Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

IS : 2720 (Part -5)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : UDS

Location : BH-1(Tangri River-Saharanpur)

Depth : 17.0m

Date Of Testing : 13.09.12

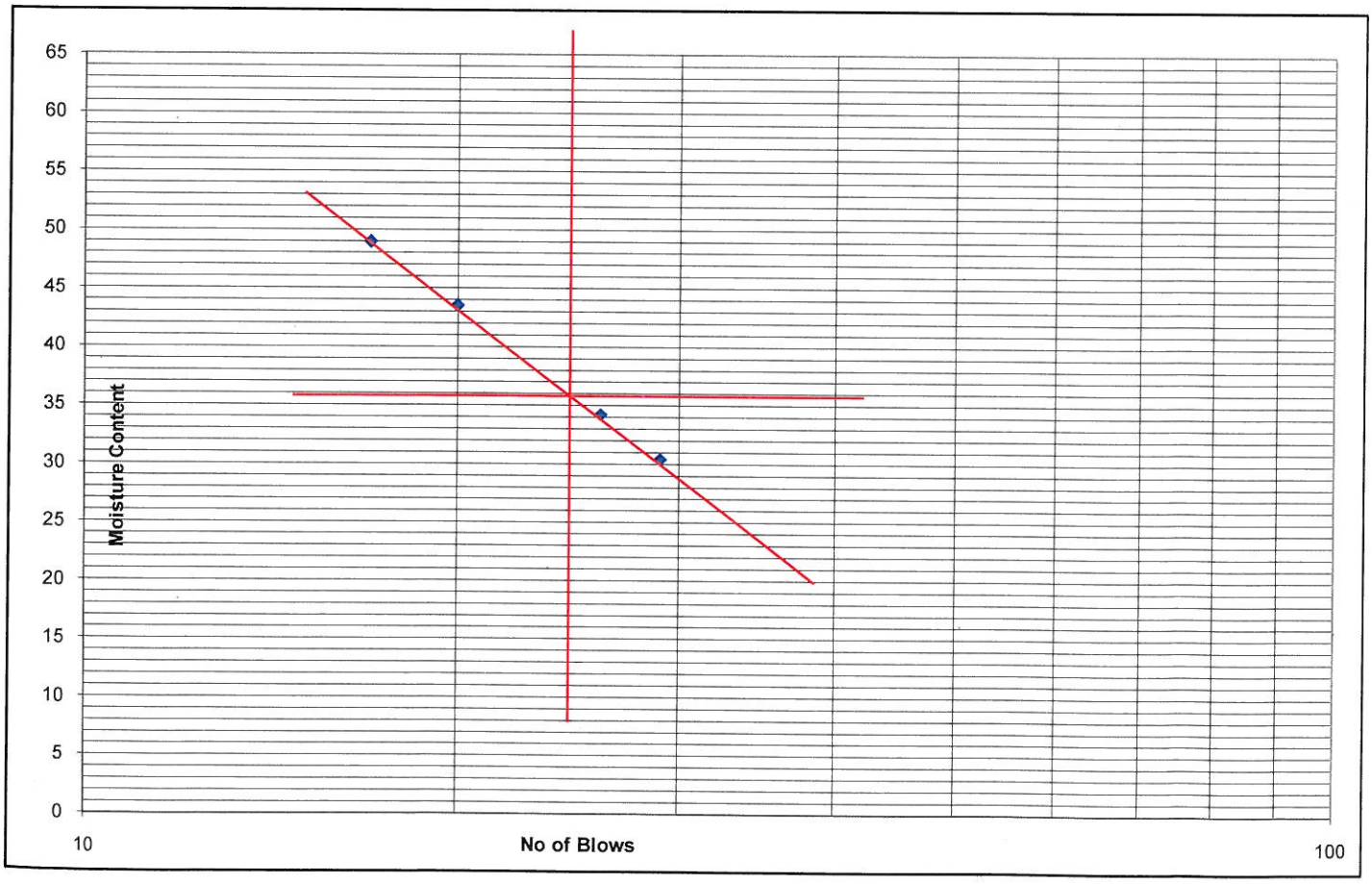
Sampled by : T. K. Das

Tested by : K.C.Sahoo

Number of Blows	29	26	20	17	Plastic Limit	
Container No.	C21	C22	C23	C24	C25	C26
Container Weight (gm) (W1)	37.88	34.61	35.8	32.51	35.83	33.36
Container + Wt. of wet soil (gm) (W2)	90.90	106.24	107.38	113.74	90.07	89.42
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	12.37	18.26	21.69	26.69	8.44	8.74
Wt. of oven dry soil (gm) (W3-W1)	40.65	53.37	49.89	54.54	45.80	47.31
Moisture Content (%)= (W2-W1)-(W3-W1)]/(W3-W1) X 100	**30.42**	**34.21**	**43.48**	**48.94**	**18.43**	**18.48**

Result Summary

Liquid Limit (WL)	36	%
Plastic Limit (Wp)	18	%
Plasticity Index (Ip)	18	%



4297

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

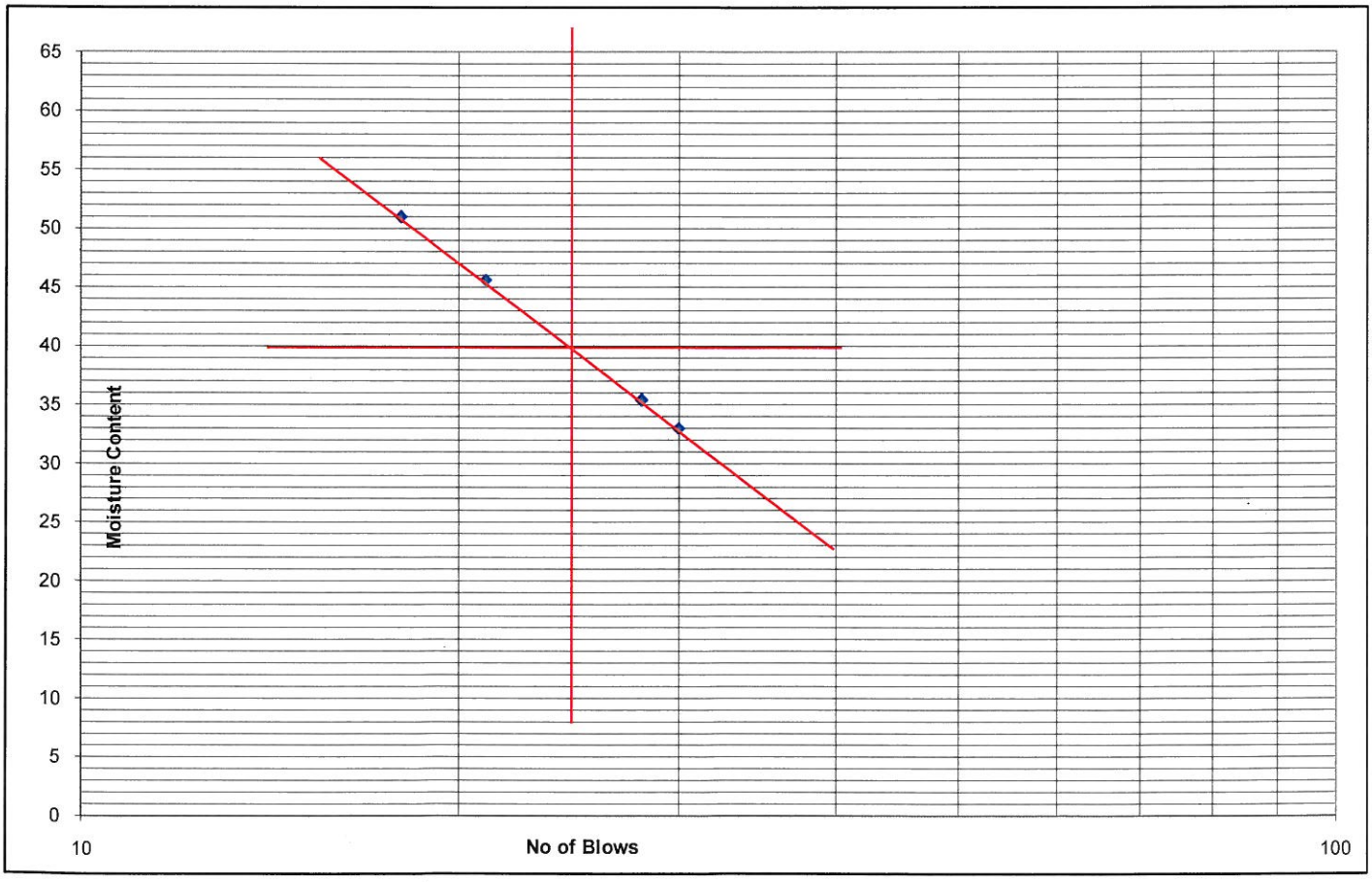
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	13.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	20.0m	Tested by	:	K.C.Sahoo

Number of Blows	30	28	21	18	Plastic Limit	
Container No.	C27	C28	C29	C30	C31	C32
Container Weight (gm) (W1)	31.2	39.42	34.86	30.76	30.8	38.08
Container + Wt. of wet soil (gm) (W2)	94.15	105.18	108.88	115.74	91.60	88.87
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	15.62	17.20	23.19	28.69	9.97	8.19
Wt. of oven dry soil (gm) (W3-W1)	47.33	48.56	50.83	56.29	50.83	42.59
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**33.00**	**35.42**	**45.63**	**50.96**	**19.62**	**19.24**

Result Summary

Liquid Limit (WL)	40	%
Plastic Limit (Wp)	19	%
Plasticity Index (Ip)	21	%



4298

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

IS : 2720 (Part -5)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : SPT

Location : BH-1(Tangri River-Saharanpur)

Depth : 24.0m

Date Of Testing : 14.09.12

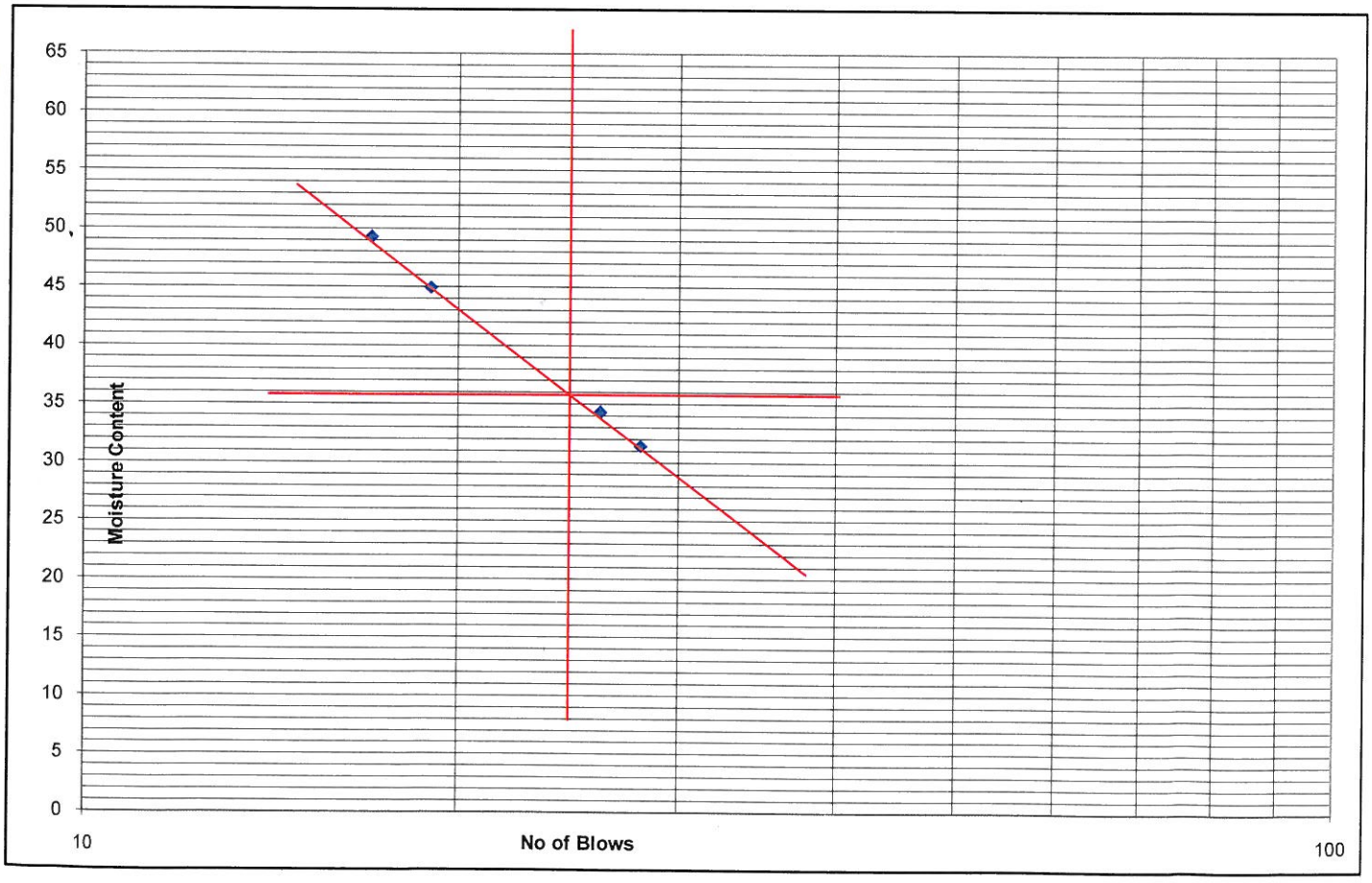
Sampled by : T. K. Das

Tested by : K.C.Sahoo

Number of Blows	28	26	19	17	Plastic Limit	
Container No.	C33	C34	C35	C36	C37	C38
Container Weight (gm) (W1)	32.47	31.56	37.73	30.99	38.52	37.22
Container + Wt. of wet soil (gm) (W2)	93.00	107.33	107.25	114.67	89.15	88.21
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	14.47	19.36	21.56	27.62	7.51	7.53
Wt. of oven dry soil (gm) (W3-W1)	46.06	56.42	47.96	56.06	43.11	43.45
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**31.41**	**34.31**	**44.95**	**49.27**	**17.43**	**17.34**

