1438.50
Product Name	: MA-541-450/7---125-76-S-.-.-
Batch No	: 201808M2
Glass Type	: E-GLASS
Finish, Coupling Agent	: Polyester & Vinlyester
Stitch Pattern	: TRICOT
Mass per unit area ISO 3374	462.00 g/m2
GSM of Yarn Chop	450 GSM

We certify that the above mentioned fabrics was tested and complied with the customer requirement.
Arvind PD Composites Pvt Ltd.
Quality Assurance

This is computer generated document & does not require signature.
VAT : 24072603094
PO. Moti Bhoyan, Tal. Kalol, Dist. Gandhinagar 382721, Gujarat, India Tel: 02764 395000





Phone : 2455-8427 (LAB.)

Fax : (033) 2455-8427

JAGANATHS SLIP GAUGES & COMPANY

N.A.B.L. ACCREDITED LABORATORY

SPECIALIST IN :

MEASURING FACILITIES WE UNDERTAKING REPAIR & CALIBRATION FOR ISO, RITES, RDSO
LAB. & OFF. : 28, GURUPADA HALDER ROAD, KALIGHAT, KOLKATA-700026

E-mail : jaganaths.slip@gmail.com

PAGE : 1 OF 2

FRM-01

CALIBRATION CERTIFICATE

SERVICE REQUEST NO. : JSGC/DIM/CAL/ARC/111/C/08-18

NAME & ADDRESS OF CUSTOMER : **ARC INSULATION & INSULATOR PVT. LTD.**
VILL: RAMDEVPUR, BAWALI, BISHNUPUR-743384

CERTIFICATE NO. : JSGC/ARC/CERT/02/01/GL802800/18-19 DATED: 01.08.2018

DATE OF RECEIPT OF SAMPLE : AT OUR LAB. (01.08.2018)

DESCRIPTION OF SAMPLE : VERNIER CALIPER

MAKE : FORBES GOKAD LTD. TYPE: 'A'

RANGE : 0 to 300 mm

LEAST COUNT : 0.02 mm

SERIAL & IDENTIFICATION NO. : GL802800

BASIS OF CALIBRATION : AS PER IS: 3651 P-2 (1985) RA: 2005 INT. PROC: P - 02

CONDITION OF THE ITEM : SATISFACTORY

DATE OF CALIBRATION : 01.08.2018

DUE DATE : 01.08.2019

ENVIRONMENTAL CONDITION DURING CALIBRATION : TEMP: 20°C ± 2°C ; HUMIDITY: 50±10% Rh.

MAJOR EQUIPMENT USED : SLIP GAUGE, DIG. OUTSIDE MICROMETER, LONG SLIP, SLIP GAUGE ACCESSORIES, MEASURING ATTACHMENTS & ACCESSORIES.

TRACEABILITY : SLIP GAUGE TRACEABLE TO NPL VIDE CMERI
CERT.NO: MetR3/2016 - 37 DT. 30.08.2016 VALID UPTO 30.08.2018
DIG. OUTSIDE MICROMETER TRACEABLE TO NPL VIDE CMERI
CERT. NO: MetR1/2018-14(3) DT. 25.04.2018 VALID UPTO 24.04.2019
LONG SLIP TRACEABLE TO NPL VIDE CMERI
CERT.NO: MetR1/2016 - 50(1) DT. 30.11.2016 VALID UPTO 28.11.2018
SLIP GAUGE ACCESSORIES TRACEABLE TO NPL VIDE CMERI
CERT. NO: MetR3/2016 - 34 (1) DT. 04.08.2016 VALID UPTO 03.08.2018

EXPANDED UNCERTAINTY : ± 13.60 µm AT 95% Confidence Level (k=2 Appx.)

LAB IDENTIFICATION : STICKER ATTACHED WITH ID. No. ON GAUGE/INSTRUMENT





ESSJAY TECHNOMEASURE PVT. LTD.

