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	:	24.10.12
Type of Sample	: SPT	Tested by	:	K.C.Sahoo
Location	: BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	: 31.5m	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	12.5	2.50	25	21	50%
2	10	12.0	2.00	20		
3	10	11.8	1.80	18		

Remarks:

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 : SPT

Location : BH-2(Yamuna River-Ambala)

Depth : 33.0m

Date Of Testing : 24.10.12

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	13.0	3.00	30	22	50%
2	10	12.5	2.50	25		
3	10	11.0	1.00	10		

Remarks:

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	:	24.10.12
Type of Sample	:	SPT	Tested by	:	K.C.Sahoo
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	34.5m	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	13.5	3.50	35	24	50%
2	10	12.2	2.20	22		
3	10	11.5	1.50	15		

Remarks:

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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	:	24.10.12
Type of Sample	:	SPT	Tested by	:	K.C.Sahoo
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	36.0m	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	13.0	3.00	30	25	50%
2	10	12.5	2.50	25		
3	10	12.0	2.00	20		

Remarks:

Total 4862

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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	37.65	
3	Weight of bottle with soil and water W3 in gm	136.23	
4	Weight of bottle full of water W4 in gm	132.42	
5	Weight of dry soil (W2-W1)in gm	6.13	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.32	
7	Specific Gravity G = (5) / (6)	2.64	

4863

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	36.45	
3	Weight of bottle with soil and water W3 in gm	135.98	
4	Weight of bottle full of water W4 in gm	132.92	
5	Weight of dry soil (W2-W1)in gm	4.93	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.87	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	35.68	
3	Weight of bottle with soil and water W3 in gm	136.45	
4	Weight of bottle full of water W4 in gm	133.86	
5	Weight of dry soil (W2-W1)in gm	4.16	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.57	
7	Specific Gravity G = (5) / (6)	2.65	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	36.72	
3	Weight of bottle with soil and water W3 in gm	137.82	
4	Weight of bottle full of water W4 in gm	134.59	
5	Weight of dry soil (W2-W1)in gm	5.20	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.96	
7	Specific Gravity G = (5) / (6)	2.65	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	37.85	
3	Weight of bottle with soil and water W3 in gm	137.88	
4	Weight of bottle full of water W4 in gm	133.95	
5	Weight of dry soil (W2-W1)in gm	6.33	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.40	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	38.31	
3	Weight of bottle with soil and water W3 in gm	138.68	
4	Weight of bottle full of water W4 in gm	134.46	
5	Weight of dry soil (W2-W1)in gm	6.79	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.56	
7	Specific Gravity G = (5) / (6)	2.65	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	15.0m	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	36.89	
3	Weight of bottle with soil and water W3 in gm	136.38	
4	Weight of bottle full of water W4 in gm	133.04	
5	Weight of dry soil (W2-W1)in gm	5.37	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.03	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	19.5m	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	37.24	
3	Weight of bottle with soil and water W3 in gm	137.38	
4	Weight of bottle full of water W4 in gm	133.82	
5	Weight of dry soil (W2-W1)in gm	5.72	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.17	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	21.0m	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	36.47	
3	Weight of bottle with soil and water W3 in gm	137.37	
4	Weight of bottle full of water W4 in gm	134.30	
5	Weight of dry soil (W2-W1)in gm	4.95	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.88	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	38.56	
3	Weight of bottle with soil and water W3 in gm	138.10	
4	Weight of bottle full of water W4 in gm	133.72	
5	Weight of dry soil (W2-W1)in gm	7.04	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.66	
7	Specific Gravity G = (5) / (6)	2.65	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	28.5m	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	37.49	
3	Weight of bottle with soil and water W3 in gm	137.93	
4	Weight of bottle full of water W4 in gm	134.16	
5	Weight of dry soil (W2-W1)in gm	5.97	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.20	
7	Specific Gravity G = (5) / (6)	2.71	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	31.5m	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	38.12	
3	Weight of bottle with soil and water W3 in gm	137.28	
4	Weight of bottle full of water W4 in gm	133.12	
5	Weight of dry soil (W2-W1)in gm	6.60	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.44	
7	Specific Gravity G = (5) / (6)	2.71	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	36.82	
3	Weight of bottle with soil and water W3 in gm	137.86	
4	Weight of bottle full of water W4 in gm	134.52	
5	Weight of dry soil (W2-W1)in gm	5.30	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.96	
7	Specific Gravity G = (5) / (6)	2.70	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	34.5m	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	38.09	
3	Weight of bottle with soil and water W3 in gm	136.21	
4	Weight of bottle full of water W4 in gm	132.10	
5	Weight of dry soil (W2-W1)in gm	6.57	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.46	
7	Specific Gravity G = (5) / (6)	2.67	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	36.0m	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	37.53	
3	Weight of bottle with soil and water W3 in gm	137.53	
4	Weight of bottle full of water W4 in gm	133.76	
5	Weight of dry soil (W2-W1)in gm	6.01	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.24	
7	Specific Gravity G = (5) / (6)	2.68	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	37.5m	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	38.20	
3	Weight of bottle with soil and water W3 in gm	137.99	
4	Weight of bottle full of water W4 in gm	133.84	
5	Weight of dry soil (W2-W1)in gm	6.68	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.53	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	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	37.65	
3	Weight of bottle with soil and water W3 in gm	137.24	
4	Weight of bottle full of water W4 in gm	133.42	
5	Weight of dry soil (W2-W1)in gm	6.13	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.31	
7	Specific Gravity G = (5) / (6)	2.65	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	42.0m	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	36.51	
3	Weight of bottle with soil and water W3 in gm	136.58	
4	Weight of bottle full of water W4 in gm	133.47	
5	Weight of dry soil (W2-W1)in gm	4.99	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.88	
7	Specific Gravity G = (5) / (6)	2.65	

4830

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	46.5m	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	36.17	
3	Weight of bottle with soil and water W3 in gm	137.03	
4	Weight of bottle full of water W4 in gm	134.14	
5	Weight of dry soil (W2-W1)in gm	4.65	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.76	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	24.10.12
Location	:	BH-2(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	50.0m	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	37.11	
3	Weight of bottle with soil and water W3 in gm	137.96	
4	Weight of bottle full of water W4 in gm	134.48	
5	Weight of dry soil (W2-W1)in gm	5.59	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.11	
7	Specific Gravity G = (5) / (6)	2.65	

4892

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-2(Yamuna River-Ambala)

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-2(Yamuna River-Ambala)	1.5	SPT	24.10.12	63.40	3.8	7	79.39	207.10	191.23	127.83	15.86	12.41	1.81	1.61
2		3.0	SPT	24.10.12	62.31	3.8	7	79.39	206.01	191.43	129.12	14.58	11.29	1.81	1.63
3		4.5	SPT	24.10.12	65.00	3.8	7	79.39	209.49	194.33	129.33	15.16	11.72	1.82	1.63
4		6.0	SPT	24.10.12	66.22	3.8	7	79.39	209.92	194.34	128.12	15.58	12.16	1.81	1.61
5		7.5	SPT	24.10.12	63.24	3.8	7	79.39	207.73	192.65	129.41	15.08	11.65	1.82	1.63
6		12.0	SPT	24.10.12	64.73	3.8	7	79.39	213.19	198.15	133.42	15.04	11.27	1.87	1.68
7		15.0	SPT	24.10.12	62.11	3.8	7	79.39	207.39	191.76	129.65	15.64	12.06	1.83	1.63
8		19.5	SPT	24.10.12	64.63	3.8	7	79.39	211.50	195.82	131.19	15.68	11.95	1.85	1.65
9		21.0	SPT	24.10.12	64.53	3.8	7	79.39	213.78	198.58	134.05	15.20	11.34	1.88	1.69
10		27.0	SPT	24.10.12	61.86	3.8	7	79.39	211.91	196.07	134.21	15.84	11.80	1.89	1.69
11		28.5	SPT	24.10.12	61.49	3.8	7	79.39	221.06	199.80	138.31	21.26	15.37	2.01	1.74
12		31.5	SPT	24.10.12	63.54	3.8	7	79.39	224.70	203.81	140.27	20.89	14.89	2.03	1.77
13		33.0	SPT	24.10.12	60.45	3.8	7	79.39	222.41	201.13	140.68	21.27	15.12	2.04	1.77
14		34.5	SPT	24.10.12	61.52	3.8	7	79.39	223.48	196.03	134.51	27.44	20.40	2.04	1.69
15		36.0	SPT	24.10.12	62.33	3.8	7	79.39	223.49	196.77	134.44	26.73	19.88	2.03	1.69
16		37.5	SPT	24.10.12	61.41	3.8	7	79.39	230.51	213.04	151.63	17.47	11.52	2.13	1.91
17		39.0	SPT	24.10.12	61.28	3.8	7	79.39	224.03	206.26	144.98	17.77	12.26	2.05	1.83
18		42.0	SPT	24.10.12	63.11	3.8	7	79.39	227.45	209.80	146.69	17.65	12.03	2.07	1.85
19		46.5	SPT	24.10.12	65.34	3.8	7	79.39	236.82	218.68	153.34	18.14	11.83	2.16	1.93
20		50.0	SPT	24.10.12	60.55	3.8	7	79.39	234.41	216.65	156.10	17.76	11.38	2.19	1.97

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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	1.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 81.63

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	35.41	35.41	35.41	64.59
0.425	31.85	31.85	67.26	32.74
0.075	14.38	14.38	81.64	18.36
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 81.64 **Silt and clay %** 18.36

Remarks :-

4884

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 80.28

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	35.32	35.32	35.32	64.68
0.425	32.13	32.13	67.45	32.55
0.075	12.83	12.83	80.28	19.72
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 80.28 **Silt and clay %** 19.72

Remarks :-

4885

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 83.50

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	36.22	36.22	36.22	63.78
0.425	33.71	33.71	69.93	30.07
0.075	13.58	13.58	83.51	16.49
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 83.51 **Silt and clay %** 16.49

Remarks :-

4886

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 81.62

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	35.33	35.33	35.33	64.67
0.425	32.46	32.46	67.79	32.21
0.075	13.83	13.83	81.62	18.38
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 81.62 **Silt and clay %** 18.38

Remarks :-

4887

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 85.68

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	9.30	9.30	9.30	90.70
2.00	34.68	34.68	43.98	56.02
0.425	29.31	29.31	73.29	26.71
0.075	12.39	12.39	85.68	14.32
Total	100.00			

Gravel Content (%)= **9.30**

Sand Content (%) = 76.38 **Silt and clay %** 14.32

Remarks :-

4888

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	10.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 87.13

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	10.21	10.21	10.21	89.79
2.00	35.27	35.27	45.48	54.52
0.425	29.70	29.70	75.18	24.82
0.075	11.95	11.95	87.13	12.87
Total	100.00			

Gravel Content (%)= **10.21**

Sand Content (%) = 76.92 **Silt and clay %** 12.87

Remarks :-

4883

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 84.44

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	9.87	9.87	9.87	90.13
2.00	33.52	33.52	43.39	56.61
0.425	28.67	28.67	72.06	27.94
0.075	12.38	12.38	84.44	15.56
Total	100.00			