Result Summary

Liquid Limit (WL)	36	%
Plastic Limit (Wp)	17	%
Plasticity Index (Ip)	19	%



4299

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

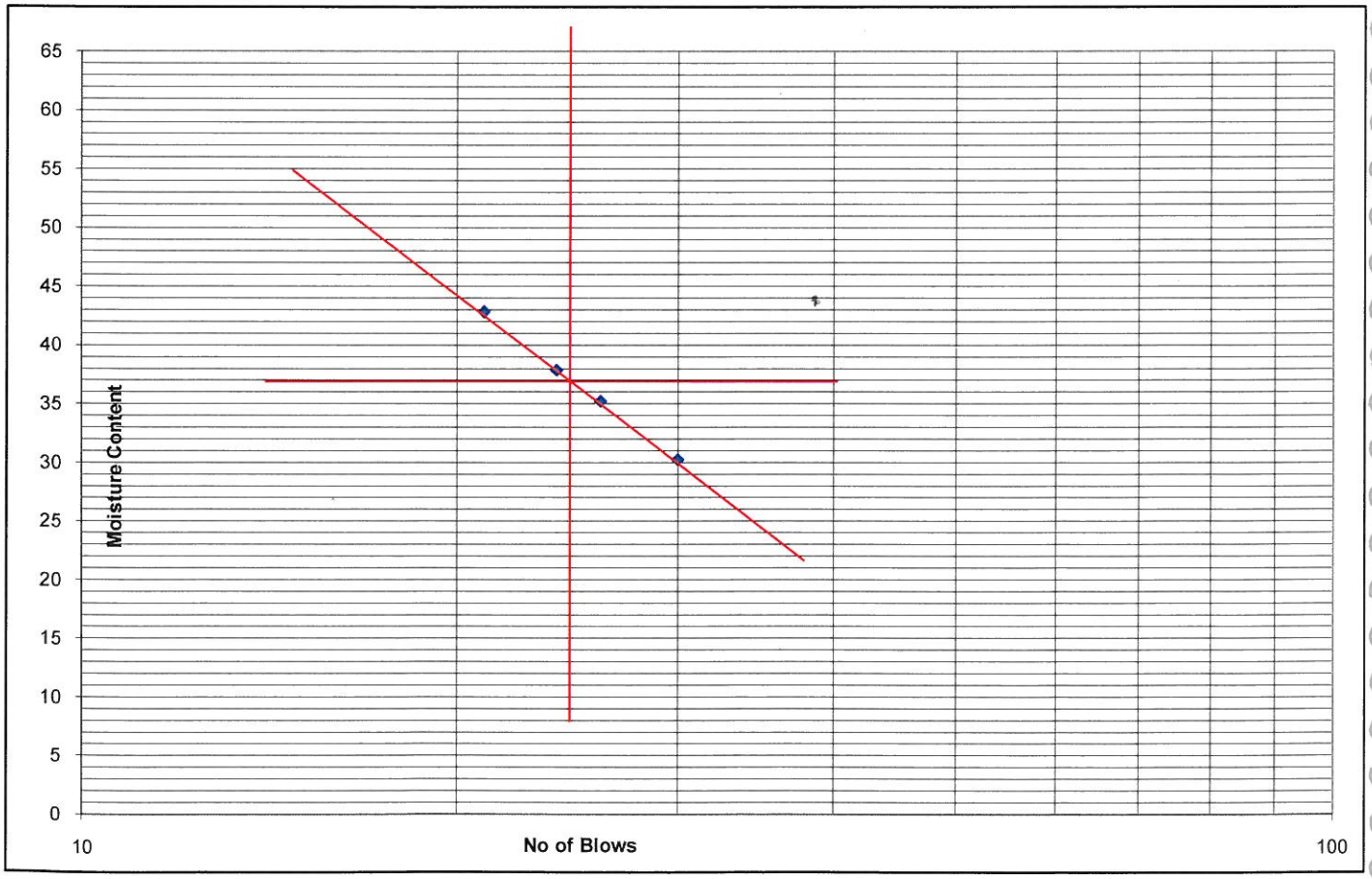
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	14.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	26.0m	Tested by	:	K.C.Sahoo

Number of Blows	30	26	24	21	Plastic Limit	
Container No.	C39	C40	C41	C42	C1	C2
Container Weight (gm) (W1)	39.43	30.5	37.6	35.55	33.6	34.2
Container + Wt. of wet soil (gm) (W2)	90.36	108.22	103.90	109.10	90.44	89.27
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	11.83	20.24	18.21	22.05	8.80	8.60
Wt. of oven dry soil (gm) (W3-W1)	39.10	57.48	48.09	51.50	48.03	46.47
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**30.25**	**35.22**	**37.86**	**42.82**	**18.33**	**18.51**

Result Summary

Liquid Limit (WL)	37	%
Plastic Limit (Wp)	18	%
Plasticity Index (Ip)	19	%



4390

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

IS : 2720 (Part -5)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : SPT

Location : BH-1(Tangri River-Saharanpur)

Depth : 27.0m

Date Of Testing : 14.09.12

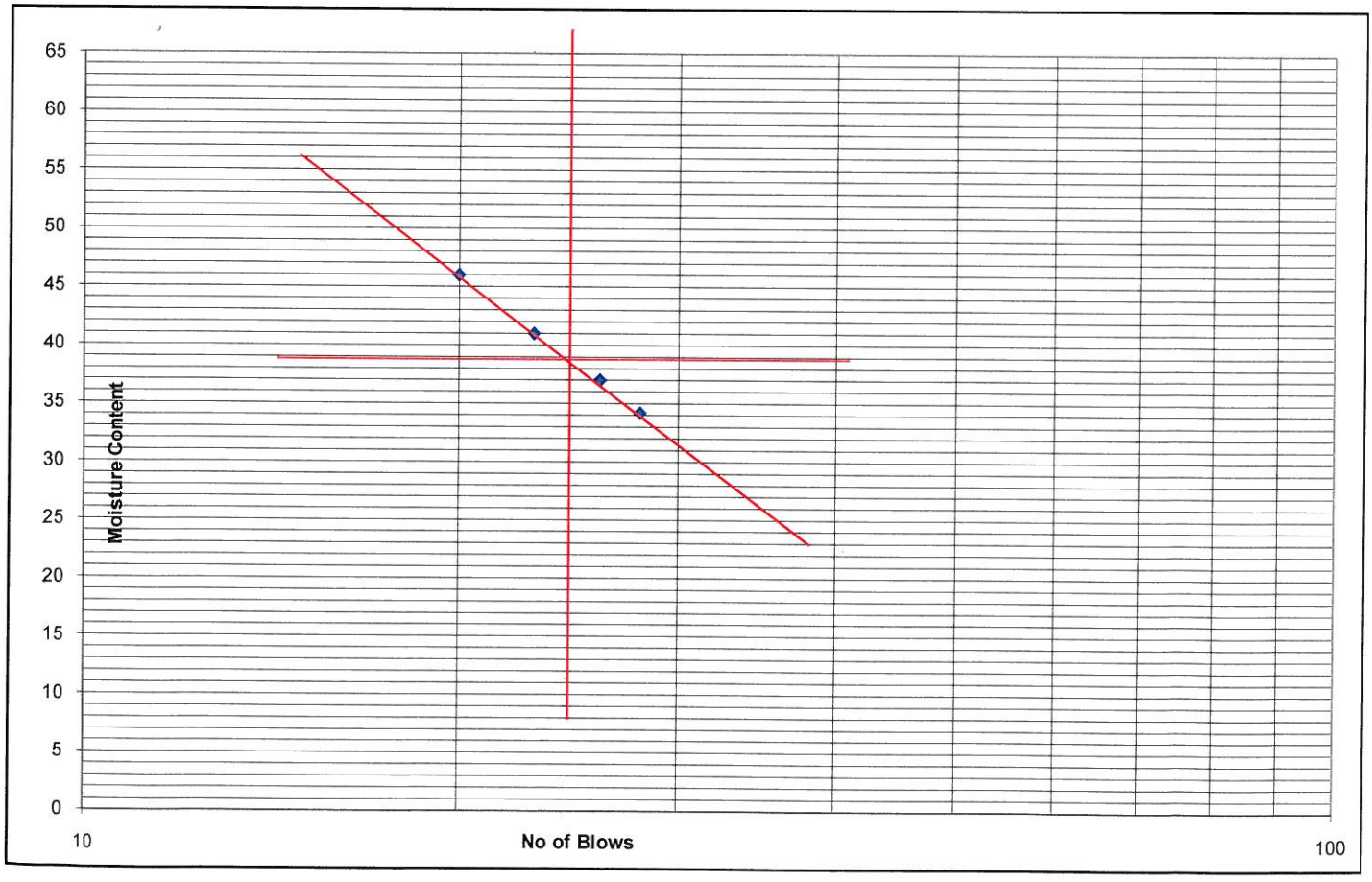
Sampled by : T. K. Das

Tested by : K.C.Sahoo

Number of Blows	28	26	23	20	Plastic Limit	
Container No.	C3	C4	C5	C6	C7	C8
Container Weight (gm) (W1)	36.7	32.65	31.26	30.12	32.58	37.21
Container + Wt. of wet soil (gm) (W2)	92.83	108.45	107.99	113.23	91.61	89.59
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	14.30	20.47	22.29	26.18	9.98	8.91
Wt. of oven dry soil (gm) (W3-W1)	41.83	55.33	54.43	56.93	49.05	43.46
Moisture Content (%)= (W2-W1)-(W3-W1)]/(W3-W1) X 100	**34.18**	**37.00**	**40.96**	**45.99**	**20.34**	**20.51**

Result Summary

Liquid Limit (WL)	39	%
Plastic Limit (Wp)	20	%
Plasticity Index (Ip)	19	%



4301

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

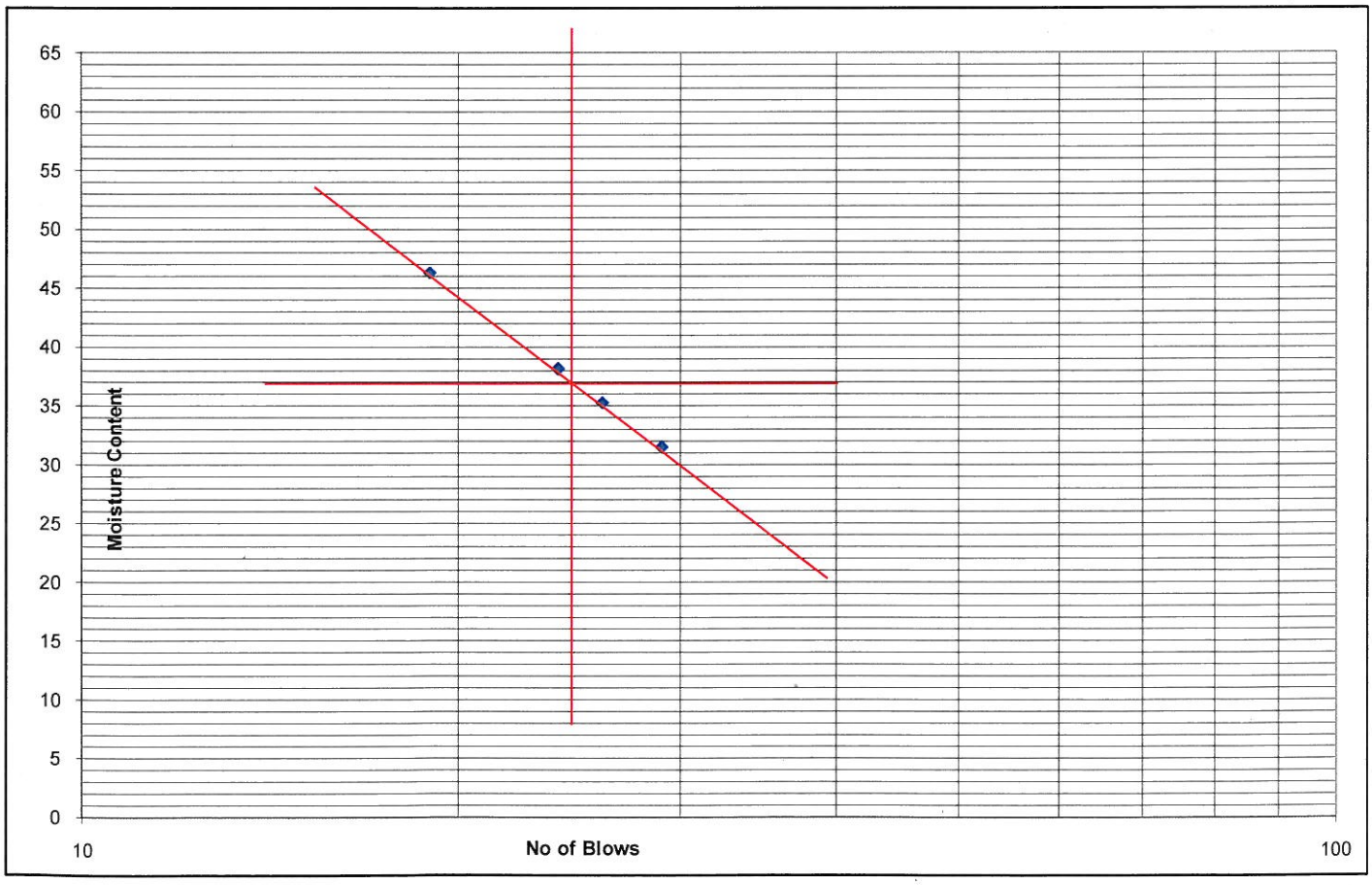
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	14.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	32.0m	Tested by	:	K.C.Sahoo