DOC No.: TM/CALI/04

(A House of Calibration Engineering & Allied Services)
AN NABL ACCREDITED, ISO 9001 & OHSAS 18001 CERTIFIED ORGANISATION
Apartment No.: D 1, 3rd Floor, 36, Kantapukur 3rd Bye Lane, Howrah - 711 101
Ph.: 033 26670835, 9674756762, website: www.technomeasurenabl.com
E-mail: technomeasure@gmail.com



CERTIFICATE NO.
CC-2628

Calibration Certificate

Issued to,
M/s. ARC Insulation & Insulator Pvt Ltd
Vill-Ramdevpur,P.O.-Bawali,
Bishnupur-743384

Certificate No.: 1808302/A392/05-np
Date: 03.08.2018

Date of Calibration	Recommended Due On (as agreed with customer)	Page No. :
01.08.2018	01.08.2019	1 of 1

Location of Calibration : At Lab
 Date Of Received : 31.07.2018
 Description of instrument : Pi-Tape
 Make: Krystal
 Range: 20 Ømm - 300 Ømm
 Least count: 0.1 Ømm
 Method of Calibration : As per Work Instruction (WI- 01), QWI -62
 Based on IS 1269 : Part 1-1997, Reaffirmed 2007

Details of Major Equipment used for Calibration

Description	Traceability Certificate-No. & Issue Date	Valid upto	Calibration Agency
Tape and Scale Measuring Machine	CGIL/2017/1002/A-001 Calibration Date: 02.10.2017	01.10.2018	CGIL

Traceability: Standards used for calibration are traceable to National Standards through NABL accredited laboratory

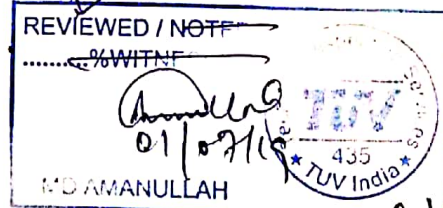
Customer's Specification : Not provided by the Customer.
 Identification Number of Instrument : ARC-06
 Environmental conditions of measurement : Temperature: 20±2°C
 Humidity: 50±10 % RH
 Uncertainty of measurement at 95% confidence level (k=1.96) : ± 120 µm

CALIBRATION RESULTS

Sl. No.	DUC* in Ø mm	Corresponding Periphery in mm	Results Observed in mm (Avg.)	Corresponding value in Ø mm	Error in Ø mm
1	20.00	62.86	62.19	19.79	0.212
2	200.00	628.57	628.66	200.03	-0.028
3	300.00	942.86	943.08	300.07	-0.071

Remarks: 1.The Instrument is visually checked & found OK,*DUC: Device Under Calibration.
 2).This calibration Certificate refers to the Value observed at the time of and under the stated condition measured.
 3).This Certificate should not be produced other than a full with written approval from the head of the Calibration Laboratory.

Calibrated By
Subir Kr. Manna
(Calibration Engineer)



Authorised Signatory
D. K. Sarkar
Quality Cum Technical Manager

Branch Office : Guwahati • Jamshedpur • Coochbehar



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Apartment No.: D 1, 3rd Floor, 36, Kantapukur 3rd Bye Lane, Howrah - 711 101
Ph.: 033 26670835, 9674756762, website: www.technomeasurenabl.com
E-mail: technomeasure@gmail.com



CERTIFICATE NO.
CC-2628

Calibration Certificate

Issued to,
M/s. ARC Insulation & Insulator Pvt. Ltd.
Vill- Ramdevpur, P.O.- Bawali, Bisnupur-743384

Certificate No.: 1808124/A392/03-kd
Date: 05.08.2018

Date of Calibration	Recommended Due Date (as agreed with customer)	Page No. :
01.08.2018	01.08.2019	1 of 1

Location of Calibration : At lab
 Date of Receipt : 30.07.2018
 Description of instrument : Shore D Hardness Tester
 Range: 0 to 100 Shore D Least Count: 1 Shore D
 : Make: Vertex Model: VBZH
 Method of Calibration : As per Work Instruction (WI- 01), Sec No: QWI-19
 Based on in-line with ISO 18898-2016 .

Details of Major Equipment used for Calibration

Description	Traceability Certificate No. & Date	Valid upto	Calibration Agency
Rubber Hardness Tester Calibrator	SCL/17-18/09/001-001 Date: 22.09.2017	21.09.2018	SCL

Traceability: Standards used for calibration are traceable to National Standards through NABL accredited laboratory

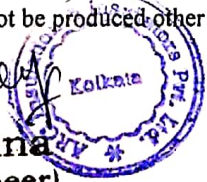
Customer's Specification : Not provided by the Customer.
 Identification Number of Instrument : Model No.: VBZH
 Environmental conditions of measurement : Temperature: 20±2°C
 Humidity: 50±10% RH