Gravel Content (%)= **9.87**

Sand Content (%) = 74.57 **Silt and clay %** 15.56

Remarks :-

4890

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 81.49

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	36.74	36.74	36.74	63.26
0.425	31.42	31.42	68.16	31.84
0.075	13.33	13.33	81.49	18.51
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 81.49 **Silt and clay %** 18.51

Remarks :-

4891

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 83.53

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	36.59	36.59	36.59	63.41
0.425	32.85	32.85	69.44	30.56
0.075	14.09	14.09	83.53	16.47
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 83.53 **Silt and clay %** 16.47

Remarks :-

4892

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	22.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 83.98

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	12.33	12.33	12.33	87.67
2.00	33.41	33.41	45.74	54.26
0.425	27.36	27.36	73.10	26.90
0.075	10.87	10.87	83.97	16.03
Total	100.00			

Gravel Content (%)= **12.33**

Sand Content (%) = 71.64 **Silt and clay %** 16.03

Remarks :-

4893

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 81.92

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	36.84	36.84	36.84	63.16
0.425	32.41	32.41	69.25	30.75
0.075	12.66	12.66	81.91	18.09
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 81.91 **Silt and clay %** 18.09

Remarks :-

4894

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 84.17

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	37.07	37.07	37.07	62.93
0.425	33.18	33.18	70.25	29.75
0.075	13.92	13.92	84.17	15.83
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 84.17 **Silt and clay %** 15.83

Remarks :-

4805

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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	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) :- 1.64

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	0.74	0.74	0.74	99.26
0.425	0.62	0.62	1.36	98.64
0.075	0.27	0.27	1.63	98.37
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 1.63 **Silt and clay %** 98.37

Remarks :-

4896

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	30.0m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 1.39

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	0.62	0.62	0.62	99.38
0.425	0.56	0.56	1.18	98.82
0.075	0.21	0.21	1.39	98.61
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 1.39 **Silt and clay %** 98.61

Remarks :-

4897

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	31.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 87.53

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	11.28	11.28	11.28	88.72
2.00	33.24	33.24	44.52	55.48
0.425	30.87	30.87	75.39	24.61
0.075	12.14	12.14	87.53	12.47
Total	100.00			

Gravel Content (%)= **11.28**

Sand Content (%) = 76.25 **Silt and clay %** 12.47

Remarks :-

4893

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	37.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 30.74

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	18.42	18.42	18.42	81.58
2.00	5.70	5.70	24.12	75.88
0.425	4.76	4.76	28.88	71.12
0.075	1.86	1.86	30.74	69.26
Total	100.00			

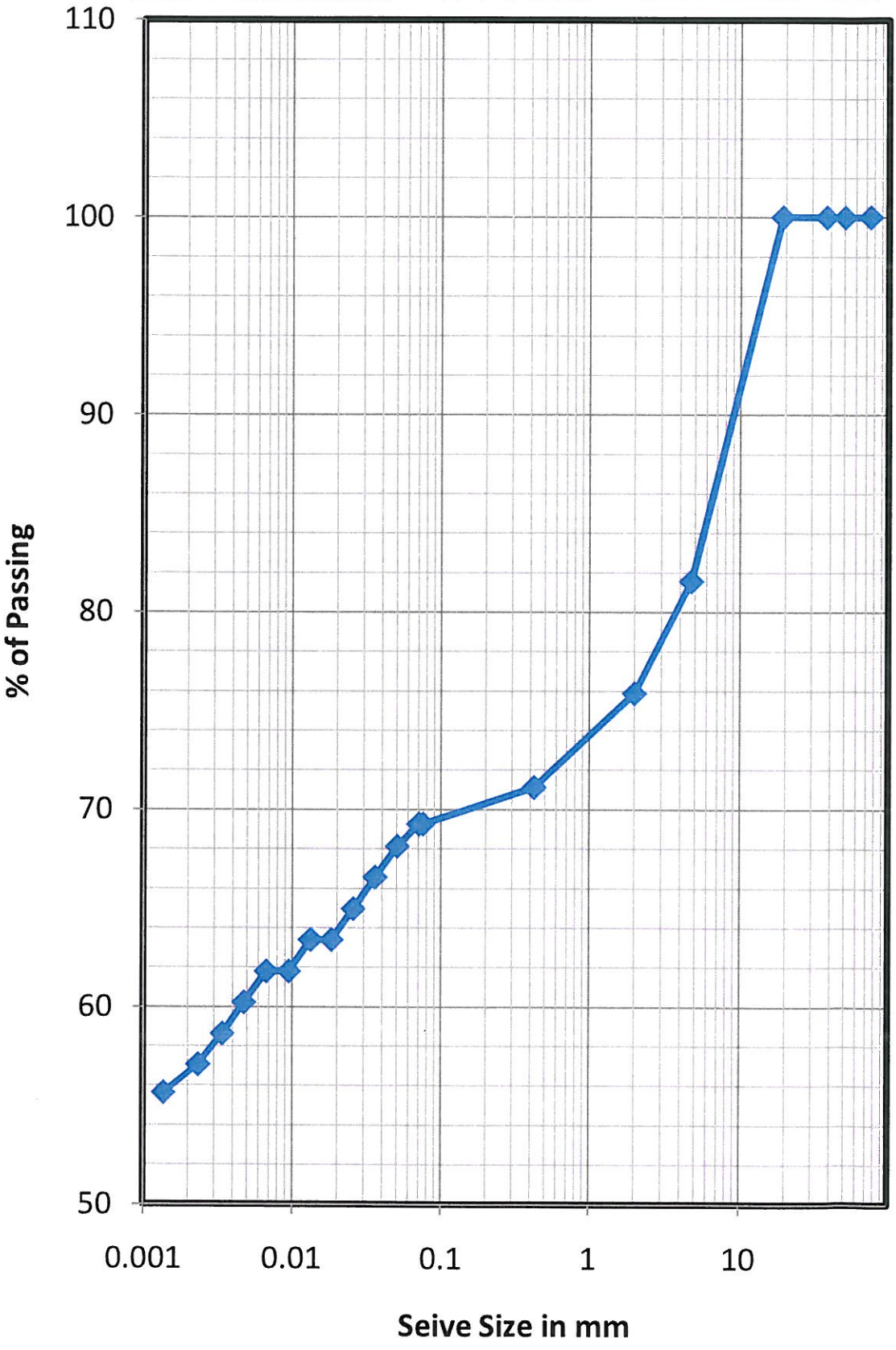
Gravel Content (%)= **18.42**

Sand Content (%) = 12.32 **Silt and clay %** 69.26

Remarks :-

4893

Grain Size Distribution Curve
BH-3,D-37.5m



4900

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	39.0m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 28.77

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	16.94	16.94	16.94	83.06
2.00	5.12	5.12	22.06	77.94
0.425	4.89	4.89	26.95	73.05
0.075	1.82	1.82	28.77	71.23
Total	100.00			

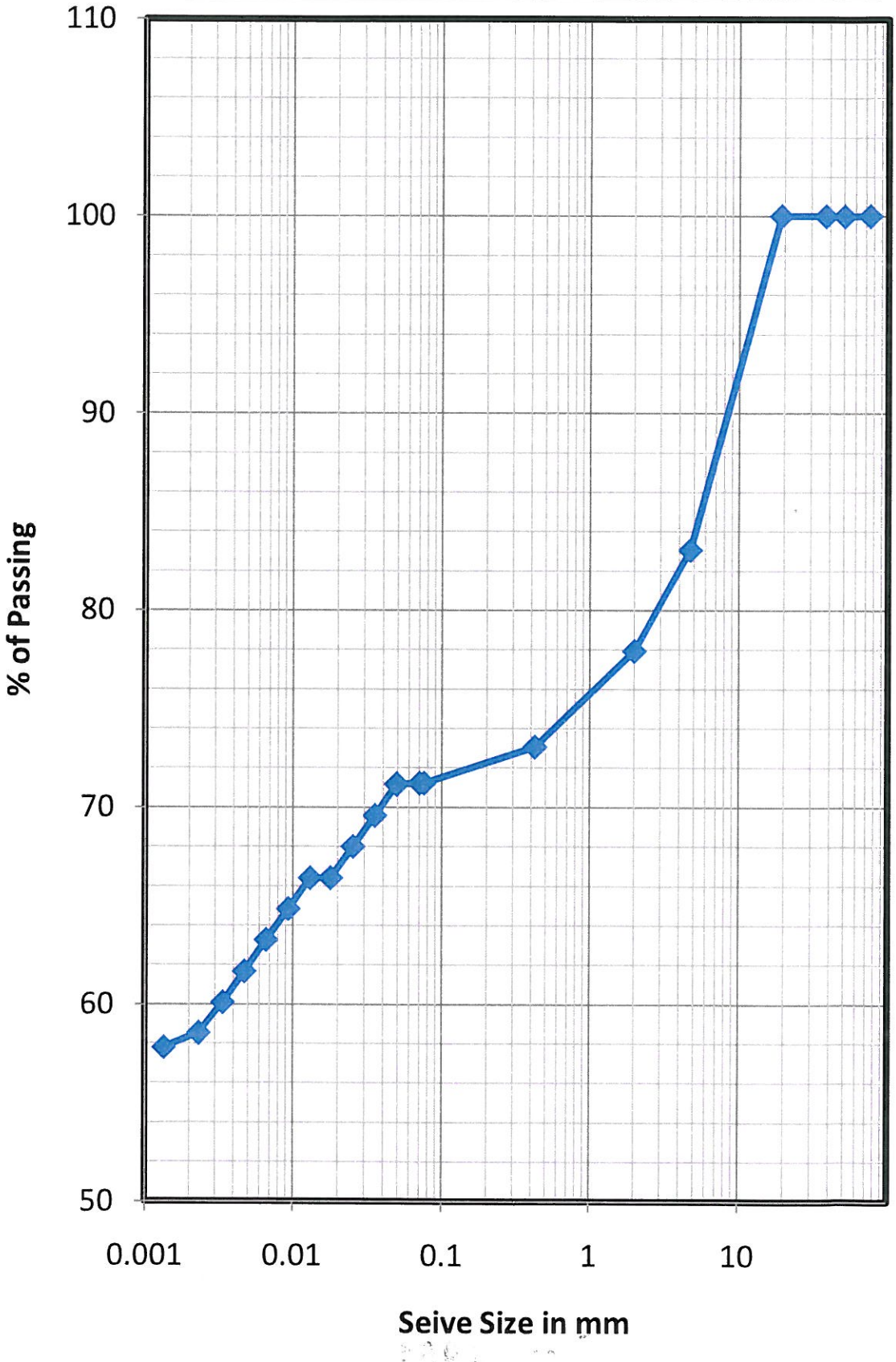
Gravel Content (%)= **16.94**

Sand Content (%) = 11.83 **Silt and clay %** 71.23

Remarks :-

4901

Grain Size Distribution Curve
BH-3,D-39.0m



4902

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	40.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 84.87

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	9.75	9.75	9.75	90.25
2.00	33.62	33.62	43.37	56.63
0.425	29.71	29.71	73.08	26.92
0.075	11.79	11.79	84.87	15.13
Total	100.00			

Gravel Content (%)= **9.75**

Sand Content (%) = 75.12 **Silt and clay %** 15.13

Remarks :-

4903

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	43.5m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 82.29