Number of Blows	29	26	24	19	Plastic Limit	
Container No.	C9	C10	C11	C12	C13	C14
Container Weight (gm) (W1)	33.14	35.42	31.85	36.97	30.44	36.34
Container + Wt. of wet soil (gm) (W2)	92.83	106.52	106.24	110.25	90.50	88.42
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	14.30	18.54	20.55	23.20	8.87	7.75
Wt. of oven dry soil (gm) (W3-W1)	45.39	52.56	53.84	50.08	51.19	44.33
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**31.50**	**35.28**	**38.16**	**46.32**	**17.33**	**17.48**

Result Summary

Liquid Limit (WL)	37	%
Plastic Limit (Wp)	17	%
Plasticity Index (Ip)	20	%



4302

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

IS : 2720 (Part -5)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : SPT

Location : BH-1(Tangri River-Saharanpur)

Depth : 33.0m

Date Of Testing : 14.09.12

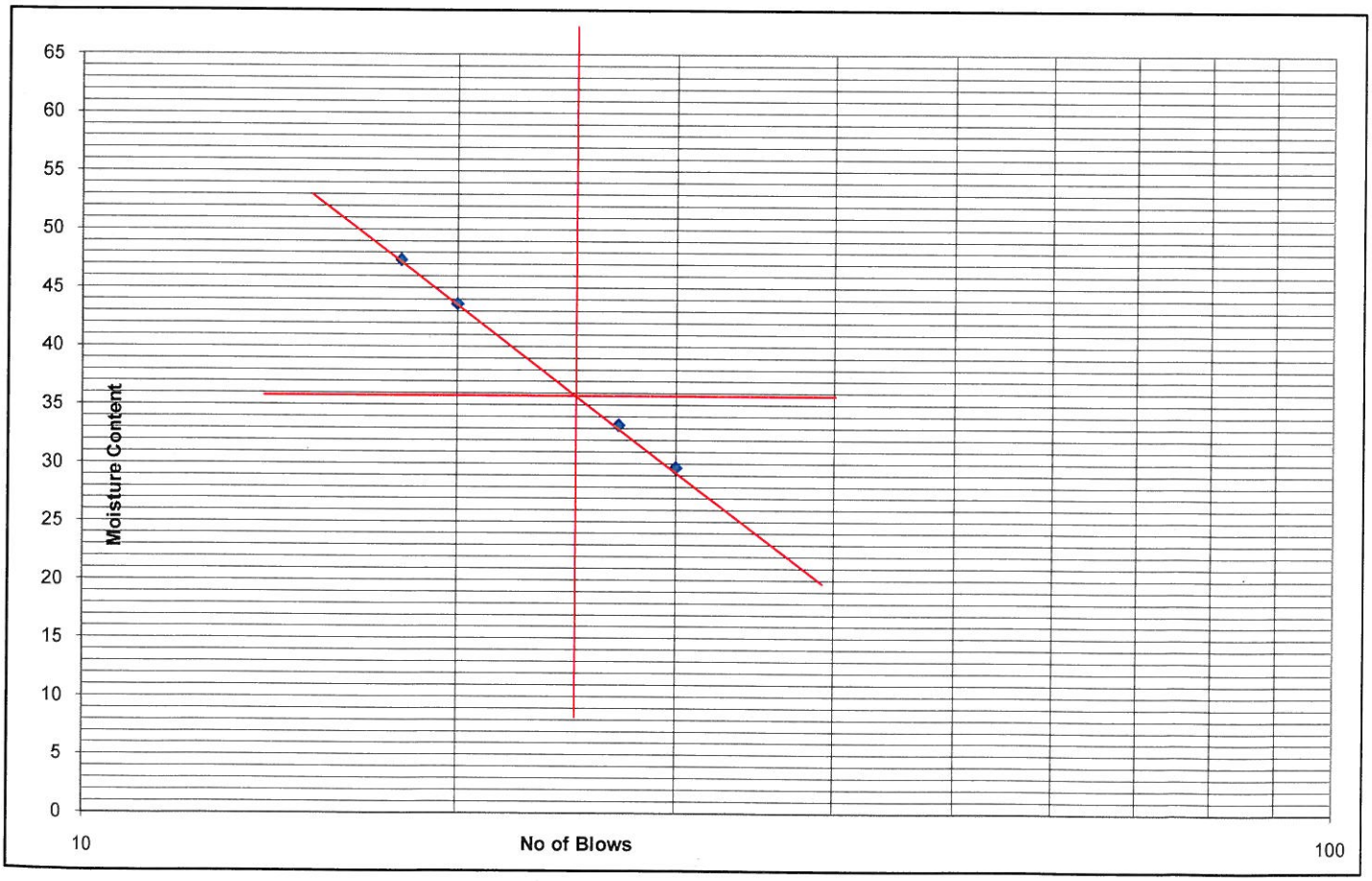
Sampled by : T. K. Das

Tested by : K.C.Sahoo

Number of Blows	30	27	20	18	Plastic Limit	
Container No.	C15	C16	C17	C18	C19	C20
Container Weight (gm) (W1)	37.83	32.28	30.76	32.24	30.48	35.24
Container + Wt. of wet soil (gm) (W2)	90.60	106.52	109.66	113.00	90.59	88.53
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	12.06	18.54	23.97	25.95	8.96	7.86
Wt. of oven dry soil (gm) (W3-W1)	40.70	55.70	54.93	54.81	51.15	45.43
Moisture Content (%)= (W2-W1)-(W3-W1)]/(W3-W1) X 100	**29.64**	**33.29**	**43.63**	**47.34**	**17.52**	**17.29**

Result Summary

Liquid Limit (WL)	36	%
Plastic Limit (Wp)	17	%
Plasticity Index (Ip)	19	%



4303

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

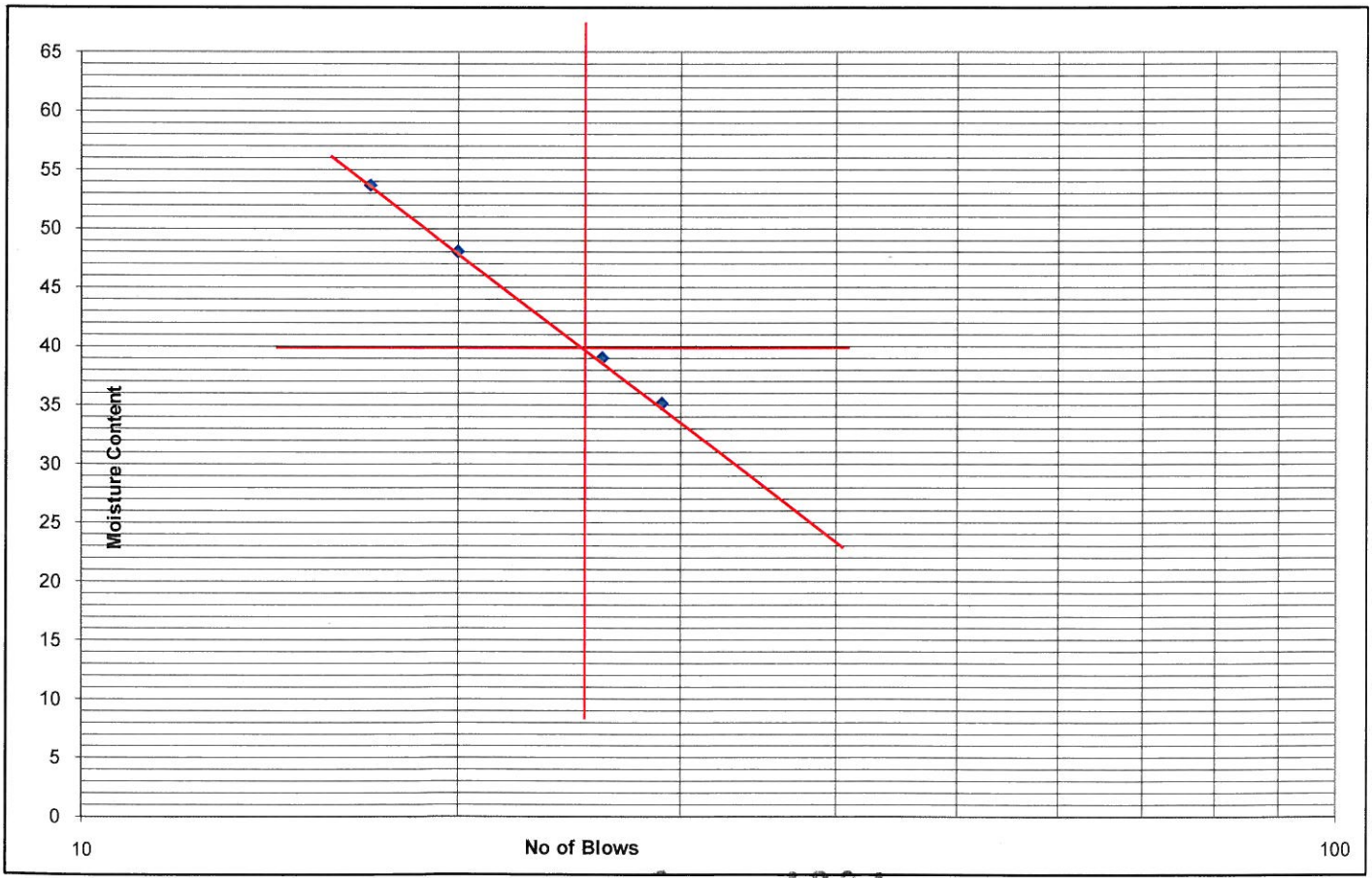
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	14.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	39.0m	Tested by	:	K.C.Sahoo

Number of Blows	29	26	20	17	Plastic Limit	
Container No.	C21	C22	C23	C24	C25	C26
Container Weight (gm) (W1)	37.88	34.61	35.8	32.51	35.83	33.36
Container + Wt. of wet soil (gm) (W2)	92.81	108.79	109.66	116.33	90.91	90.22
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	14.28	20.81	23.97	29.28	9.28	9.55
Wt. of oven dry soil (gm) (W3-W1)	40.65	53.37	49.89	54.54	45.80	47.31
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**35.13**	**39.00**	**48.04**	**53.68**	**20.26**	**20.19**

Result Summary

Liquid Limit (WL)	40	%
Plastic Limit (Wp)	20	%
Plasticity Index (Ip)	20	%



4304

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

IS : 2720 (Part -5)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : SPT

Location : BH-1(Tangri River-Saharanpur)