Calibration Data

Sl..No.	Indicated Shore D Hardness on Std	Observed Shore D (Set 1, Set 5) On DUC					Average value on DUC in shore D	Error in Shore D	Expanded Uncertainty in % at 95% confidence level (K=1.96)
		S1	S2	S3	S4	S5			
1	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
2	10	10.0	10.0	10.0	10.0	10.2	10.0	0.0	
3	20	20.2	20.0	20.2	20.2	20.0	20.1	0.1	
4	30	30.2	30.0	30.2	30.2	30.2	30.2	0.2	
5	40	40.4	40.2	40.4	40.2	40.4	40.3	0.3	
6	50	50.4	50.2	50.4	50.4	50.2	50.3	0.3	
7	60	60.2	60.4	60.4	60.4	60.2	60.3	0.3	
8	70	70.6	70.4	70.4	70.6	70.4	70.5	0.5	
9	80	80.8	81.0	80.8	81.0	80.6	80.8	0.8	
10	90	91.0	91.2	91.6	91.0	91.4	91.2	1.2	
11	100	101.8	102.4	101.8	102.0	102.2	102.0	2.0	

Note ; The Instrument is visually checked & found ok , DUC: device Under Calibration. Std.=Standard
 1.This calibration Certificate refers to the Value observed at the time of and under the stated condition measured.
 2.This Certificate should not be produced other than a full with written approval from the head of the Calibration Laboratory.

Calibrated By
Subir Kr. Manna
(Calibration Engineer)



REVIEWED / NOTED
WITNESSED
21/07/18
Authorized Signatory
D. K. Sarkar
Quality Cum Technical Manager
MD AMANULLAH

Branch Office : Guwahati • Jamshedpur • Coochbehar



TESTING MACHINES CORPORATION

CALIBRATION CERTIFICATE

A NABL Accredited Company



CC-2718

Form No. TMC/FM/29 - Rev. No. 02 dt. 23.03.2012

Calibration Certificate of	Universal Testing Machine	Page No.	1 of 2
Certificate No.	TMC/TS/603/19	Date of Calibration	05.03.2019
		Recommended date for the next calibration	05.03.2020

Name & Address of the customer : M/S. ARC Insulation & Insulators Pvt. Ltd.
 Vill. Ramdevpur, Bibirhat
 P.O. Bawali, Maheshtala Road
 Dist. 24 Parganas (South)
 West Bengal

Customer reference details : Telephonic dated 01.03.2019

Location of the Machine : Laboratory

Description and Identification of the Machine : Electronic Universal Testing Machine
 Model UTK - 60E I. D. No. 2010 /1020
 Capacity 600.kN Make Krystal
 Least Count 0.03 kN upto 0 - 120 kN
 and Least count 0.15 kN above 120 kN

Calibration method : IS : 1828 (Part 1) 2015 in compression.

Environmental condition : Temperature (26 ± 1) deg.C

Reference Standard used : Force Proving Instrument
 Capacity - 200 kN SI. No.200 kN 95339
 Capacity - 1000 kN SI. No. CSS.100 Tonnes.CMTC.708.87.88

Traceability of reference Standard : Traceable to National Standard vide FRI Certificate No.
 FRI/03/18/10332 dated 16.03.2018 valid upto 16.05.2020
 FRI/12/18/11149 dated 10.12.2018 valid upto 10.02.2021

Calibrated by
A. Dey



Calibration Division
by
Executive

Regd. Office
126 B Lenin Sarani,
Kolkata- 700 013.

Tel : +91 33 22657230 / 22657322
 Fax : +91 33 22657322
 E-mail : testingmachines.co@gmail.com



ESSJAY TECHNOMEASURE PVT. LTD.