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	35.73	35.73	35.73	64.27
0.425	32.71	32.71	68.44	31.56
0.075	13.86	13.86	82.30	17.70
Total	100.00			

Gravel Content (%)= **0.00**

Sand Content (%) = 82.30 **Silt and clay %** 17.70

Remarks :-

4904

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	45.0m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 87.90

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	10.54	10.54	10.54	89.46
2.00	33.08	33.08	43.62	56.38
0.425	31.37	31.37	74.99	25.01
0.075	12.91	12.91	87.90	12.10
Total	100.00			

Gravel Content (%)= **10.54**

Sand Content (%) = 77.36 **Silt and clay %** 12.10

Remarks :-

4905

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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	:	27.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T. K. Das
Depth	:	48.0m	Tested by	:	K.C.Sahoo

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

Weight of oven dried sample after washing (gm) :- 86.95

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	11.06	11.06	11.06	88.94
2.00	33.08	33.08	44.14	55.86
0.425	30.14	30.14	74.28	25.72
0.075	12.67	12.67	86.95	13.05
Total	100.00			

Gravel Content (%)= **11.06**

Sand Content (%) = 75.89 **Silt and clay %** 13.05

Remarks :-

4906

ARKI TECHNO CONSULTANTS (INDIA) PVT LTD

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL - HYDROMETER METHOD

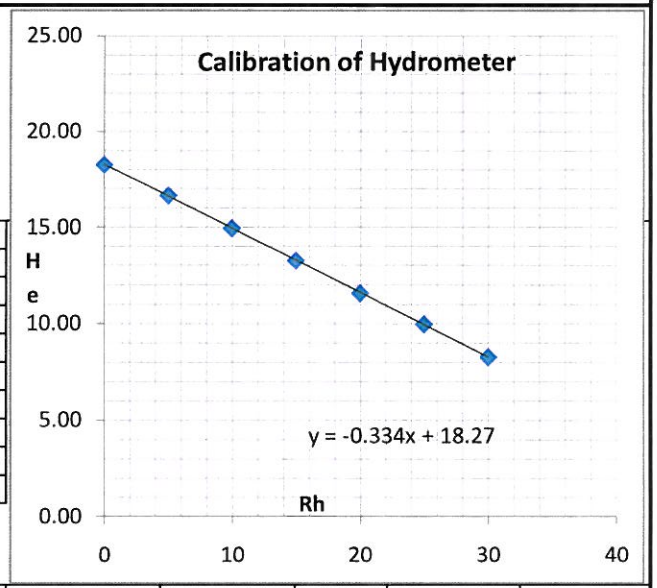
Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges	Depth	:	28.5m
Type of Sample	:	SPT	Date of Testing	:	29.10.12
Location	:	BH-3(Yamuna River- Ambala)	Tested by	:	K.C.Sahoo
Sampled by	:	T.K.Das			

(I)	Percentage of 75 micron passing (from sieve analysis)		98.37
(II)	Mass of dry soil passing 2mm sieve taken (gm)		50
(III)	Mass of dry soil retained on 75micron sieve (gm)		0.8
(IV)	Mass of dry soil passing 75 micron Wh (gm)		49.2
(V)	Specific gravity of soil grains, Gs		2.67
(VI)	Top Meniscus reading on hydrometer stem		2.0
(VII)	Bottom meniscus reading on hydrometer stem		2.5
(VIII)	Meniscuss correction, Cm = + [(VII) - (VI)]		0.5
a	Hydrometer No	1	
	Volume of Hydrometer V (cm3)	50	
	Height of bulb (h) in cm	16.5	
b	Sedimentation Jar No	1	
	Cross sectional area of jar (A) in cm2	35.714	

CALIBRATION OF HYDROMETER

(Rh)	H (cm)	He (cm)
30	0.7	8.25
25	2.4	9.95
20	4.0	11.55
15	5.7	13.25
10	7.4	14.95
5	9.1	16.65
0	10.7	18.25
-5	12.4	19.95

Rh = hydrometer Reading
H = height corresponding to Rh
He = Effective height = H + 0.5*(h -V/A)



Time	Elapsed Time (min)	Hydrometer Reading (Rh)	Temperature (o C)	Composite Correction +/- C	Effective depth h (cm)	Rc1 = Rh + Cm	Sqrt (h/t)	Viscosity (gm/cm2)	Factor M	Particle 'C' (cm) (8) x (10)	Rc2 = Rh + C (3) + (5)	Factor N	% Finner w.r.t Wd F (12) x (13)	% Finner w.r.t total mass (14) x (I)/100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.30	0.5	29.84	29	-2.0	8.30	30.34	0.526	0.000008341	0.012240833	0.00643990	27.84	3.251	90.50	89.02
	1	29.50	29	-2.0	8.42	30.00	0.375	0.000008341	0.012240833	0.00458473	27.50	3.251	89.39	87.93
	2	29.00	29	-2.0	8.58	29.50	0.267	0.000008341	0.012240833	0.00327390	27.00	3.251	87.77	86.34
	4	29.00	29	-2.0	8.58	29.50	0.189	0.000008341	0.012240833	0.00231500	27.00	3.251	87.77	86.34
	8	28.50	29	-2.0	8.75	29.00	0.135	0.000008341	0.012240833	0.00165280	26.50	3.251	86.14	84.74
	15	28.50	29	-2.0	8.75	29.00	0.099	0.000008341	0.012240833	0.00120703	26.50	3.251	86.14	84.74
	30	28.00	29	-2.0	8.92	28.50	0.070	0.000008341	0.012240833	0.00086161	26.00	3.251	84.52	83.14
	60	28.00	29	-2.0	8.92	28.50	0.050	0.000008341	0.012240833	0.00060925	26.00	3.251	84.52	83.14
	120	27.50	29	-2.0	9.09	28.00	0.036	0.000008341	0.012240833	0.00043482	25.50	3.251	82.89	81.54
	240	27.50	29	-2.0	9.09	28.00	0.025	0.000008341	0.012240833	0.00030746	25.50	3.251	82.89	81.54
	480	27.00	32	-2.0	9.25	27.50	0.018	0.000007821	0.011853101	0.00021245	25.00	3.251	81.26	79.94
	1440	26.81	32	-2.0	9.32	27.31	0.010	0.000007821	0.011853101	0.000123079	24.81	3.251	80.64	79.33

ARKI TECHNO CONSULTANTS (INDIA) PVT LTD

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL - HYDROMETER METHOD

Client : DFCC

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

Type of Sample : SPT

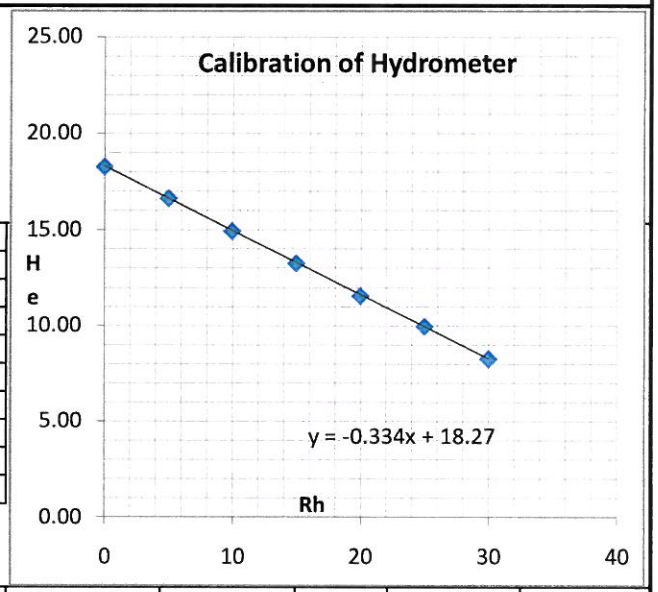
Location : BH-3(Yamuna River- Ambala)

Sampled by : T.K.Das

Depth : 30.0m

Date of Testing : 29.10.12

Tested by : K.C.Sahoo



(I)	Percentage of 75 micron passing (from sieve analysis)		98.62
(II)	Mass of dry soil passing 2mm sieve taken (gm)		50
(III)	Mass of dry soil retained on 75micron sieve (gm)		0.7
(IV)	Mass of dry soil passing 75 micron Wh (gm)		49.3
(V)	Specific gravity of soil grains, Gs		2.67
(VI)	Top Meniscus reading on hydrometer stem		2.0
(VII)	Bottom meniscus reading on hydrometer stem		2.5
(VIII)	Meniscuss correction, Cm = + [(VII) - (VI)]		0.5
a	Hydrometer No	1	
	Volume of Hydrometer V (cm3)	50	
	Height of bulb (h) in cm	16.5	
b	Sedimentation Jar No	1	
	Cross sectional area of jar (A) in cm2	35.714	

CALIBRATION OF HYDROMETER

(Rh)	H (cm)	He (cm)
30	0.7	8.25
25	2.4	9.95
20	4.0	11.55
15	5.7	13.25
10	7.4	14.95
5	9.1	16.65
0	10.7	18.25
-5	12.4	19.95

Rh = hydrometer Reading

H = height corresponding to Rh

He = Effective height = H + 0.5*(h -V/A)

Time	Elapsed Time (min)	Hydrometer Reading (Rh)	Temperature (o C)	Composite Correction +/- C	Effective depth h (cm)	Rc1 = Rh + Cm	Sqrt (h/t)	Viscosity (gm/cm2)	Factor M	Particle 'C' (cm) (8) x (10)	Rc2 = Rh + C (3) + (5)	Factor N	% Finner w.r.t Wd F (12) x (13)	% Finner w.r.t total mass (14) x (I)/100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.30	0.5	29.93	29	-2.0	8.27	30.43	0.525	0.000008341	0.012240833	0.00642824	27.93	3.242	90.56	89.31
	1	29.50	29	-2.0	8.42	30.00	0.375	0.000008341	0.012240833	0.00458473	27.50	3.242	89.16	87.93
	2	29.50	29	-2.0	8.42	30.00	0.265	0.000008341	0.012240833	0.00324190	27.50	3.242	89.16	87.93
	4	29.00	29	-2.0	8.58	29.50	0.189	0.000008341	0.012240833	0.00231500	27.00	3.242	87.54	86.34
	8	29.00	29	-2.0	8.58	29.50	0.134	0.000008341	0.012240833	0.00163695	27.00	3.242	87.54	86.34
	15	28.50	29	-2.0	8.75	29.00	0.099	0.000008341	0.012240833	0.00120703	26.50	3.242	85.92	84.74
	30	28.50	29	-2.0	8.75	29.00	0.070	0.000008341	0.012240833	0.00085350	26.50	3.242	85.92	84.74
	60	28.00	29	-2.0	8.92	28.50	0.050	0.000008341	0.012240833	0.00060925	26.00	3.242	84.30	83.14
	120	28.00	29	-2.0	8.92	28.50	0.035	0.000008341	0.012240833	0.00043080	26.00	3.242	84.30	83.14
	240	27.50	29	-2.0	9.09	28.00	0.025	0.000008341	0.012240833	0.00030746	25.50	3.242	82.68	81.54
	480	27.50	32	-2.0	9.09	28.00	0.018	0.000007821	0.011853101	0.00021052	25.50	3.242	82.68	81.54
	1440	27.12	32	-2.0	9.21	27.62	0.010	0.000007821	0.011853101	0.000122387	25.12	3.242	81.45	80.33