Depth : 45.0m

Date Of Testing : 14.09.12

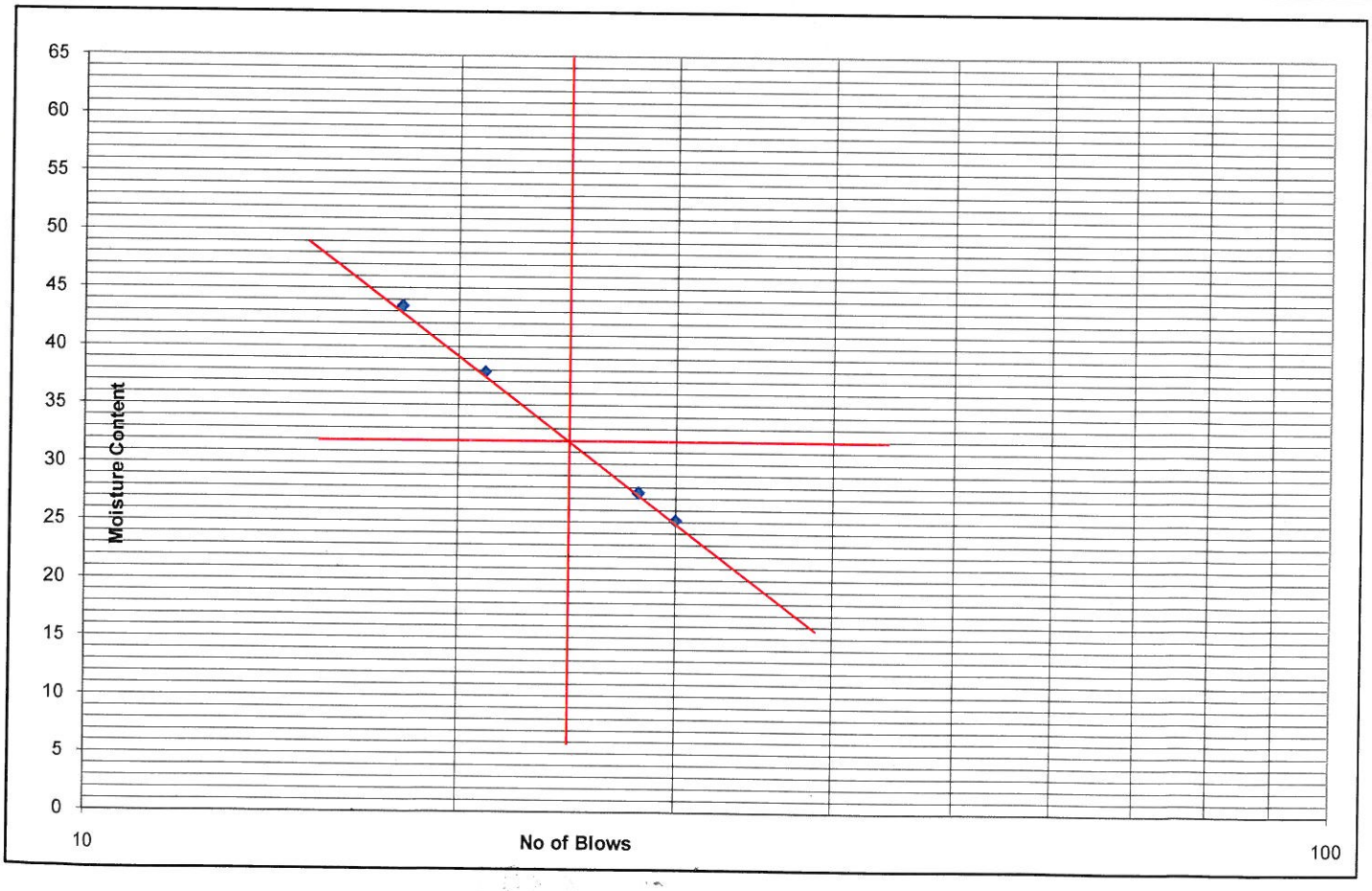
Sampled by : T. K. Das

Tested by : K.C.Sahoo

Number of Blows	30	28	21	18	Plastic Limit	
Container No.	C27	C28	C29	C30	C31	C32
Container Weight (gm) (W1)	31.2	39.42	34.86	30.76	30.8	38.08
Container + Wt. of wet soil (gm) (W2)	92.81	101.34	107.63	111.73	90.98	88.54
Wt of Container + Wt. of oven dry soil (gm) (W3)	80.42	87.98	87.65	87.21	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	12.39	13.36	19.99	24.52	9.35	7.87
Wt. of oven dry soil (gm) (W3-W1)	49.22	48.56	52.79	56.45	50.83	42.59
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**25.17**	**27.52**	**37.86**	**43.43**	**18.39**	**18.47**

Result Summary

Liquid Limit (WL)	32	%
Plastic Limit (Wp)	18	%
Plasticity Index (Ip)	14	%



4305

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

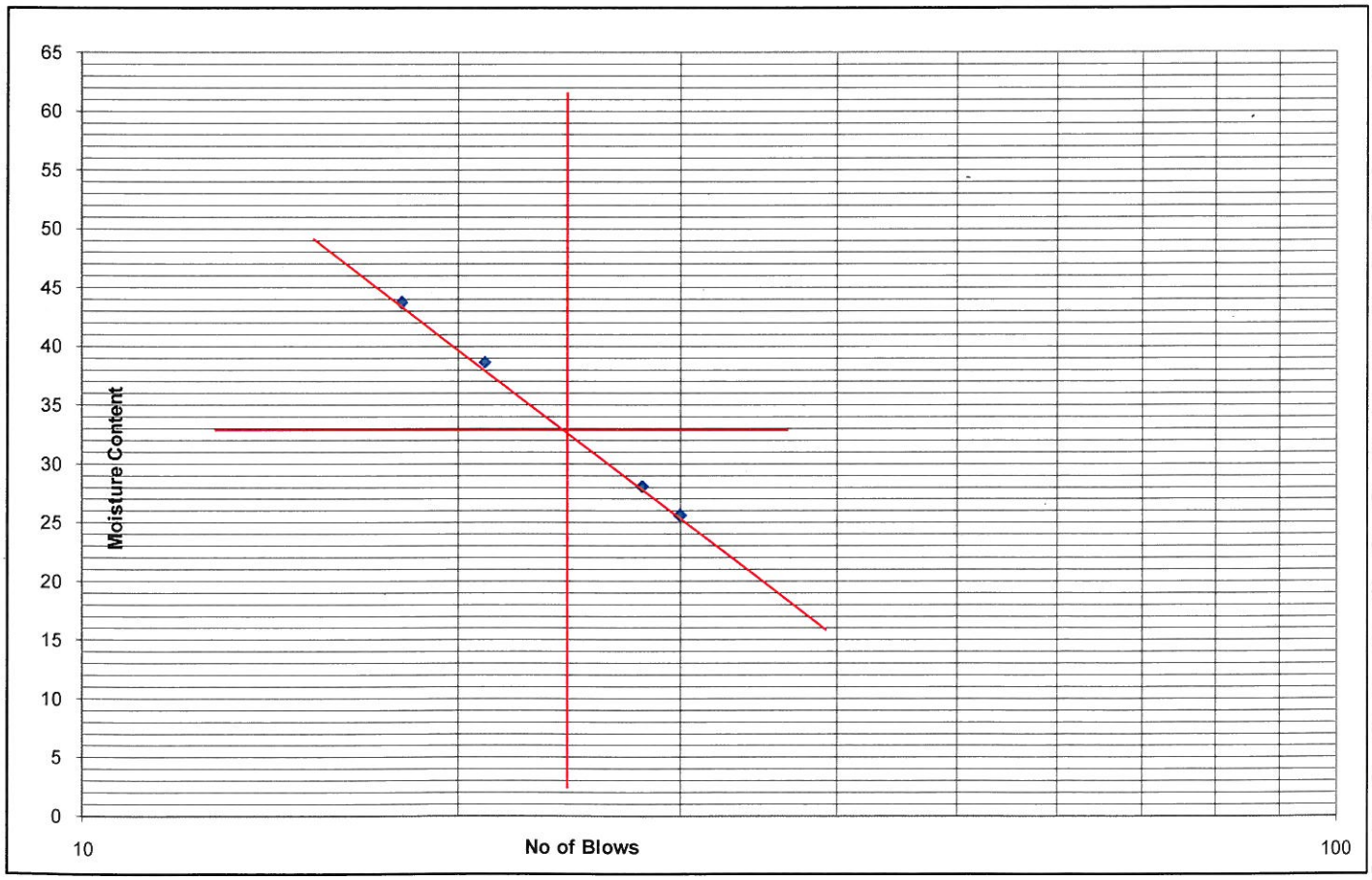
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	14.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	48.0m	Tested by	:	K.C.Sahoo

Number of Blows	30	28	21	18	Plastic Limit	
Container No.	C33	C34	C35	C36	C37	C38
Container Weight (gm) (W1)	32.47	31.56	37.73	30.99	38.52	37.22
Container + Wt. of wet soil (gm) (W2)	90.34	103.82	104.23	111.56	89.05	88.21
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	87.98	85.69	87.05	81.63	80.67
Wt. Of water (gm) (W2-W1)-(W3-W1)	11.81	15.84	18.54	24.51	7.42	7.53
Wt. of oven dry soil (gm) (W3-W1)	46.06	56.42	47.96	56.06	43.11	43.45
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**25.63**	**28.08**	**38.65**	**43.72**	**17.22**	**17.34**

Result Summary

Liquid Limit (WL)	33	%
Plastic Limit (Wp)	17	%
Plasticity Index (Ip)	16	%



4306

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : UDS

Location : BH-1(Tangri River-Saharanpur)

Depth : 0.5m

Date Of Testing : 12.09.12

Tested by : K.C Sahoo

Sampled by : T. K. Das

Weight of Sample : 10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	10.5	0.50	5	12	50%
2	10	11.5	1.50	15		
3	10	11.5	1.50	15		

Remarks:

Lab Manager

Checked By:

4307

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges	Date Of Testing	:	12.09.12
Type of Sample	:	UDS	Tested by	:	K.C Sahoo
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	6.5m	Weight of Sample	:	10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.0	1.00	10	8	50%
2	10	11.0	1.00	10		
3	10	10.5	0.50	5		

Remarks:

Lab Manager

Checked By:

4308

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges	Date Of Testing	:	12.09.12
Type of Sample	:	UDS	Tested by	:	K.C Sahoo
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	14.0m	Weight of Sample	:	10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.5	1.50	15	15	50%
2	10	12.0	2.00	20		
3	10	11.0	1.00	10		

Remarks:

Lab Manager

Checked By:

4309

Arki Techno Consultants (India) Pvt.Ltd

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges	Date Of Testing	:	12.09.12
Type of Sample	:	UDS	Tested by	:	K.C Sahoo
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	17.0m	Weight of Sample	:	10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	12.0	2.00	20	17	50%
2	10	11.5	1.50	15		
3	10	11.5	1.50	15		

Remarks:

Lab Manager

Checked By:

4310

Arki Techno Consultants (India) Pvt.Ltd

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : UDS

Location : BH-1(Tangri River-Saharanpur)

Depth : 20.0m

Date Of Testing : 12.09.12

Tested by : K.C Sahoo

Sampled by : T. K. Das

Weight of Sample : 10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.5	1.50	15	18	50%
2	10	12.0	2.00	20		
3	10	11.9	1.90	19		

Remarks:

Lab Manager

Checked By:

4311

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client	: DFCC				
Project Name	: G.I For 3 Nos. Important Bridges	Date Of Testing	:	12.09.12
Type of Sample	: UDS	Tested by	:	K.C Sahoo
Location	: BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	: 23.0m	Weight of Sample	:	10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.0	1.00	10	16	50%
2	10	11.5	1.50	15		
3	10	12.3	2.30	23		

Remarks:

Lab Manager

Checked By:

4312

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : UDS

Location : BH-1(Tangri River-Saharanpur)

Depth : 26.0m

Date Of Testing : 12.09.12

Tested by : K.C Sahoo

Sampled by : T. K. Das

Weight of Sample : 10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.5	1.50	15	17	50%
2	10	11.5	1.50	15		
3	10	12.1	2.10	21		

Remarks:

Lab Manager

Checked By:

4313

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : UDS

Location : BH-1(Tangri River-Saharanpur)

Depth : 29.0m

Date Of Testing : 12.09.12

Tested by : K.C Sahoo

Sampled by : T. K. Das

Weight of Sample : 10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.0	1.00	10	15	50%
2	10	12.0	2.00	20		
3	10	11.5	1.50	15		

Remarks:

Lab Manager

Checked By:

4314

Arki Techno Consultants (India) Pvt.Ltd

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Type of Sample : UDS

Location : BH-1(Tangri River-Saharanpur)

Depth : 32.0m

Date Of Testing : 12.09.12

Tested by : K.C Sahoo

Sampled by : T. K. Das

Weight of Sample : 10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.5	1.50	15	17	50%
2	10	11.0	1.00	10		
3	10	12.5	2.50	25		

Remarks:

Lab Manager

Checked By:

4315

Arki Techno Consultants (India) Pvt.Ltd

N 3/91, IRC Village, Bhubaneswar

DIFFERENTIAL FREE SWELL INDEX OF SOIL (D.F.S.)

AS PER IS: 2720 (PART - 40)

Client	: DFCC				
Project Name	: G.I For 3 Nos. Important Bridges	Date Of Testing	:	12.09.12
Type of Sample	: UDS	Tested by	:	K.C Sahoo
Location	: BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	: 35.0m	Weight of Sample	:	10gm

SAMPLE NO.	VOLUME IN KEROSIN OIL Vk	VOLUME IN WATER Vd	SWELL (Vd-Vk)	SWELL INDEX = (Vd-Vk)/ (Vk)*100 (%)	AVERAGE SWELL %	SPECIFIC LIMIT
1	10	11.0	1.00	10	16	50%
2	10	11.5	1.50	15		
3	10	12.3	2.30	23		

Remarks:

Lab Manager

Checked By:

4316

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	0.5m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.26	
3	Weight of bottle with soil and water W3 in gm	137.34	
4	Weight of bottle full of water W4 in gm	133.76	
5	Weight of dry soil (W2-W1)in gm	5.74	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.16	
7	Specific Gravity G = (5) / (6)	2.66	

Lab Manager

Checked By

4317

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	1.5m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.64	
3	Weight of bottle with soil and water W3 in gm	136.76	
4	Weight of bottle full of water W4 in gm	132.32	
5	Weight of dry soil (W2-W1)in gm	7.12	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.68	
7	Specific Gravity G = (5) / (6)	2.66	

Lab Manager

Checked By

4318

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	3.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	39.16	
3	Weight of bottle with soil and water W3 in gm	137.42	
4	Weight of bottle full of water W4 in gm	132.66	
5	Weight of dry soil (W2-W1)in gm	7.64	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.88	
7	Specific Gravity G = (5) / (6)	2.65	

Lab Manager

Checked By

4319

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	4.5m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.39	
3	Weight of bottle with soil and water W3 in gm	137.82	
4	Weight of bottle full of water W4 in gm	133.50	
5	Weight of dry soil (W2-W1)in gm	6.87	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.55	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4320

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	6.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.62	
3	Weight of bottle with soil and water W3 in gm	137.53	
4	Weight of bottle full of water W4 in gm	133.71	
5	Weight of dry soil (W2-W1)in gm	6.10	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.28	
7	Specific Gravity G = (5) / (6)	2.68	