DOC No. : TM/CAL/04

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Ph.: 033 26670835, 9674756762, website : www.technomeasurenabl.com
E-mail : technomeasure@gmail.com



CERTIFICATE NO.
CC-2628

Calibration Certificate

Issued To,
M/s. ARC Insulation & Insulator Pvt. Ltd.
Vill- Ramdevpur, P.O.- Bawali, Bisnupur-743384

Certificate No. : 1808124/A392/01-kd
Date : 05.08.2018

Date of Calibration	Recommended Due On (as agreed with customer)	Page No.
01.08.2018	01.08.2019	1 of 1

Location of Calibration : At Lab
 Date of Receipt : 30.07.2018
 Description of instrument : Steel Scale
 Make : Omega Range : 0 to 1000 mm
 L/C : 0.5 mm upto 100mm & 1 mm above 100 mm
 Identification Number of Instrument : ARC-12
 Method of Calibration : As per Work Instruction (WI- 01, Sec No: QWI - 29)
 Based on IS 1481-1970(Reaffirmed: 2008)

Details of Major Equipment used for Calibration :

Description	Traceability Certificate No. & Issue Date	Valid upto	Calibration Agency
Tape and Scale Measuring Machine	CGIL/2017/10027A-001 Calibration Date: 02.10.2017	01.10.2018	CGIL

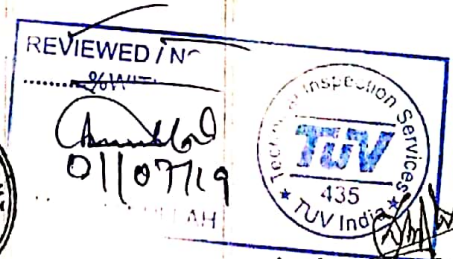
Traceability: Standards used for calibration are traceable to National Standards through NABL accredited laboratory

Customer's Specification : Not provided by the Customer.
 Environmental conditions : Temperature: 20±2°C
 Humidity : 50±10% RH
 Uncertainty of measurement-at.95% C.L.(k=1.96) : ±58.4 µm

Calibration Results			
Sl. No.	Size of DUC* (in mm)	Mean of Observed Values on Reference Std. (in mm)	Error (in mm)
1	100.0	100.01	-0.01
2	200	200.04	-0.04
3	400	400.02	-0.02
4	800	800.03	-0.03
5	1000	1000.03	-0.03

- Remarks: 1.The Instrument is visually checked & found OK, DUC*=Device Under Calibration.
 2.This calibration certificate refers to the value observed at the time of and under the stated conditions measured.
 3.This certificate should not be produced other than a full with written approval from the head of the calibration Laboratory.

Calibrated By
Subir Kr. Manna
 (Calibration Engineer)



Authorised Signatory
D. K. Sarkar
 Quality Cum Technical Manager

Branch Office : Guwahati • Jamshedpur • Coochbehar



ESSJAY TECHNOMEASURE PVT. LTD.

(A House of Calibration Engineering & Allied Services)
 AN NABL ACCREDITED, ISO 9001 & OHSAS 18001 CERTIFIED ORGANISATION
 Apartment No. : D 1, 3rd Floor, 36, Kantapur 3rd Bye Lane, Howrah - 711 101
 Ph.: 033 26670835, 9674756762, website : www.technomeasurenabl.com
 E-mail : technomeasure@gmail.com

DOC No. : TM/CALI/04



CERTIFICATE NO.
CC-2628

Calibration Certificate

Issued To,

M/s. ARC Insulation & Insulator Pvt. Ltd.
 Vill- Ramdevpur, P.O.- Bawali, Bisnupur-743384

Certificate No. : 1808124/A392/02-kd
 Date : 05.08.2018

Date of Calibration	Recommended Due On (As agreed with Customer)	Page No.
01.08.2018	01.08.2019	1 of 1

Location of Calibration : At Lab
 Date of Receipt : 30.07.2018
 Description of instrument : Steel Tape
 Make : GJ FML Range : 0-15000 mm L/C : 1 mm
 Identification Number of Instrument : ARC-16
 Method of Calibration : As per Work Instruction (WI- 01, Sec No: QWI - 30)
 Based on IS 1269: Part 2, 1997(Reaffirmed: 2007)

Details of Major Equipment used for Calibration :

Description	Traceability Certificate No. & Issue Date	Valid upto	Calibration Agency
Tape and Scale Measuring Machine	CGIL/2017/1002/A-001 Calibration Date: 02.10.2017	01-10.2018	CGIL

Traceability: Standards used for calibration are traceable to National Standards through NABL accredited laboratory

Customer's Specification : Not provided by the Customer.
 Environmental conditions : Temperature: 20±2°C
 Humidity : 50±10 %RH
 Uncertainty of measurement at 95% C.L. (k=1.96) : ± 120 µm/M