ARKI TECHNO CONSULTANTS (INDIA) PVT LTD

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL - HYDROMETER METHOD

Client : DFCC

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

Depth : 37.5m

Type of Sample : SPT

Date of Testing : 29.10.12

Location : BH-3(Yamuna River- Ambala)

Tested by : K.C.Sahoo

Sampled by : T.K.Das

(I)	Percentage of 75 micron passing (from sieve analysis)		69.26
(II)	Mass of dry soil passing 2mm sieve taken (gm)		50
(III)	Mass of dry soil retained on 75micron sieve (gm)		15.4
(IV)	Mass of dry soil passing 75 micron Wh (gm)		34.6
(V)	Specific gravity of soil grains, Gs		2.71
(VI)	Top Meniscus reading on hydrometer stem		2.0
(VII)	Bottom meniscus reading on hydrometer stem		2.5
(VIII)	Meniscuss correction, Cm = + [(VII) - (VI)]		0.5
a	Hydrometer No	1	
	Volume of Hydrometer V (cm3)	50	
	Height of bulb (h) in cm	16.5	
b	Sedimentation Jar No	1	
	Cross sectional area of jar (A) in cm2	35.714	

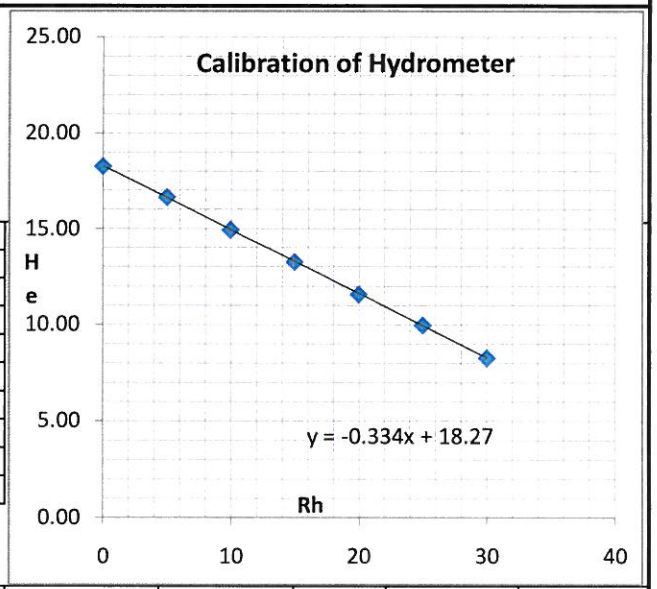
CALIBRATION OF HYDROMETER

(Rh)	H (cm)	He (cm)
30	0.7	8.25
25	2.4	9.95
20	4.0	11.55
15	5.7	13.25
10	7.4	14.95
5	9.1	16.65
0	10.7	18.25
-5	12.4	19.95

Rh = hydrometer Reading

H = height corresponding to Rh

He = Effective height = H + 0.5*(h -V/A)



Time	Elapsed Time (min)	Hydrometer Reading (Rh)	Temperature (o C)	Composite Correction +/- C	Effective depth h (cm)	Rc1 = Rh + Cm	Sqrt (h/t)	Viscosity (gm/cm2)	Factor M	Particle 'C' (cm) (8) x (10)	Rc2 = Rh + C (3) + (5)	Factor N	% Finner w.r.t Wd F (12) x (13)	% Finner w.r.t total mass (14) x (I)/100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.30	0.5	23.85	29	-2.0	10.30	24.35	0.586	0.000008341	0.012096818	0.00708934	21.85	4.576	100.00	69.26
	1	23.50	29	-2.0	10.42	24.00	0.417	0.000008341	0.012096818	0.00504139	21.50	4.576	98.39	68.15
	2	23.00	29	-2.0	10.59	23.50	0.297	0.000008341	0.012096818	0.00359325	21.00	4.576	96.10	66.56
	4	22.50	29	-2.0	10.76	23.00	0.212	0.000008341	0.012096818	0.00256077	20.50	4.576	93.82	64.98
	8	22.00	29	-2.0	10.92	22.50	0.151	0.000008341	0.012096818	0.00182474	20.00	4.576	91.53	63.39
	15	22.00	29	-2.0	10.92	22.50	0.110	0.000008341	0.012096818	0.00133260	20.00	4.576	91.53	63.39
	30	21.50	29	-2.0	11.09	22.00	0.078	0.000008341	0.012096818	0.00094947	19.50	4.576	89.24	61.81
	60	21.50	29	-2.0	11.09	22.00	0.056	0.000008341	0.012096818	0.00067138	19.50	4.576	89.24	61.81
	120	21.00	29	-2.0	11.26	21.50	0.040	0.000008341	0.012096818	0.00047830	19.00	4.576	86.95	60.22
	240	20.50	29	-2.0	11.42	21.00	0.028	0.000008341	0.012096818	0.00034071	18.50	4.576	84.66	58.64
	480	20.00	32	-2.0	11.59	20.50	0.020	0.000007821	0.011713648	0.00023498	18.00	4.576	82.37	57.05
	1440	19.56	32	-2.0	11.74	20.06	0.012	0.000007821	0.011713648	0.000136530	17.56	4.576	80.35	55.65

ARKI TECHNO CONSULTANTS (INDIA) PVT LTD

N 3/91, IRC Village, Bhubaneswar

GRAIN SIZE ANALYSIS OF SOIL - HYDROMETER METHOD

Client : DFCC

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

Type of Sample : SPT

Location : BH-3(Yamuna River- Ambala)

Sampled by : T.K.Das

Depth : 39.0m

Date of Testing : 29.10.12

Tested by : K.C.Sahoo

(I)	Percentage of 75 micron passing (from sieve analysis)		71.23
(II)	Mass of dry soil passing 2mm sieve taken (gm)		50
(III)	Mass of dry soil retained on 75micron sieve (gm)		14.4
(IV)	Mass of dry soil passing 75 micron Wh (gm)		35.6
(V)	Specific gravity of soil grains, Gs		2.72
(VI)	Top Meniscus reading on hydrometer stem		2.0
(VII)	Bottom meniscus reading on hydrometer stem		2.5
(VIII)	Meniscuss correction, Cm = + [(VII) - (VI)]		0.5
a	Hydrometer No	1	
	Volume of Hydrometer V (cm3)	50	
	Height of bulb (h) in cm	16.5	
b	Sedimentation Jar No	1	
	Cross sectional area of jar (A) in cm2	35.714	

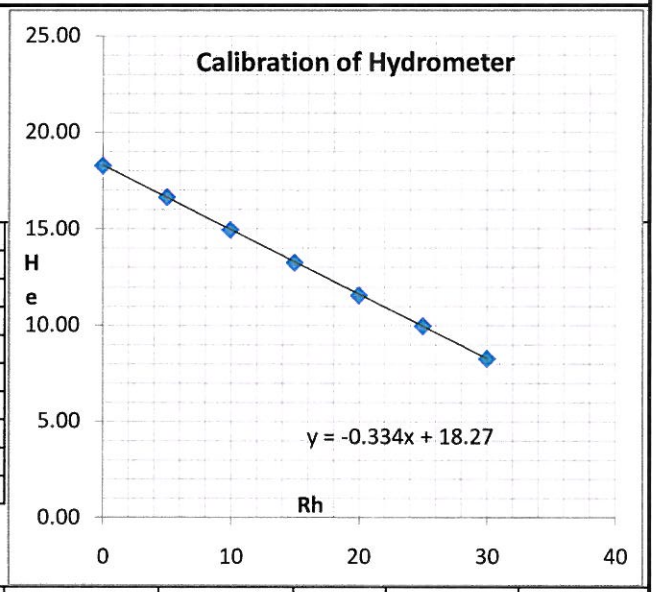
CALIBRATION OF HYDROMETER

(Rh)	H (cm)	He (cm)
30	0.7	8.25
25	2.4	9.95
20	4.0	11.55
15	5.7	13.25
10	7.4	14.95
5	9.1	16.65
0	10.7	18.25
-5	12.4	19.95

Rh = hydrometer Reading

H = height corresponding to Rh

He = Effective height = H + 0.5*(h -V/A)



Time	Elapsed Time (min)	Hydrometer Reading (Rh)	Temperature (o C)	Composite Correction +/- C	Effective depth h (cm)	Rc1 = Rh + Cm	Sqrt (h/t)	Viscosity (gm/cm2)	Factor M	Particle 'C' (cm) (8) x (10)	Rc2 = Rh + C (3) + (5)	Factor N	% Finner w.r.t Wd F (12) x (13)	% Finner w.r.t total mass (14) x (I)/100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10.30	0.5	24.52	29	-2.0	10.08	25.02	0.580	0.000008341	0.012061601	0.00699153	22.52	4.440	100.00	71.23
	1	24.50	29	-2.0	10.09	25.00	0.410	0.000008341	0.012061601	0.00494550	22.50	4.440	99.91	71.16
	2	24.00	29	-2.0	10.25	24.50	0.292	0.000008341	0.012061601	0.00352583	22.00	4.440	97.69	69.58
	4	23.50	29	-2.0	10.42	24.00	0.208	0.000008341	0.012061601	0.00251336	21.50	4.440	95.47	68.00
	8	23.00	29	-2.0	10.59	23.50	0.149	0.000008341	0.012061601	0.00179139	21.00	4.440	93.25	66.42
	15	23.00	29	-2.0	10.59	23.50	0.108	0.000008341	0.012061601	0.00130825	21.00	4.440	93.25	66.42
	30	22.50	29	-2.0	10.76	23.00	0.077	0.000008341	0.012061601	0.00093234	20.50	4.440	91.03	64.84
	60	22.00	29	-2.0	10.92	22.50	0.055	0.000008341	0.012061601	0.00066436	20.00	4.440	88.81	63.26
	120	21.50	29	-2.0	11.09	22.00	0.039	0.000008341	0.012061601	0.00047335	19.50	4.440	86.58	61.67
	240	21.00	29	-2.0	11.26	21.50	0.028	0.000008341	0.012061601	0.00033722	19.00	4.440	84.36	60.09
	480	20.50	32	-2.0	11.42	21.00	0.020	0.000007821	0.011679547	0.00023261	18.50	4.440	82.14	58.51
	1440	20.27	32	-2.0	11.50	20.77	0.012	0.000007821	0.011679547	0.000134742	18.27	4.440	81.13	57.79