Lab Manager

Checked By

4321

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	6.5m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	36.43	
3	Weight of bottle with soil and water W3 in gm	136.82	
4	Weight of bottle full of water W4 in gm	133.74	
5	Weight of dry soil (W2-W1)in gm	4.91	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.83	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4322

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	7.5m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.64	
3	Weight of bottle with soil and water W3 in gm	136.73	
4	Weight of bottle full of water W4 in gm	132.27	
5	Weight of dry soil (W2-W1)in gm	7.12	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.66	
7	Specific Gravity G = (5) / (6)	2.68	

Lab Manager

Checked By

4323

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	9.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.69	
3	Weight of bottle with soil and water W3 in gm	135.48	
4	Weight of bottle full of water W4 in gm	131.64	
5	Weight of dry soil (W2-W1)in gm	6.17	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.33	
7	Specific Gravity G = (5) / (6)	2.65	

Lab Manager

Checked By

4324

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	12.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.53	
3	Weight of bottle with soil and water W3 in gm	137.94	
4	Weight of bottle full of water W4 in gm	133.57	
5	Weight of dry soil (W2-W1)in gm	7.01	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.64	
7	Specific Gravity G = (5) / (6)	2.65	

Lab Manager

Checked By

4325

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	13.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.95	
3	Weight of bottle with soil and water W3 in gm	136.85	
4	Weight of bottle full of water W4 in gm	132.80	
5	Weight of dry soil (W2-W1)in gm	6.43	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.38	
7	Specific Gravity G = (5) / (6)	2.70	

Lab Manager

Checked By

4326

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	14.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.45	
3	Weight of bottle with soil and water W3 in gm	136.71	
4	Weight of bottle full of water W4 in gm	132.34	
5	Weight of dry soil (W2-W1)in gm	6.93	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.56	
7	Specific Gravity G = (5) / (6)	2.71	

Lab Manager

Checked By

4327

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	17.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.44	
3	Weight of bottle with soil and water W3 in gm	135.83	
4	Weight of bottle full of water W4 in gm	132.11	
5	Weight of dry soil (W2-W1)in gm	5.92	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.20	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4328

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	20.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	36.75	
3	Weight of bottle with soil and water W3 in gm	135.84	
4	Weight of bottle full of water W4 in gm	132.55	
5	Weight of dry soil (W2-W1)in gm	5.23	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.94	
7	Specific Gravity G = (5) / (6)	2.70	

Lab Manager

Checked By

4329

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	23.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.58	
3	Weight of bottle with soil and water W3 in gm	135.88	
4	Weight of bottle full of water W4 in gm	132.07	
5	Weight of dry soil (W2-W1)in gm	6.06	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.25	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4330

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	24.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.46	
3	Weight of bottle with soil and water W3 in gm	135.49	
4	Weight of bottle full of water W4 in gm	131.14	
5	Weight of dry soil (W2-W1)in gm	6.94	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.59	
7	Specific Gravity G = (5) / (6)	2.68	

Lab Manager

Checked By

4331

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	26.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.36	
3	Weight of bottle with soil and water W3 in gm	135.92	
4	Weight of bottle full of water W4 in gm	131.62	
5	Weight of dry soil (W2-W1)in gm	6.84	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.54	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4332

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	27.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.32	
3	Weight of bottle with soil and water W3 in gm	135.64	
4	Weight of bottle full of water W4 in gm	132.00	
5	Weight of dry soil (W2-W1)in gm	5.80	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.16	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4333

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	29.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.66	
3	Weight of bottle with soil and water W3 in gm	135.76	
4	Weight of bottle full of water W4 in gm	131.27	
5	Weight of dry soil (W2-W1)in gm	7.14	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.65	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4334

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	32.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.83	
3	Weight of bottle with soil and water W3 in gm	136.42	
4	Weight of bottle full of water W4 in gm	132.46	
5	Weight of dry soil (W2-W1)in gm	6.31	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.35	
7	Specific Gravity G = (5) / (6)	2.68	

Lab Manager

Checked By

4335

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	33.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.43	
3	Weight of bottle with soil and water W3 in gm	135.72	
4	Weight of bottle full of water W4 in gm	131.38	
5	Weight of dry soil (W2-W1)in gm	6.91	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.57	
7	Specific Gravity G = (5) / (6)	2.69	

Lab Manager

Checked By

4336

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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	35.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	37.39	
3	Weight of bottle with soil and water W3 in gm	135.80	
4	Weight of bottle full of water W4 in gm	132.10	
5	Weight of dry soil (W2-W1)in gm	5.87	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.17	
7	Specific Gravity G = (5) / (6)	2.70	

Lab Manager

Checked By

4337

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	39.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.53	
3	Weight of bottle with soil and water W3 in gm	136.98	
4	Weight of bottle full of water W4 in gm	132.57	
5	Weight of dry soil (W2-W1)in gm	7.01	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.60	
7	Specific Gravity G = (5) / (6)	2.70	

Lab Manager

Checked By

4338

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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	45.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.53	
3	Weight of bottle with soil and water W3 in gm	136.75	
4	Weight of bottle full of water W4 in gm	132.37	
5	Weight of dry soil (W2-W1)in gm	7.01	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.63	
7	Specific Gravity G = (5) / (6)	2.67	

Lab Manager

Checked By

4339

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF SPECIFIC GRAVITY BY DENSITY BOTTLE METHOD AS PER IS : 2386 (Part -2)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	12.09.12
Location	:	BH-1(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	48.0m	Tested by	:	K.C Sahoo

Sl. No.	Observations	1	Remarks
1	Weight of density bottle W1 in gm	31.52	
2	Weight of bottle with dry soil in W2 gm	38.63	
3	Weight of bottle with soil and water W3 in gm	135.95	
4	Weight of bottle full of water W4 in gm	131.46	
5	Weight of dry soil (W2-W1)in gm	7.11	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.62	
7	Specific Gravity G = (5) / (6)	2.71	

Lab Manager

Checked By

4340

ARKI TECHNO CONSULTANTS (I) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF BULK DENSITY & MOISTURE CONTENT OF SOIL SAMPLE

Client : DFCC

Project Name : G.I For 3 Nos. Important Bridges

Location : BH-1(Tangri River-Saharanpur)

Sl No.	BH No.	Depth in m	Type of Sample	Date of Testing	Weight of Container in gm	Diameter of Sample in cm	Length of Sample in cm	Volume of Sample in cc	Weight of Container + Wet Soil in gm	Weight of Container + Dry soil in gm	Weight of Dry soil in gm	Weight of water in gm	Moisture Content in %	Bulk Density in gm/cc	Dry Density in gm/cc
1	BH-1(Tangri River-Saharanpur)	0.50	UDS	12.09.12	60.35	3.8	7	79.39	213.57	188.42	128.07	25.15	19.64	1.93	1.61
2		1.50	SPT	12.09.12	61.58	3.8	7	79.39	215.60	189.28	127.70	26.32	20.61	1.94	1.61
3		4.50	SPT	12.09.12	63.57	3.8	7	79.39	212.82	195.33	131.76	17.50	13.28	1.88	1.66
4		6.00	SPT	12.09.12	64.66	3.8	7	79.39	220.26	200.05	135.39	20.21	14.93	1.96	1.71
5		6.50	UDS	12.09.12	60.83	3.8	7	79.39	220.40	197.39	136.56	23.01	16.85	2.01	1.72
6		7.50	SPT	12.09.12	63.41	3.8	7	79.39	223.78	199.73	136.32	24.05	17.64	2.02	1.72
7		12.00	SPT	12.09.12	63.29	3.8	7	79.39	210.96	194.64	131.35	16.31	12.42	1.86	1.65
8		14.00	UDS	12.09.12	61.55	3.8	7	79.39	222.71	194.87	133.32	27.84	20.88	2.03	1.68
9		17.00	UDS	12.09.12	65.76	3.8	7	79.39	228.51	199.86	134.10	28.65	21.36	2.05	1.69
10		20.00	UDS	12.09.12	61.43	3.8	7	79.39	226.56	196.94	135.51	29.62	21.86	2.08	1.71
11		23.00	UDS	12.09.12	62.52	3.8	7	79.39	228.45	199.92	137.40	28.52	20.76	2.09	1.73
12		24.00	SPT	12.09.12	63.33	3.8	7	79.39	226.87	197.15	133.82	29.72	22.21	2.06	1.69
13		26.00	UDS	12.09.12	62.51	3.8	7	79.39	227.64	198.58	136.07	29.06	21.36	2.08	1.71
14		27.00	SPT	12.09.12	63.46	3.8	7	79.39	229.39	200.71	137.25	28.67	20.89	2.09	1.73
15		29.00	UDS	12.09.12	63.75	3.8	7	79.39	231.26	202.50	138.75	28.76	20.73	2.11	1.75
16		32.00	UDS	12.09.12	63.28	3.8	7	79.39	234.76	204.37	141.09	30.39	21.54	2.16	1.78
17		33.00	SPT	12.09.12	64.50	3.8	7	79.39	235.98	204.89	140.39	31.10	22.15	2.16	1.77
18		35.00	UDS	12.09.12	63.11	3.8	7	79.39	233.80	203.35	140.24	30.45	21.71	2.15	1.77
19		39.00	SPT	12.09.12	62.87	3.8	7	79.39	235.94	203.92	141.05	32.02	22.70	2.18	1.78
20		45.00	SPT	12.09.12	63.99	3.8	7	79.39	237.85	209.43	145.44	28.42	19.54	2.19	1.83
21		48.00	SPT	12.09.12	64.81	3.8	7	79.39	237.88	208.03	143.22	29.85	20.84	2.18	1.80

Arki Techno Consultants (India) Pvt. Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	3.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 64.92

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	19.23	19.23	19.23	80.77
0.425	34.43	34.43	53.66	46.34
0.075	11.26	11.26	64.92	35.08
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 64.92 **Silt and clay %** 35.08

Remarks :-

Lab Manager

4342

Checked By

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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	4.5m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 5.17

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %`	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	1.20	1.20	1.20	98.80
0.425	1.66	1.66	2.86	97.14
0.075	2.31	2.31	5.17	94.83
Total	100.00			

Gravel Content (%)= **0.00**

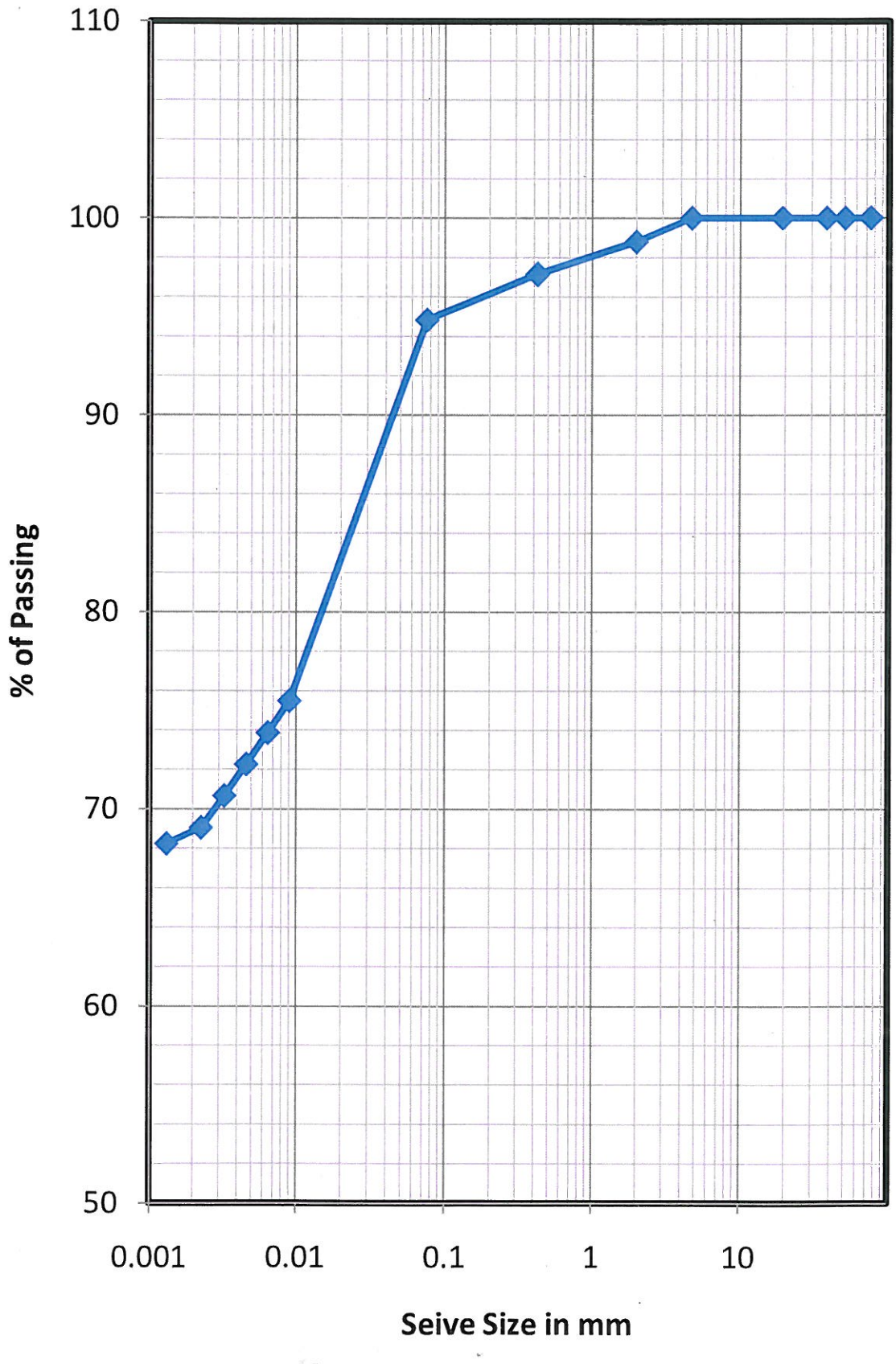
Sand Content (%) = 5.17 **Silt and clay %** 94.83