Sl. No.	Marked on DUC* (in mm)	Calibration Results	
		Cumulative length (in mm)	Cumulative error (in mm)
1	0	0.000	0.000
2	1000	1000.260	-0.260
3	2000	2000.330	-0.330
4	3000	3000.420	-0.420
5	4000	4000.510	-0.510
6	5000	5000.750	-0.750
7	6000	6000.850	-0.850
8	7000	7001.580	-1.580
9	8000	8002.250	-2.250
10	9000	9002.340	-2.340
11	10000	10002.410	-2.410
12	11000	11002.450	-2.450
13	13000	13002.620	-2.620
14	14000	14003.430	-3.430
15	15000	15003.540	-3.540

Remarks : 1. The Instrument is visually checked & found ok, DUC*=Device Under Calibration,
 2. This calibration certificate refers to the value observed at the time of and under the stated conditions measured
 3. This certificate should not be produced other than a full with written approval from the head of the calibration Laboratory.

Calibrated By
Subir Kr. Manna
 (Calibration Engineer)



WITNESSED
 MANULLAH



Authorized Signatory
D. K. Sarkar
 Quality Cum Technical Manager

Branch Office : Guwahati • Jamshedpur • Coochbehar



ESSJAY TECHNOMEASURE PVT. LTD.

(A House of Calibration Engineering & Allied Services)
 AN NABL ACCREDITED, ISO 9001 & OHSAS 18001 CERTIFIED ORGANISATION
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 Ph.: 033 26670835, 9674756762, website : www.technomeasurenabl.com
 E-mail : technomeasure@gmail.com

DOC No. : TM/CAL/1/04



Calibration Certificate

Issued To,
 M/s. ARC Insulation & Insulator Pvt Ltd
 Vill-Ramdevpur, P.O.-Bawali,
 Bishnupur-743384

Certificate No.: 1808302/A.392/07-np
 Date : 03.08.2018

Date of Calibration	Recommended Due On (as agreed with customer)	Page No.
01.08.2018	01.08.2019	1 of 1

Location of Calibration : At Lab
 Date of Receipt : 31.07.2018
 Description of instrument : Pressure Gauge
 Make : Guru Range : 0 to 40 kg/cm² L/C : 1 kg/cm²
 Identification Number of Instrument : ARC-03/PG-01
 Method of Calibration : As per Work Instruction (WI- 01), Sec No: QWI -14
 Rev No. 02 Rev Date: 22.12.2015 based on IS 3624-1987
 (Reaffirmed 2004) DKD R6-1 Edition 01/2003

Details of Major Equipment used for Calibration :

Description	Traceability Certificate No. & Issue Date	Valid upto	Calibration Agency
Pressure Calibrator	2017-18/CFC/2968/2 Calibration Dated: 28.03.2018	27.03.2019	Nagman

Traceability: Standards used for calibration are traceable to National Standards through NABL accredited laboratory

Customer's Specification : Not provided by the Customer.
 Environmental conditions : Temperature: 23±2°C
 Humidity: 45% to 75% RH
 Uncertainty of measurement at 95% CL : ± 0.59 bar
 C.L.(k=1.96)

Calibration Results							
Obs. No.	Ascending			Obs. No.	Descending		
	DUC in kg/cm ²	Std. Observed value (Average) Converted in kg/cm ²	Error in % of Reading		DUC in kg/cm ²	Std. Observed value (Average) Converted in kg/cm ²	Error in % of Reading
1	5	5.080	-1.600	1	40	40.220	-0.550
2	10	10.100	-1.000	2	30	30.130	-0.400
3	20	20.130	-0.650	3	20	20.110	-0.550
4	30	30.150	-0.500	4	10	10.090	-0.900
5	40	40.220	-0.550	5	5	5.070	-1.400

Remarks : The instrument is visually checked and found ok, DUC = Device Under Calibration, Std. = Standard
 1. This calibration Certificate refers to the Value observed at the time of and under the stated condition measured.
 2. This Certificate should not be produced other than a full with written approval from the head of the Calibration Laboratory

This Instrument is used only for scientific and industrial purposes.

40 kg/cm² = 39.227 Bar

REVIEWED / NOTED
 % WITNESSED
 Calibrated By
Subir Kr. Manma
 (Calibration Engineer)
 MANULLAH
 01/08/18
 TECHNOMEASURE PVT. LTD.
 Howrah
 Authorised Signatory
D. K. Sarkar
 Quality Cum Technical Manager

Branch Office : Guwahati • Jorhat