Arki Techno Consultants (India) Pvt.Ltd

ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

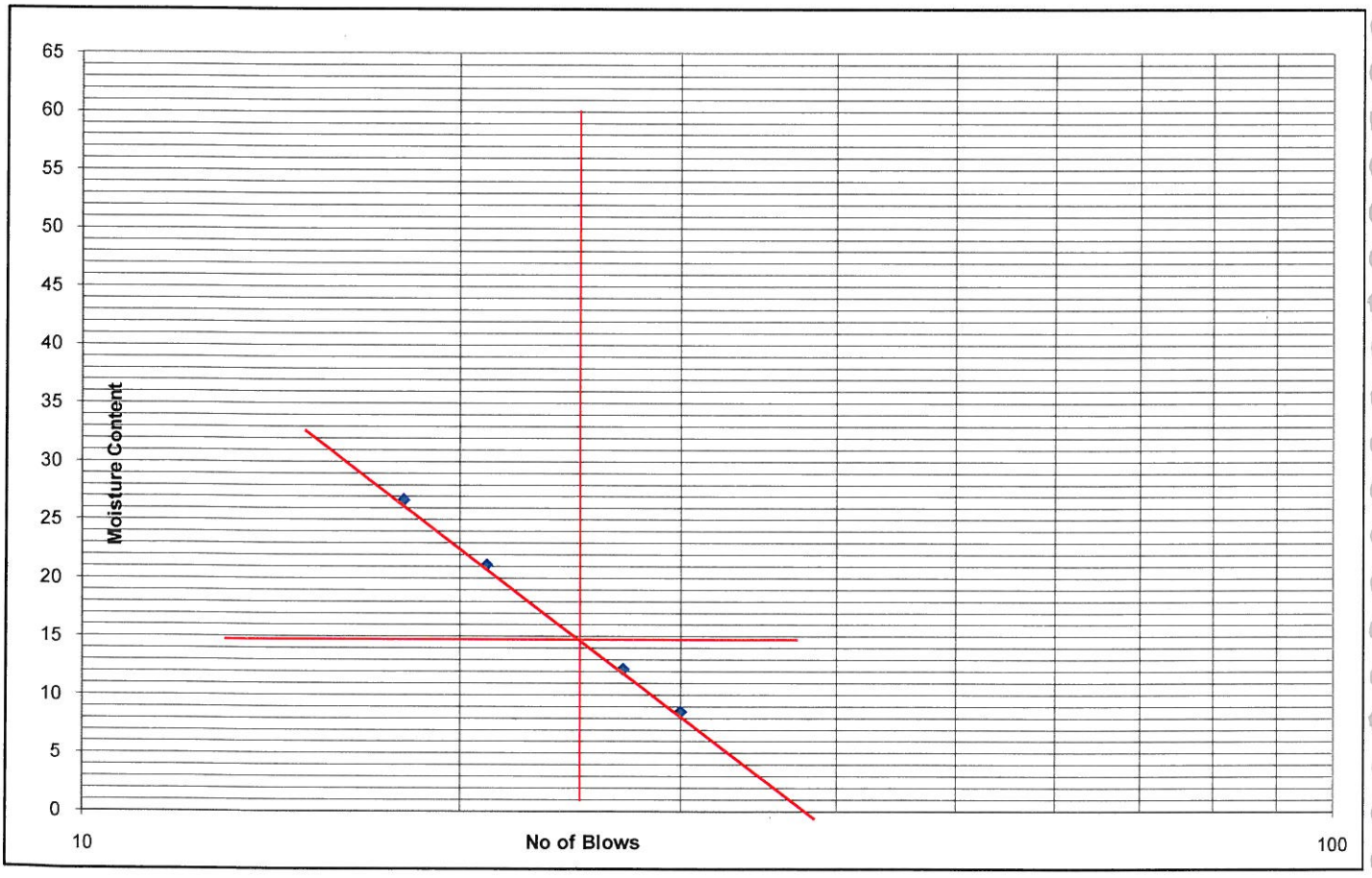
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	1.5m	Tested by	:	D.Mohanty

Number of Blows	30	27	21	18	Plastic Limit	
Container No.	E1	E2	E3	E4	NP	
Container Weight (gm) (W1)	30.48	35.24	37.88	34.61		
Container + Wt. of wet soil (gm) (W2)	82.11	94.81	95.94	101.82		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.03	88.32	85.81	87.66		
Wt. Of water (gm) (W2-W1)-(W3-W1)	4.08	6.49	10.14	14.16		
Wt. of oven dry soil (gm) (W3-W1)	47.55	53.08	47.93	53.05		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**8.57**	**12.23**	**21.15**	**26.69**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

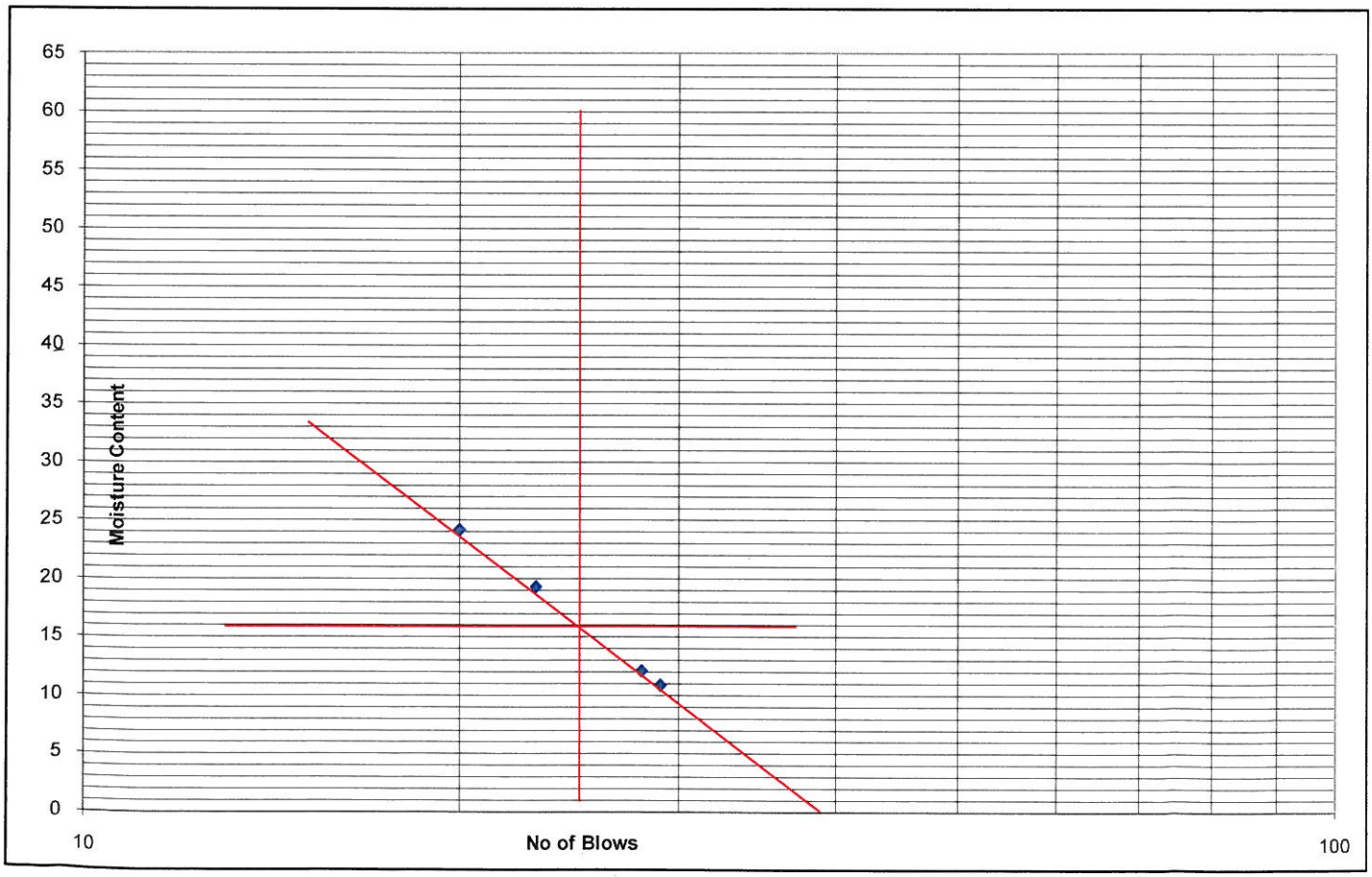
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	3.0m	Tested by	:	D.Mohanty

Number of Blows	29	28	23	20	Plastic Limit	
Container No.	B31	B32	B33	B34	NP	
Container Weight (gm) (W1)	30.8	34.1	32.47	31.56		
Container + Wt. of wet soil (gm) (W2)	83.39	94.81	96.08	101.39		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.23	88.26	85.81	87.82		
Wt. Of water (gm) (W2-W1)-(W3-W1)	5.16	6.55	10.28	13.57		
Wt. of oven dry soil (gm) (W3-W1)	47.43	54.16	53.34	56.26		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**10.87**	**12.10**	**19.27**	**24.13**		

Result Summary

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



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N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

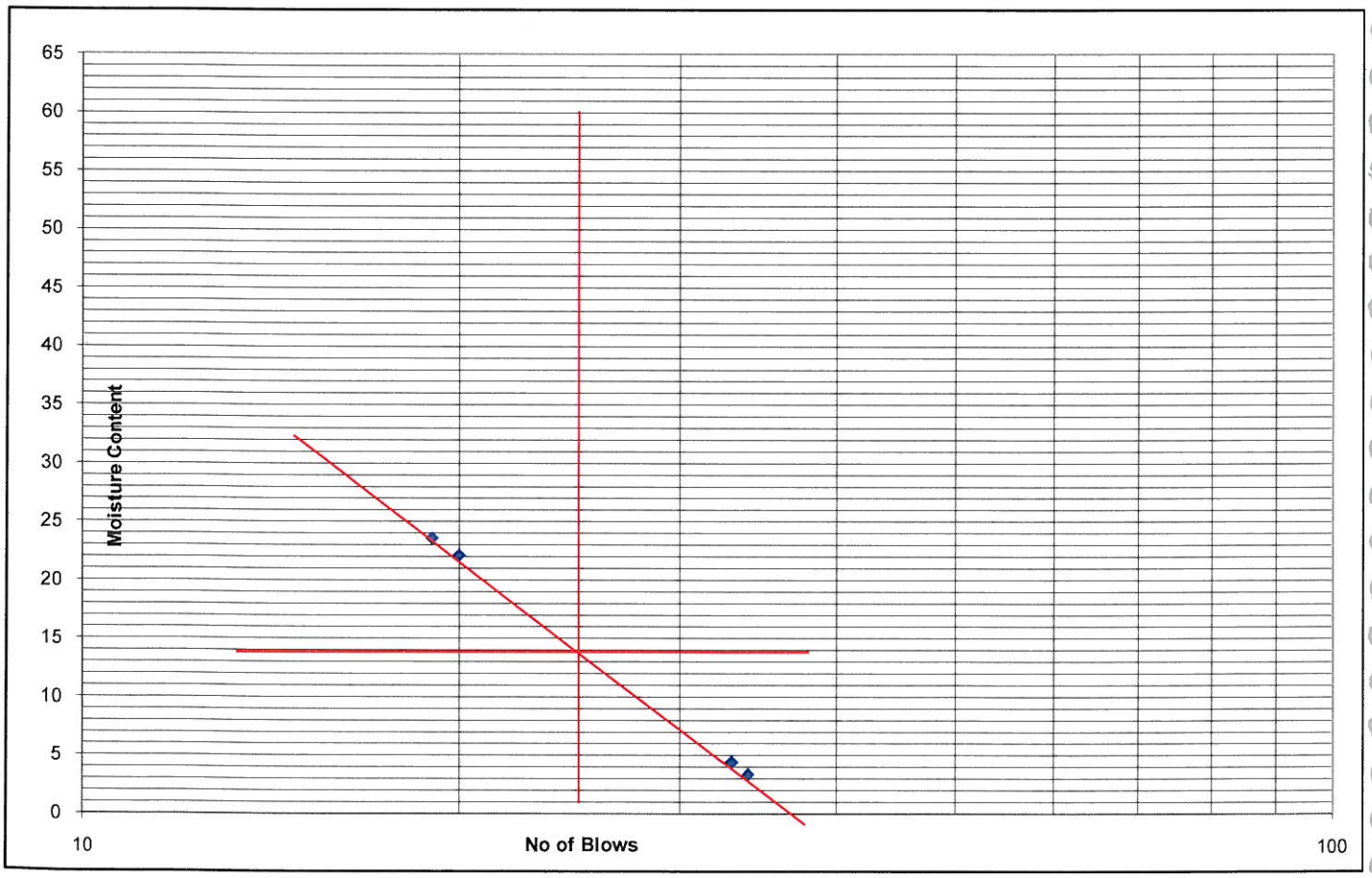
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	4.5m	Tested by	:	D.Mohanty