Remarks :-

Lab Manager Checked By

4343

Grain Size Distribution Curve
BH-2, D-4.5m



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N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	5.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 5.65

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.81	0.81	0.81	99.19
0.425	3.47	3.47	4.28	95.72
0.075	1.37	1.37	5.65	94.35
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 5.65 **Silt and clay %** 94.35

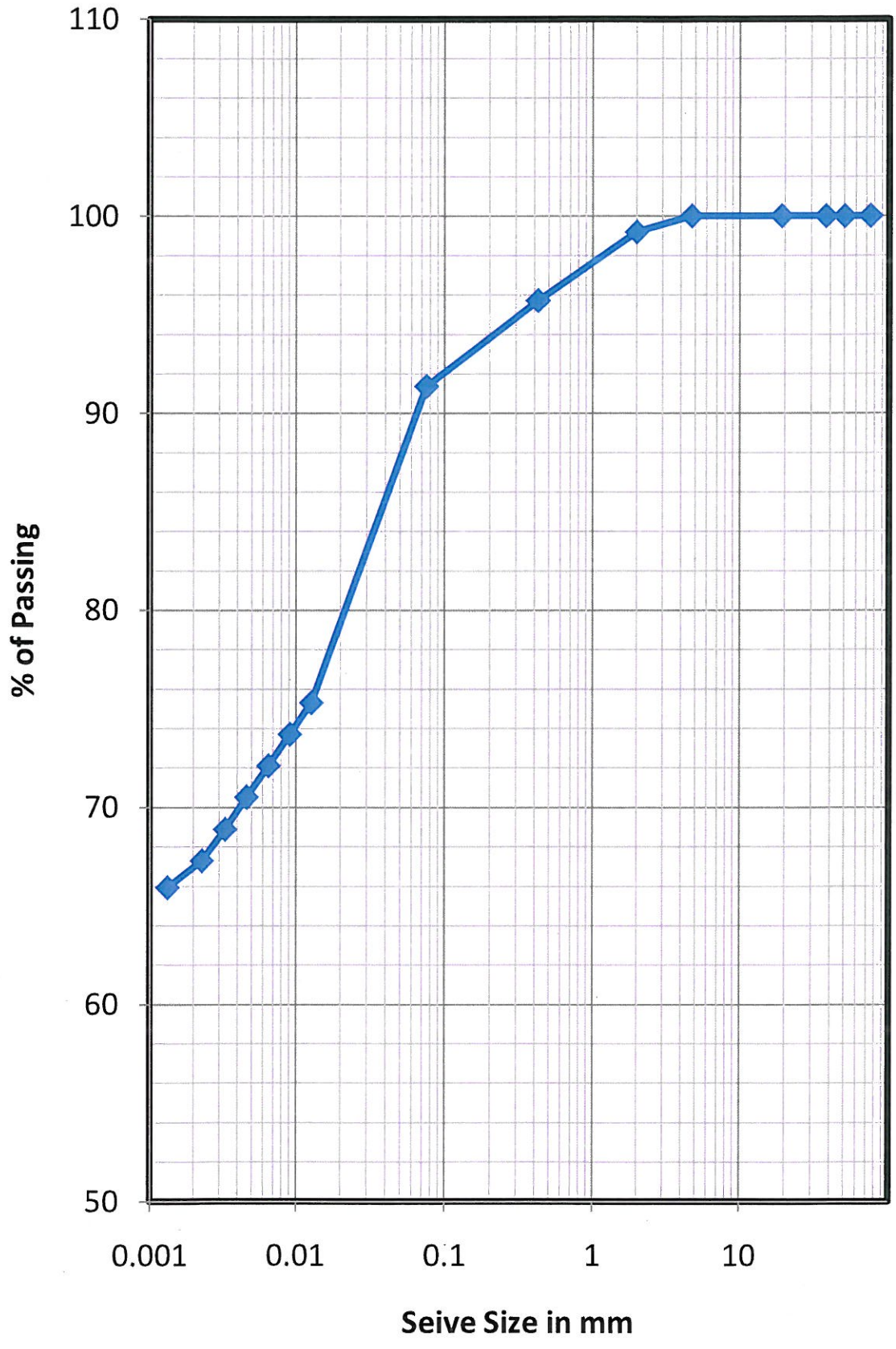
Remarks :-

Lab Manager

Checked By

4345

Grain Size Distribution Curve
BH-2, D-5.0m



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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	6.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 5.59

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	1.25	1.25	1.25	98.75
0.425	2.97	2.97	4.22	95.78
0.075	1.37	1.37	5.59	94.41
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 5.59 **Silt and clay %** 94.41

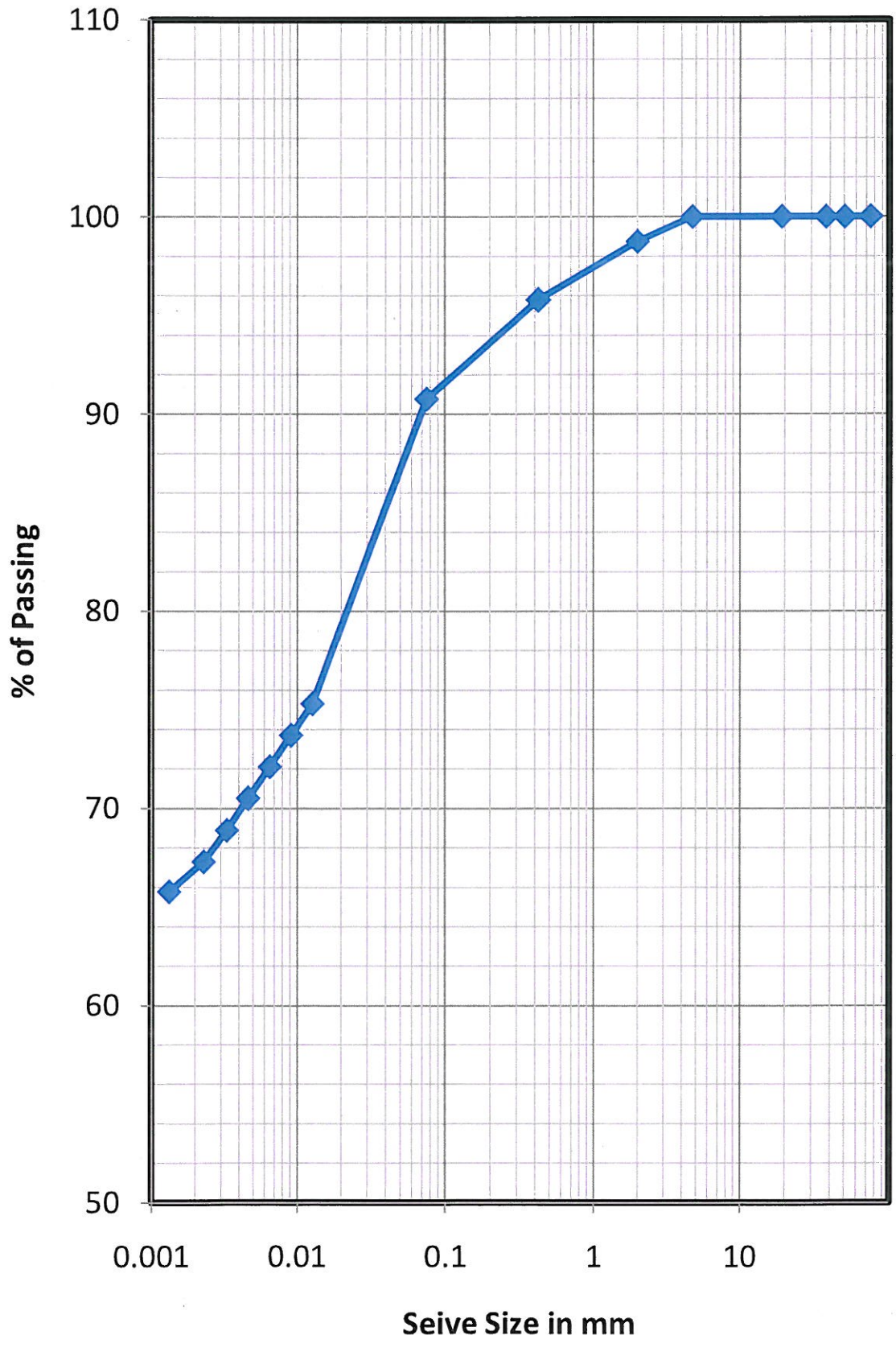
Remarks :-

Lab Manager

Checked By

4347

Grain Size Distribution Curve
BH-2, D-6.0m



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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	8.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 6.12

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	1.92	1.92	1.92	98.08
0.425	2.56	2.56	4.48	95.52
0.075	1.64	1.64	6.12	93.88
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 6.12 **Silt and clay %** 93.88

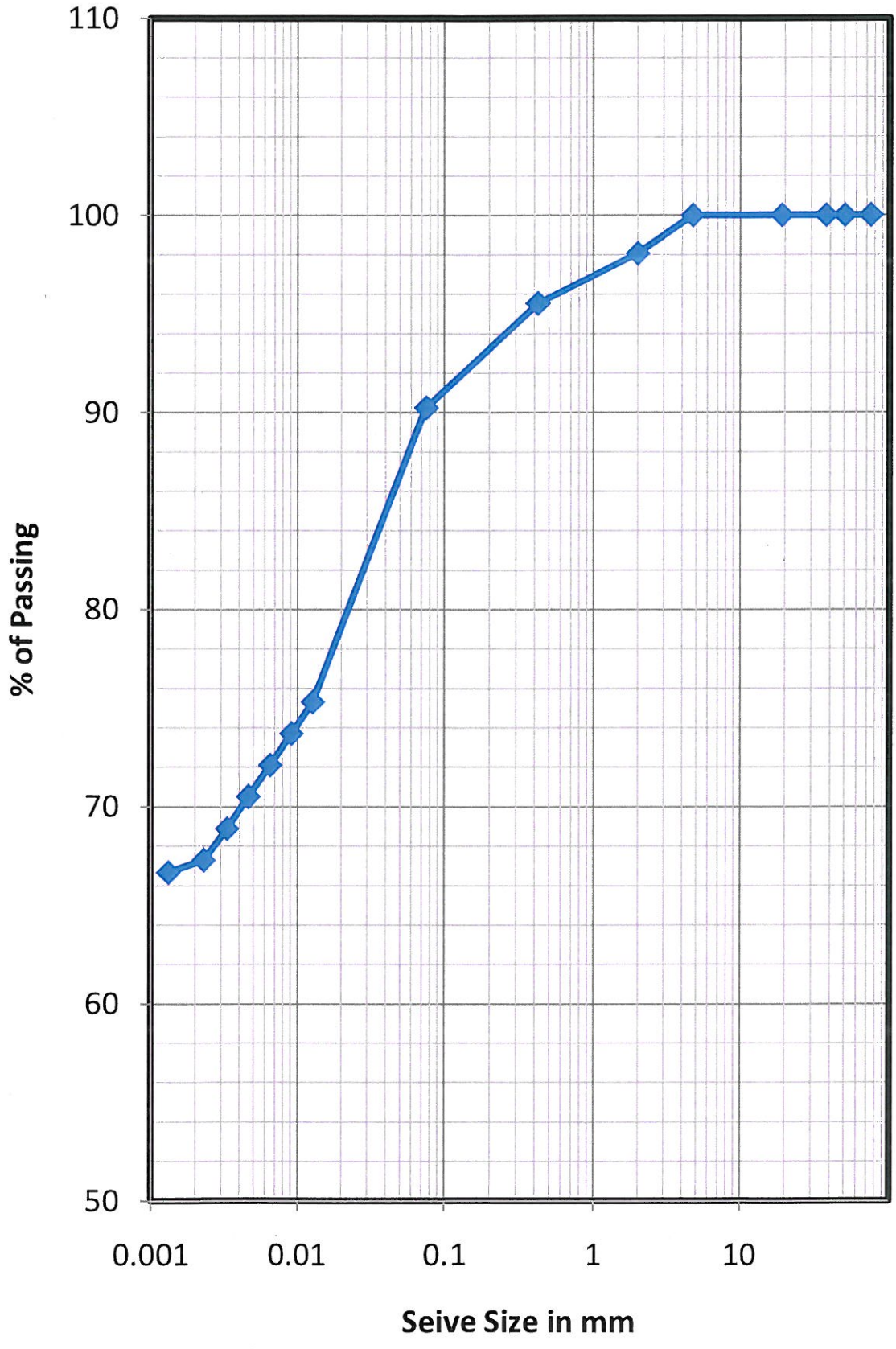
Remarks :-

Lab Manager

Checked By

4349

Grain Size Distribution Curve
BH-2, D-8.0m



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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	9.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 4.00

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.94	0.94	0.94	99.06
0.425	1.28	1.28	2.22	97.78
0.075	1.78	1.78	4.00	96.00
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 4.00 **Silt and clay %** 96.00