Number of Blows	34	33	20	19	Plastic Limit	
Container No.	B35	B36	E5	E6	NP	
Container Weight (gm) (W1)	35.65	30.99	35.8	32.51		
Container + Wt. of wet soil (gm) (W2)	79.75	90.79	97.04	101.16		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.31	88.26	85.95	88.06		
Wt. Of water (gm) (W2-W1)-(W3-W1)	1.44	2.53	11.08	13.10		
Wt. of oven dry soil (gm) (W3-W1)	42.66	57.27	50.15	55.55		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**3.37**	**4.41**	**22.10**	**23.58**		

Result Summary

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



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N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

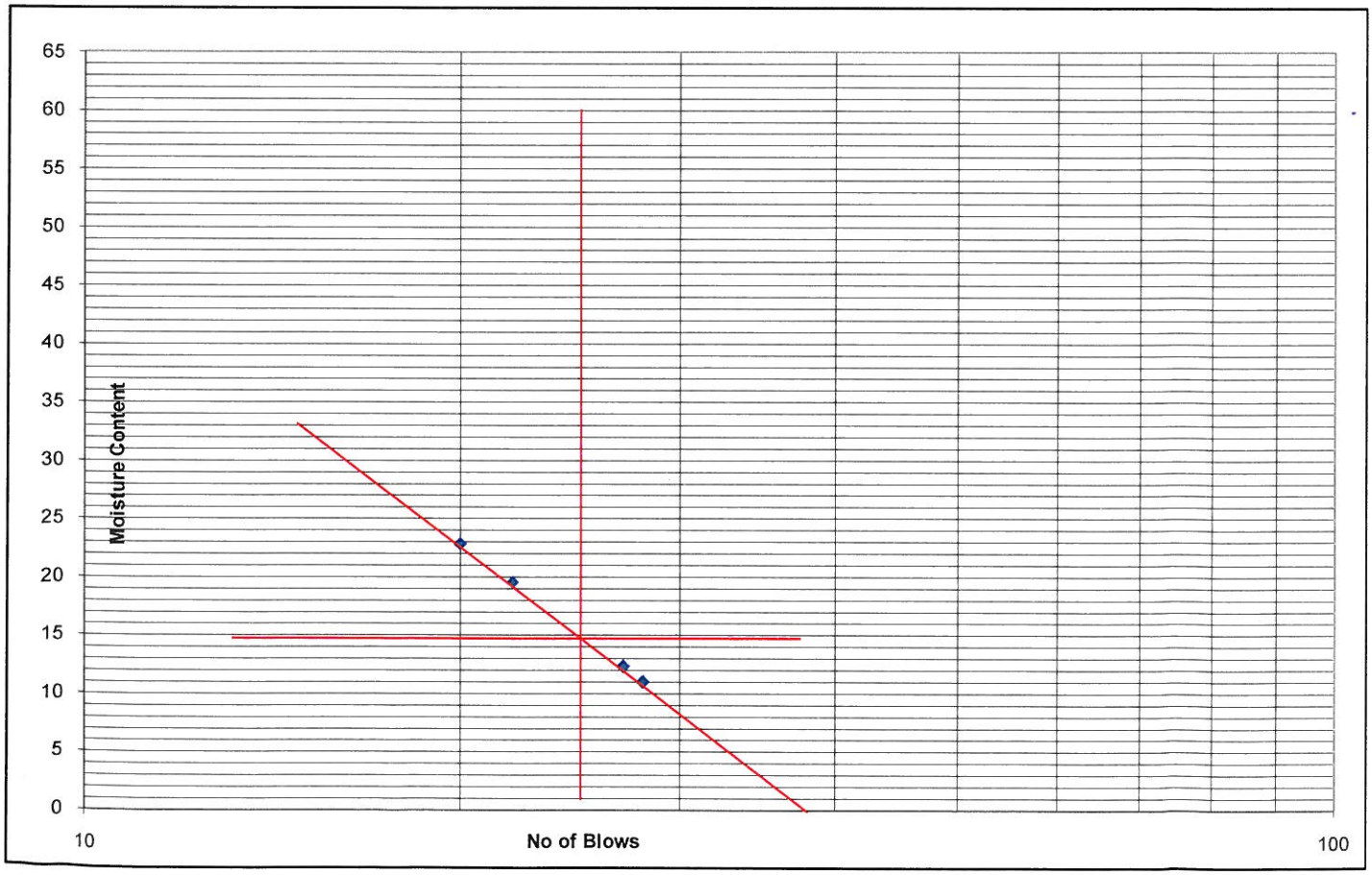
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	6.0m	Tested by	:	D.Mohanty

Number of Blows	28	27	22	20	Plastic Limit	
Container No.	B25	B26	B27	B28	NP	
Container Weight (gm) (W1)	35.22	33.36	31.2	39.42		
Container + Wt. of wet soil (gm) (W2)	82.97	95.05	96.13	99.04		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.23	88.26	85.51	87.95		
Wt. Of water (gm) (W2-W1)-(W3-W1)	4.74	6.79	10.63	11.09		
Wt. of oven dry soil (gm) (W3-W1)	43.01	54.90	54.31	48.53		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**11.02**	**12.37**	**19.57**	**22.84**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

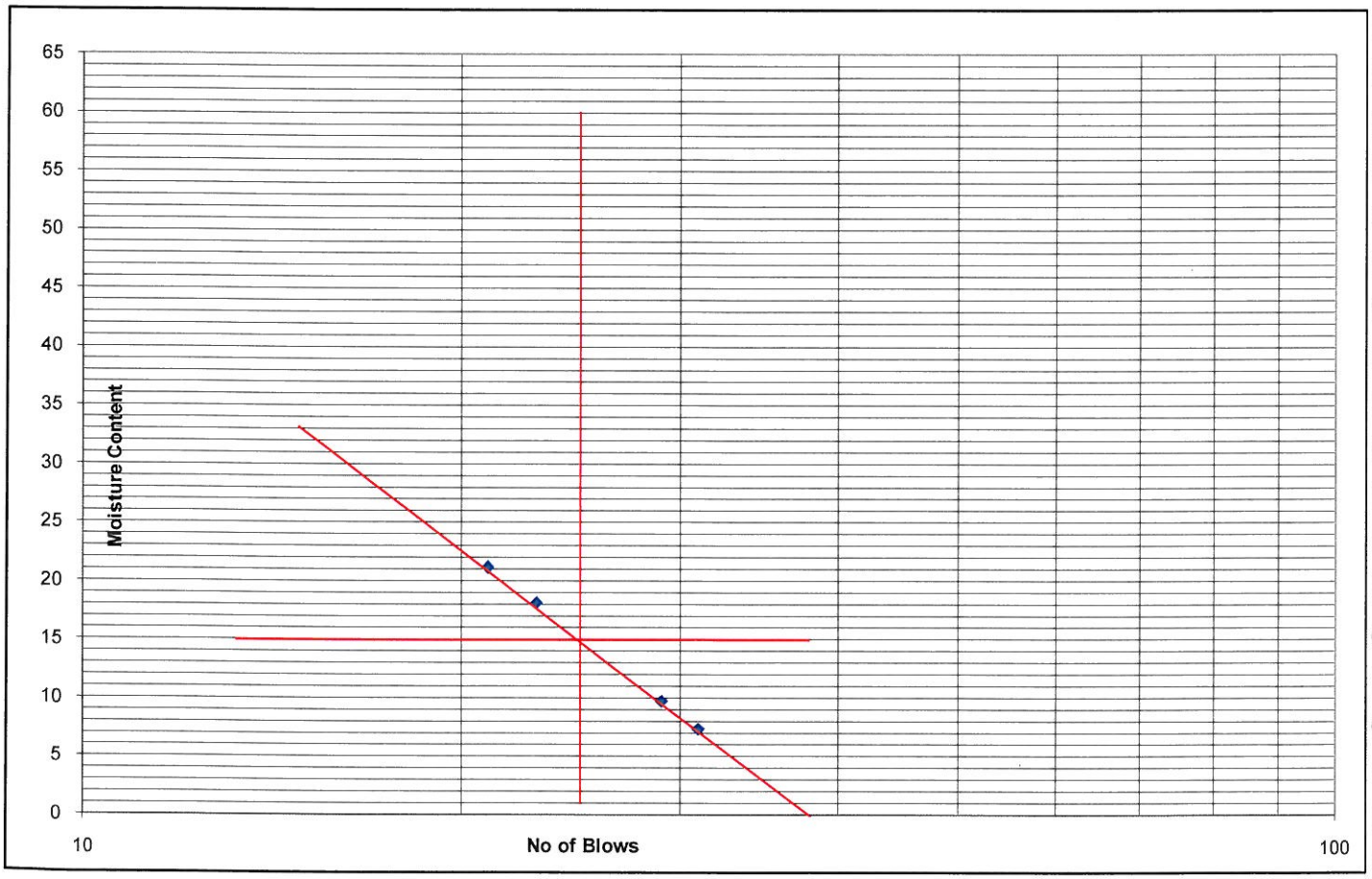
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	9.0m	Tested by	:	D.Mohanty

Number of Blows	31	29	23	21	Plastic Limit	
Container No.	B13	B14	B15	B16	NP	
Container Weight (gm) (W1)	34.46	33.59	32.1	31.29		
Container + Wt. of wet soil (gm) (W2)	81.55	93.78	95.42	101.14		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.32	88.44	85.70	88.96		
Wt. Of water (gm) (W2-W1)-(W3-W1)	3.23	5.34	9.72	12.18		
Wt. of oven dry soil (gm) (W3-W1)	43.86	54.85	53.60	57.67		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**7.37**	**9.74**	**18.14**	**21.13**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

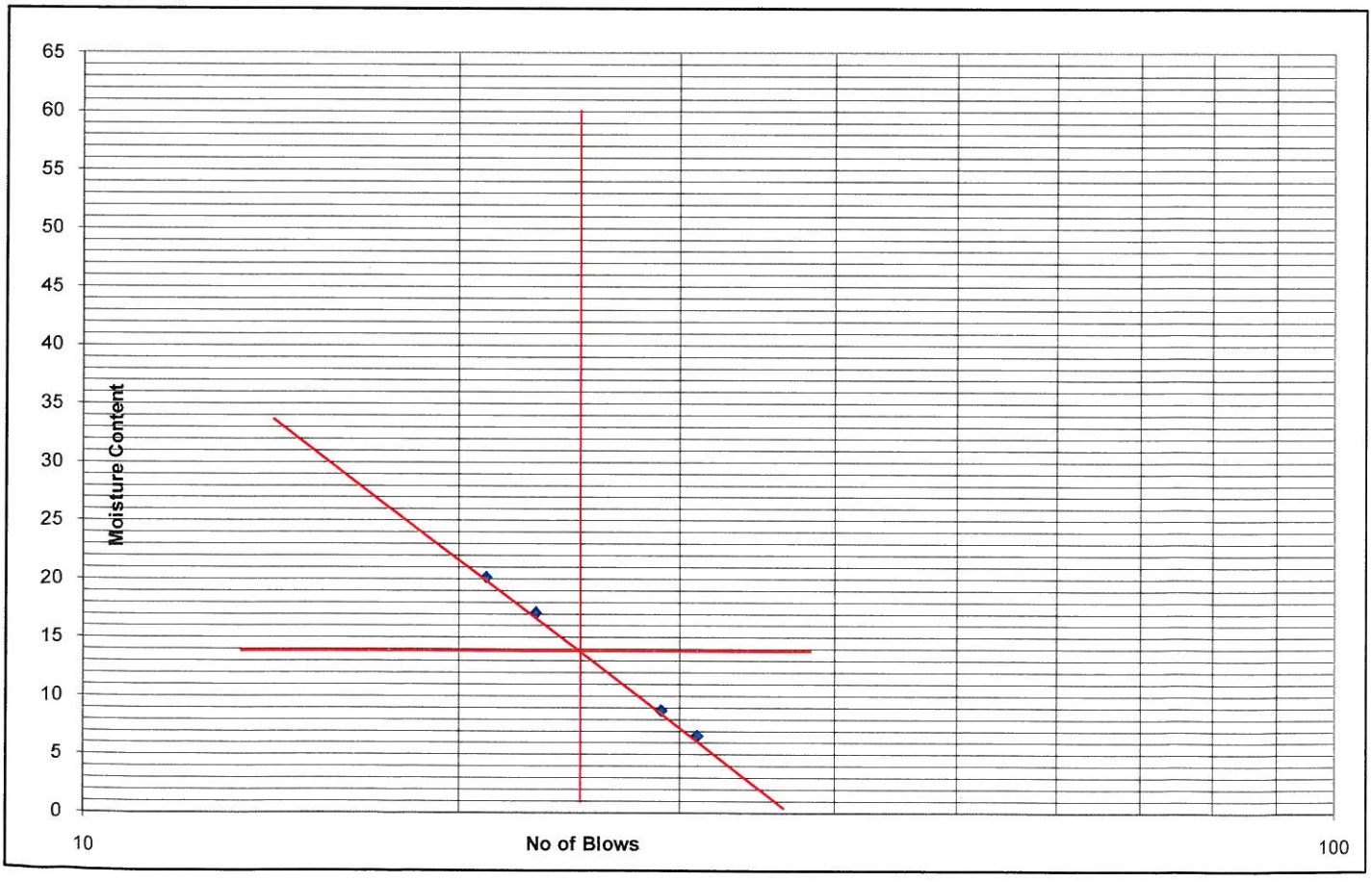
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	10.5m	Tested by	:	D.Mohanty

Number of Blows	31	29	23	21	Plastic Limit	
Container No.	B29	B30	B5	B6	NP	
Container Weight (gm) (W1)	34.86	30.76	31.26	30.57		
Container + Wt. of wet soil (gm) (W2)	81.31	93.56	94.98	100.86		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.43	88.48	85.70	89.07		
Wt. Of water (gm) (W2-W1)-(W3-W1)	2.88	5.07	9.29	11.79		
Wt. of oven dry soil (gm) (W3-W1)	43.57	57.72	54.44	58.50		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**6.61**	**8.79**	**17.06**	**20.15**		

Result Summary

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



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ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

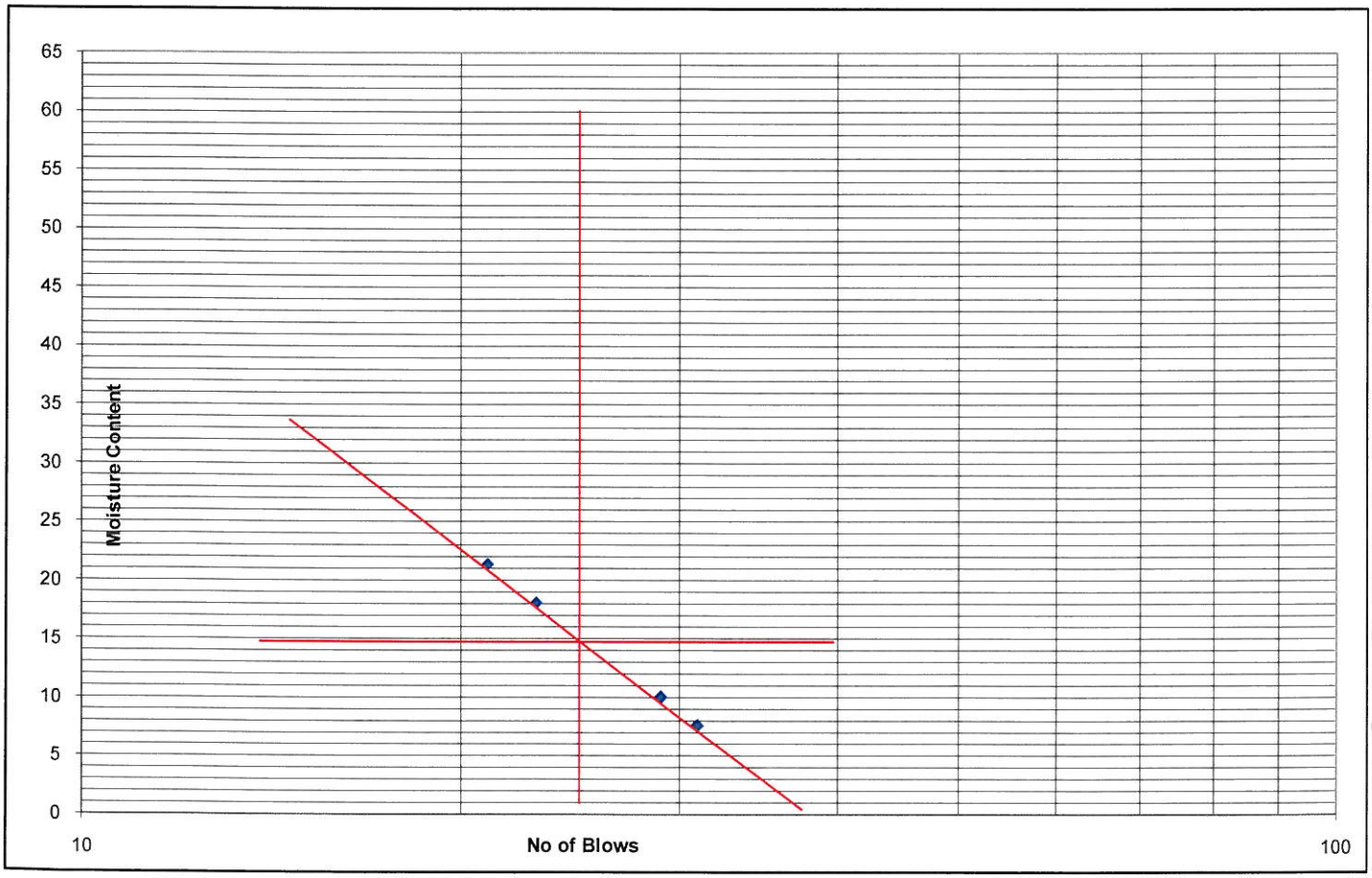
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	13.5m	Tested by	:	D.Mohanty

Number of Blows	31	29	23	21	Plastic Limit	
Container No.	D13	D14	D15	D16	NP	
Container Weight (gm) (W1)	34.4	33.46	32.41	35.31		
Container + Wt. of wet soil (gm) (W2)	81.89	94.19	95.34	100.77		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.53	88.66	85.70	89.25		
Wt. Of water (gm) (W2-W1)-(W3-W1)	3.36	5.53	9.64	11.52		
Wt. of oven dry soil (gm) (W3-W1)	44.13	55.20	53.29	53.94		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**7.61**	**10.02**	**18.10**	**21.36**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

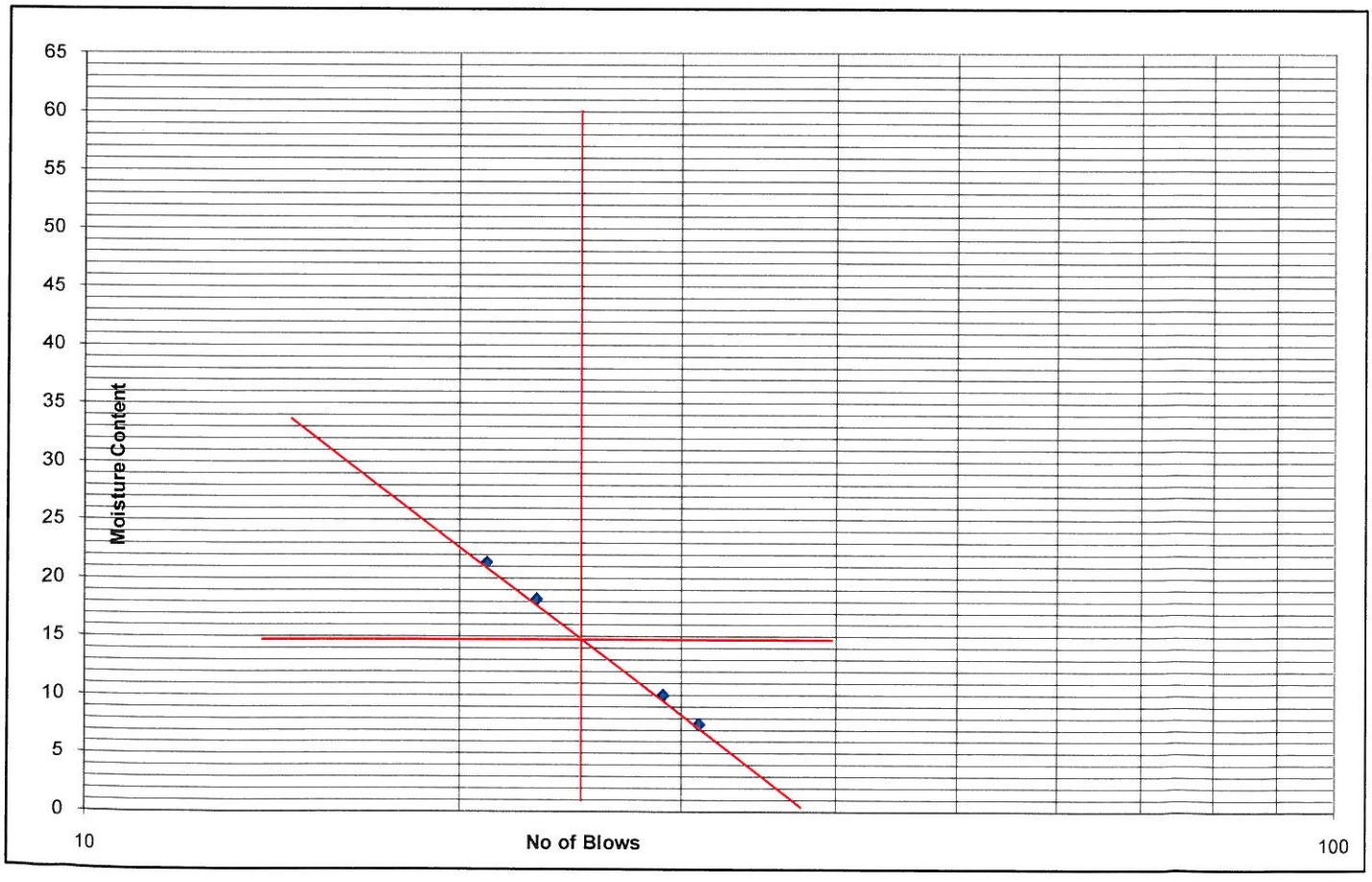
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	30.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	16.5m	Tested by	:	D.Mohanty