Remarks :-

Lab Manager

Checked By

4351

Arki Techno Consultants (India) Pvt. Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	13.5m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 6.08

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	1.46	1.46	1.46	98.54
0.425	2.04	2.04	3.50	96.50
0.075	2.58	2.58	6.08	93.92
Total	100.00			

Gravel Content (%)= **0.00**

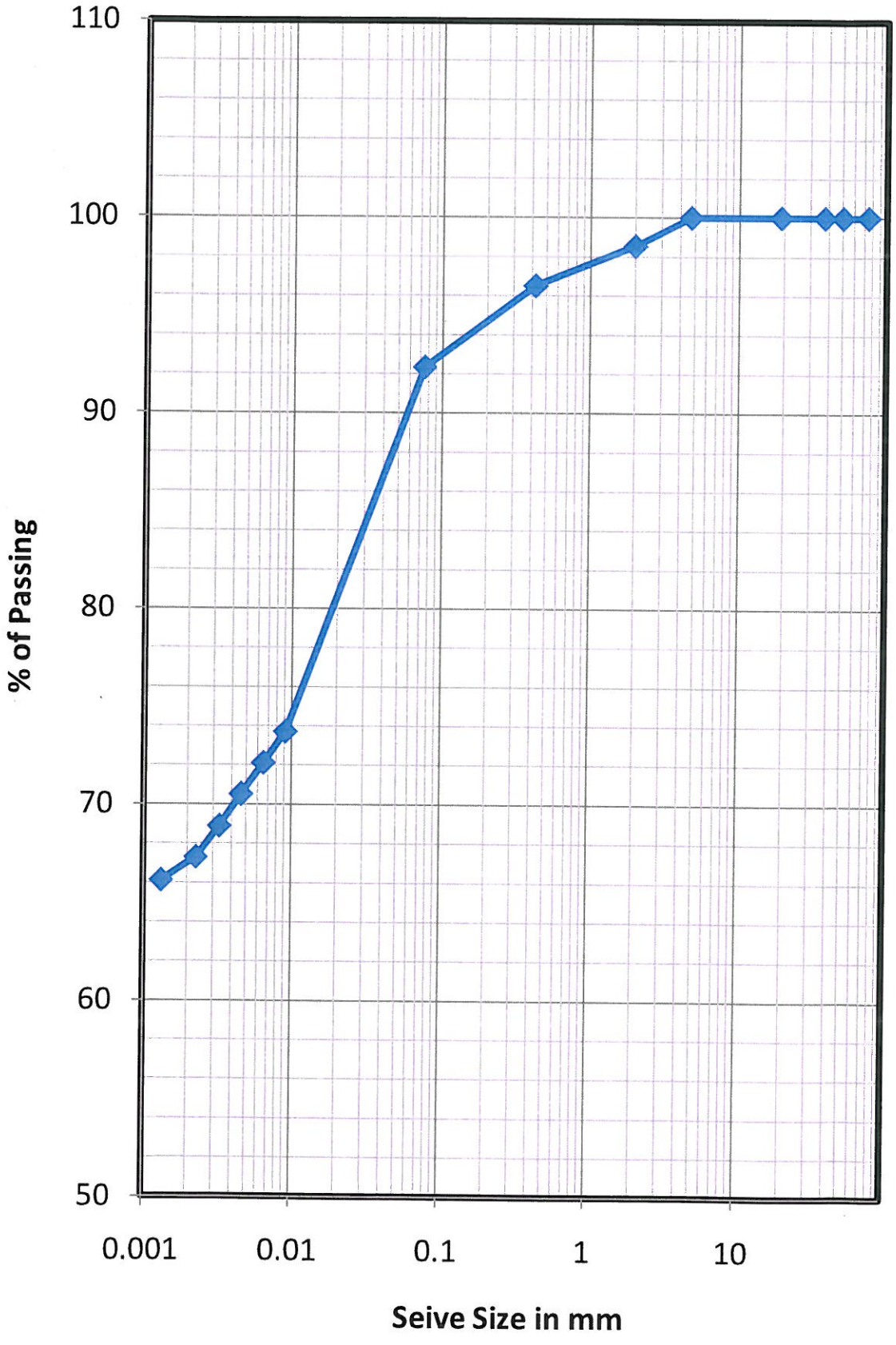
Sand Content (%) = 6.08 **Silt and clay %** 93.92

Remarks :-

Lab Manager Checked By

4352

Grain Size Distribution Curve
BH-2, D-13.5m



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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	15.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.56

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.03	0.03	0.03	99.97
0.425	0.45	0.45	0.48	99.52
0.075	0.08	0.08	0.56	99.44
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 0.56 **Silt and clay %** 99.44

Remarks :-

Lab Manager Checked By

4354

Arki Techno Consultants (India) Pvt. Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	16.5m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.87

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.12	0.12	0.12	99.88
0.425	0.56	0.56	0.68	99.32
0.075	0.19	0.19	0.87	99.13
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 0.87 **Silt and clay %** 99.13

Remarks :-

Lab Manager

Checked By

4355

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N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	18.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.25

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.05	0.05	0.05	99.95
0.425	0.07	0.07	0.12	99.88
0.075	0.13	0.13	0.25	99.75
Total	100.00			

Gravel Content (%)= **0.00**

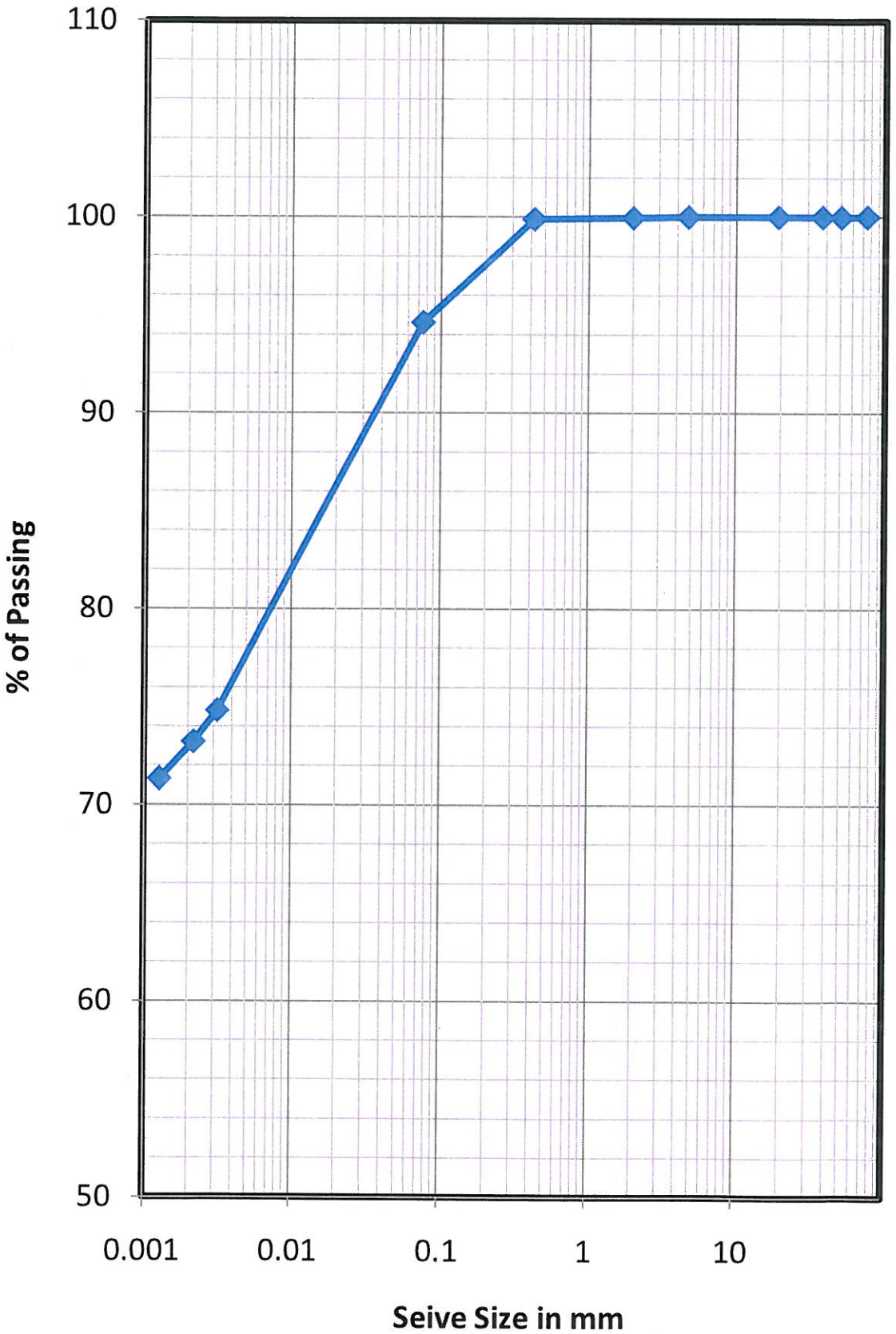
Sand Content (%) = 0.25 **Silt and clay %** 99.75

Remarks :-

Lab Manager Checked By

4356

Grain Size Distribution Curve
BH-2, D-18.0m



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N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	19.5m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.83

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.17	0.17	0.17	99.83
0.425	0.40	0.40	0.57	99.43
0.075	0.26	0.26	0.83	99.17
Total	100.00			

Gravel Content (%)= **0.00**

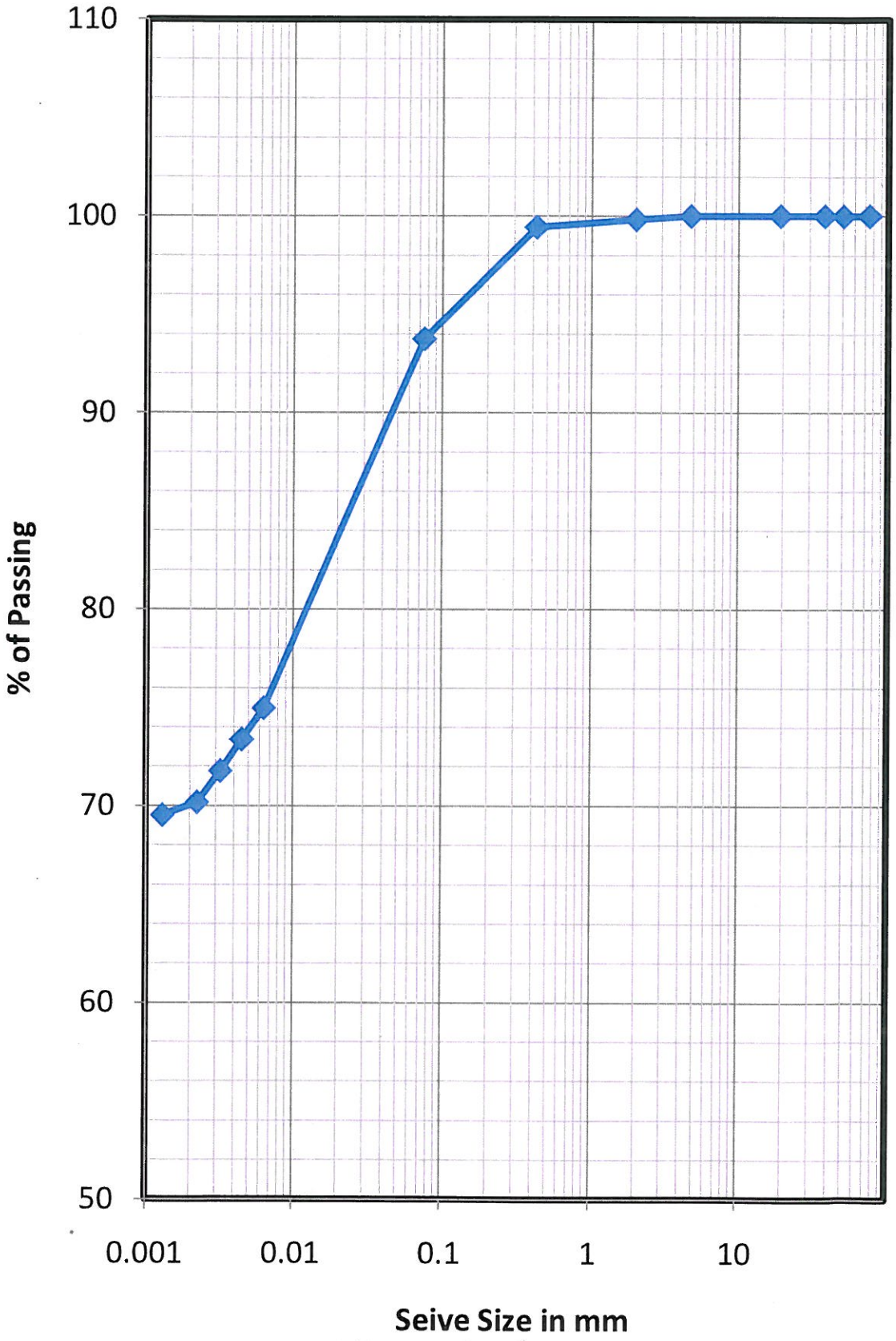
Sand Content (%) = 0.83 **Silt and clay %** 99.17

Remarks :-

Lab Manager Checked By

4358

Grain Size Distribution Curve
BH-2, D-19.5m



4859

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GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	24.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.62

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.17	0.17	0.17	99.83
0.425	0.11	0.11	0.28	99.72
0.075	0.34	0.34	0.62	99.38
Total	100.00			

Gravel Content (%)= **0.00**

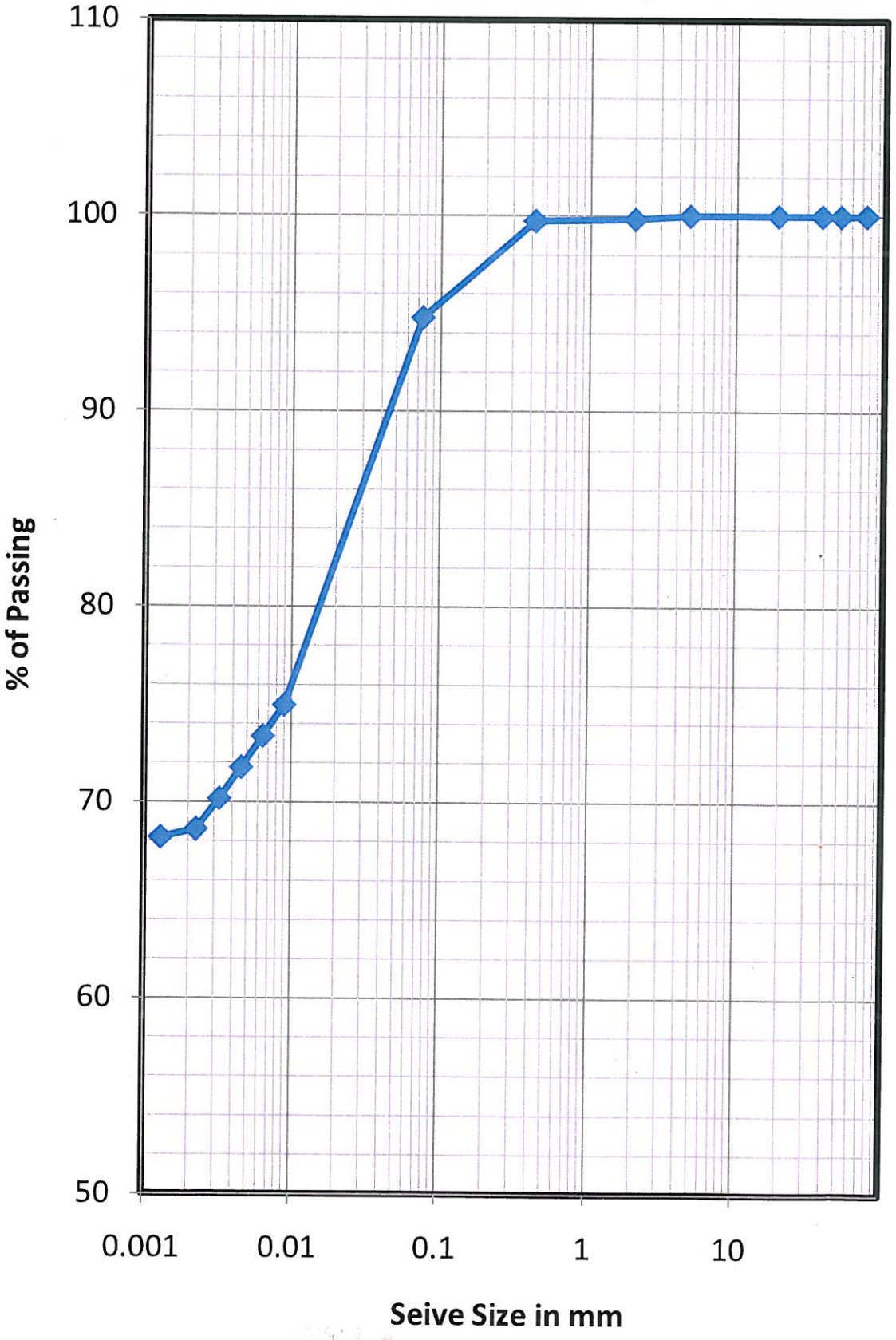
Sand Content (%) = 0.62 **Silt and clay %** 99.38

Remarks :-

Lab Manager Checked By

4360

Grain Size Distribution Curve
BH-2, D-24.0m



4361

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GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	25.5m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.91

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.37	0.37	0.37	99.63
0.425	0.29	0.29	0.66	99.34
0.075	0.25	0.25	0.91	99.09
Total	100.00			

Gravel Content (%)= **0.00**

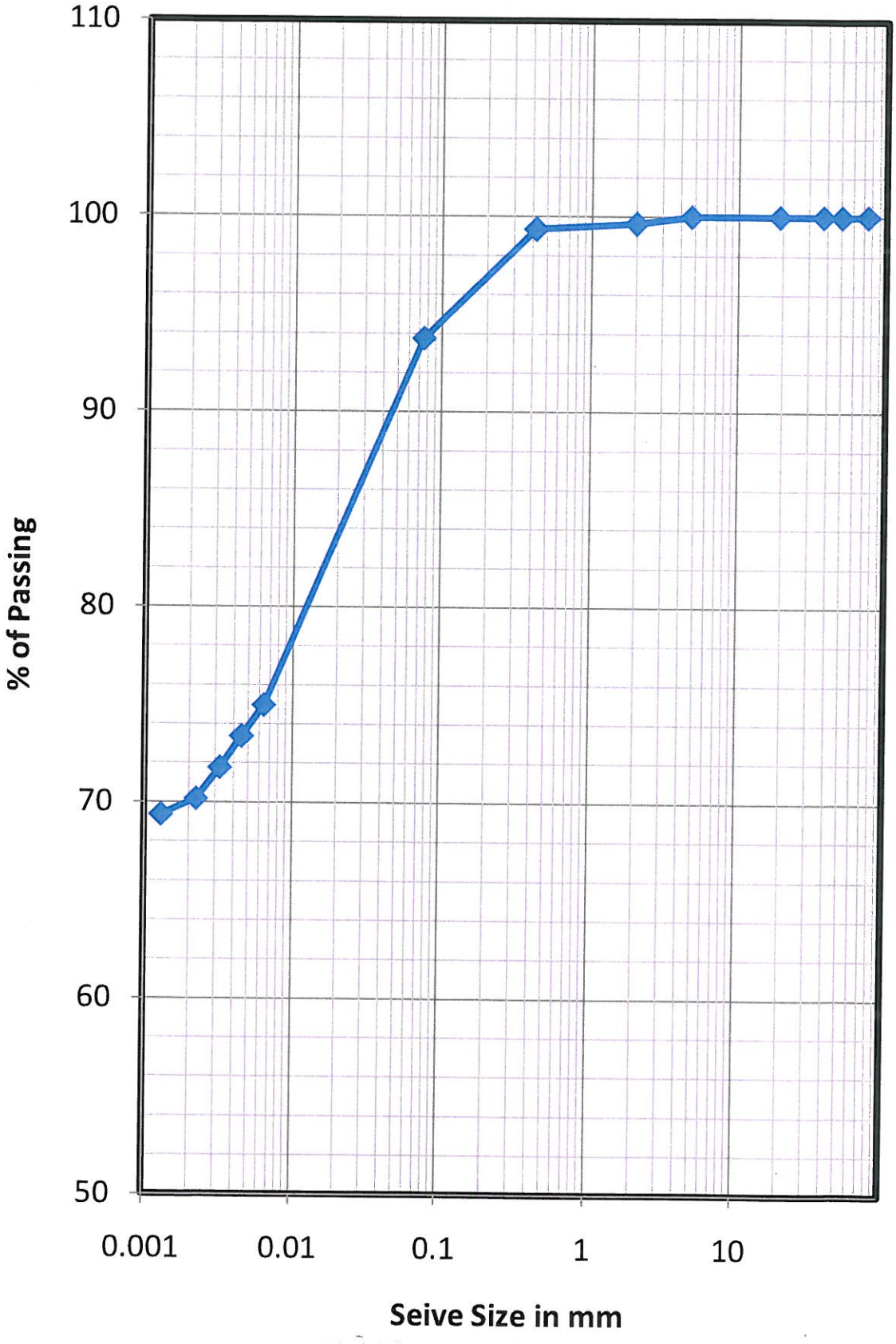
Sand Content (%) = 0.91 **Silt and clay %** 99.09

Remarks :-

Lab Manager Checked By

4362

Grain Size Distribution Curve
BH-2, D-25.5m



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N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	27.0m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.38

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.04	0.04	0.04	99.96
0.425	0.11	0.11	0.15	99.85
0.075	0.23	0.23	0.38	99.62
Total	100.00			

Gravel Content (%)= **0.00**

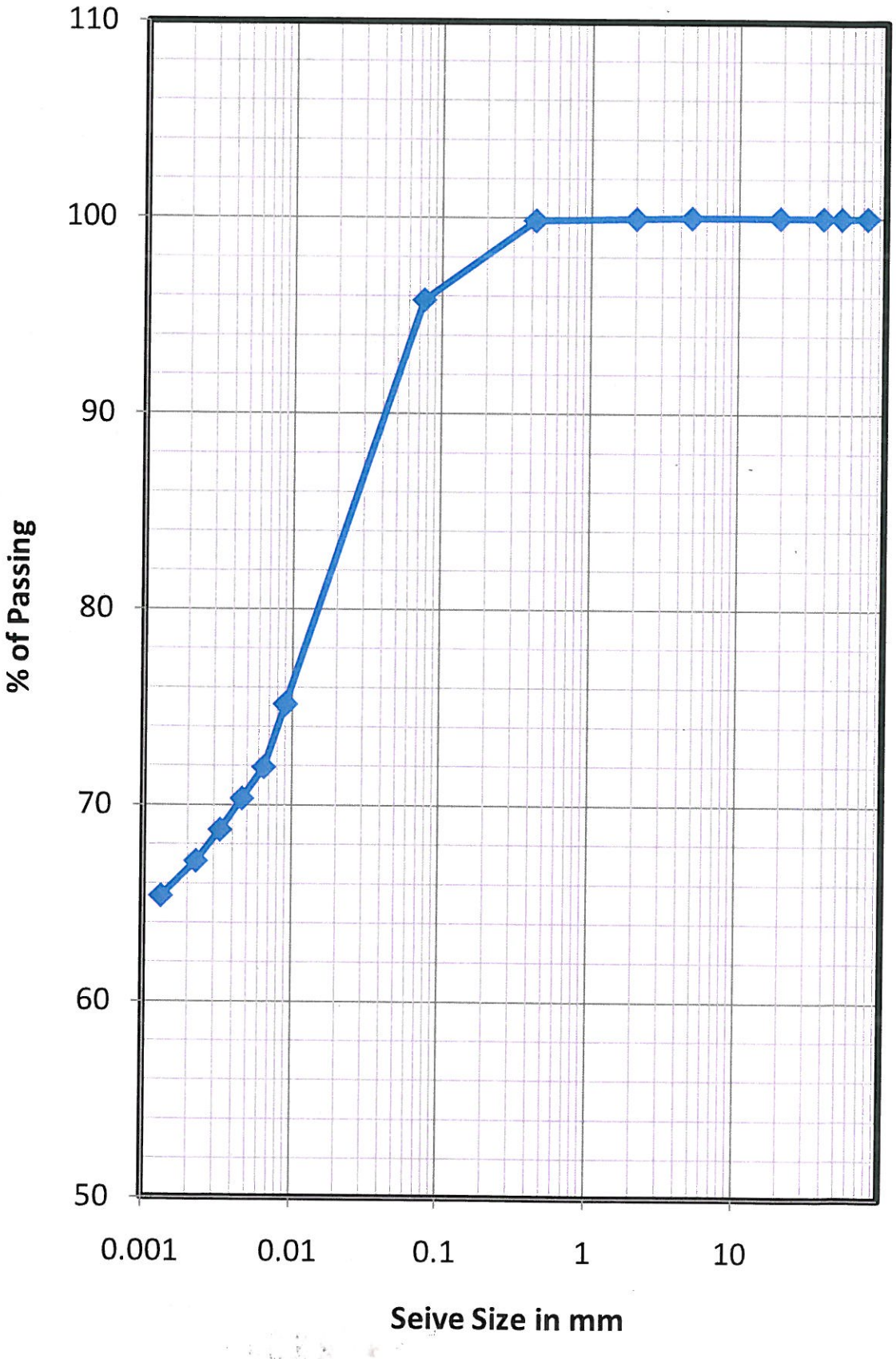
Sand Content (%) = 0.38 **Silt and clay %** 99.62

Remarks :-

Lab Manager Checked By

4364

Grain Size Distribution Curve
BH-2, D-27.0m



4365

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N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL AS PER IS 2720 (P- 4)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	UDS	Date of Testing	:	20.09.12
Location	:	BH-2(Tangri River-Saharanpur)	Sampled by	:	T. K. Das
Depth	:	28.5m	Tested by	:	K.C Sahoo

Weight of oven dried sample before washing (gm) :- 100.00

Weight of oven dried sample after washing (gm) :- 0.73

Sieve Size mm	Individual Weight Retained in gm.	Individual Wt. Retained In %	Cummulative Wt Retained In %	Cummulative Wt Passing In %
75	0	0.00	0.00	100.00
50	0	0.00	0.00	100.00
37.5	0	0.00	0.00	100.00
19	0	0.00	0.00	100.00
4.75	0.00	0.00	0.00	100.00
2.00	0.07	0.07	0.07	99.93
0.425	0.21	0.21	0.28	99.72
0.075	0.45	0.45	0.73	99.27
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 0.73 **Silt and clay %** 99.27

Remarks :-

Lab Manager Checked By

4366