Number of Blows	31	29	23	21	Plastic Limit	
Container No.	D37	D38	D39	D40	NP	
Container Weight (gm) (W1)	36.57	32.26	31.04	30.5		
Container + Wt. of wet soil (gm) (W2)	81.62	94.45	95.47	102.51		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.48	88.82	85.57	89.83		
Wt. Of water (gm) (W2-W1)-(W3-W1)	3.14	5.64	9.90	12.68		
Wt. of oven dry soil (gm) (W3-W1)	41.91	56.56	54.53	59.33		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**7.49**	**9.97**	**18.16**	**21.37**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

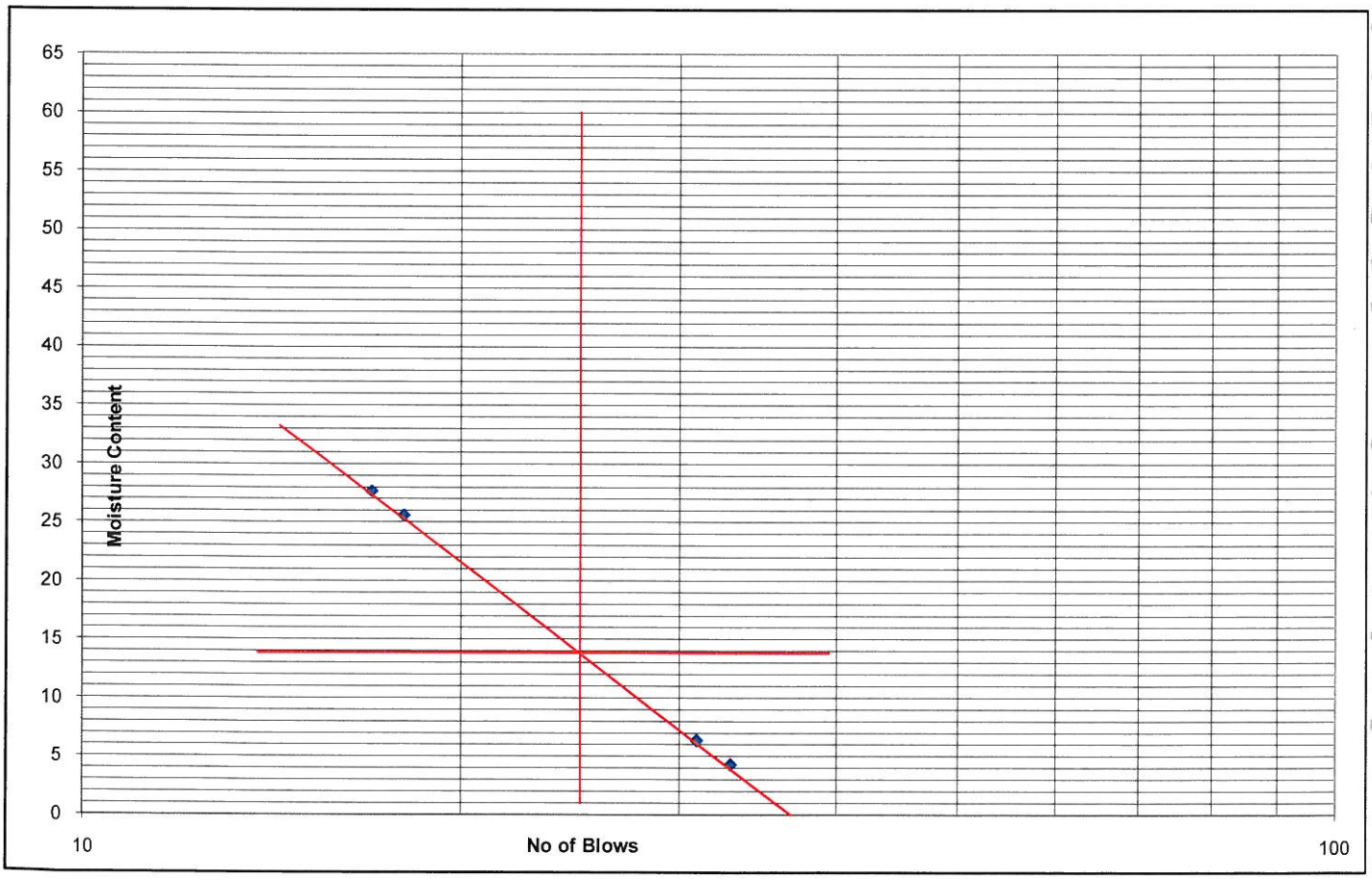
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	30.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	18.0m	Tested by	:	D.Mohanty

Number of Blows	33	31	18	17	Plastic Limit	
Container No.	D19	D20	D21	D22	NP	
Container Weight (gm) (W1)	35.26	31.48	30.11	32.39		
Container + Wt. of wet soil (gm) (W2)	80.40	92.75	100.39	106.02		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.54	89.07	86.08	90.07		
Wt. Of water (gm) (W2-W1)-(W3-W1)	1.87	3.68	14.31	15.95		
Wt. of oven dry soil (gm) (W3-W1)	43.28	57.59	55.97	57.68		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**4.32**	**6.39**	**25.57**	**27.65**		

Result Summary

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



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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

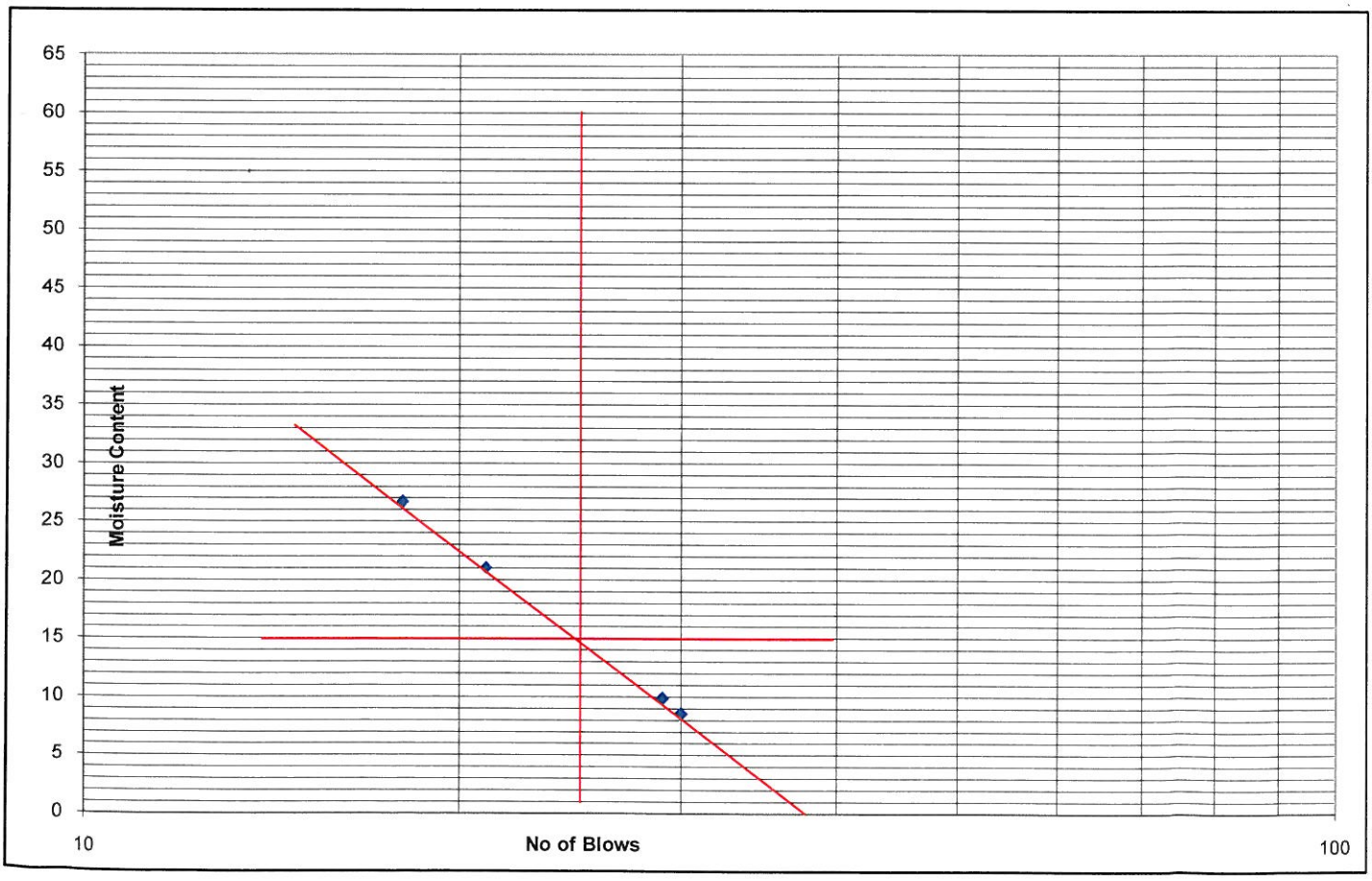
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	29.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	22.5m	Tested by	:	D.Mohanty

Number of Blows	30	29	21	18	Plastic Limit	
Container No.	D23	D24	D5	D6	NP	
Container Weight (gm) (W1)	33.72	34.86	34.68	35.29		
Container + Wt. of wet soil (gm) (W2)	82.00	94.14	96.40	104.22		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.20	88.82	85.66	89.70		
Wt. Of water (gm) (W2-W1)-(W3-W1)	3.81	5.32	10.74	14.52		
Wt. of oven dry soil (gm) (W3-W1)	44.48	53.96	50.98	54.41		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**8.56**	**9.86**	**21.06**	**26.69**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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ARKITECHNO CONSULTANTS (INDIA) PVT. LTD.

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

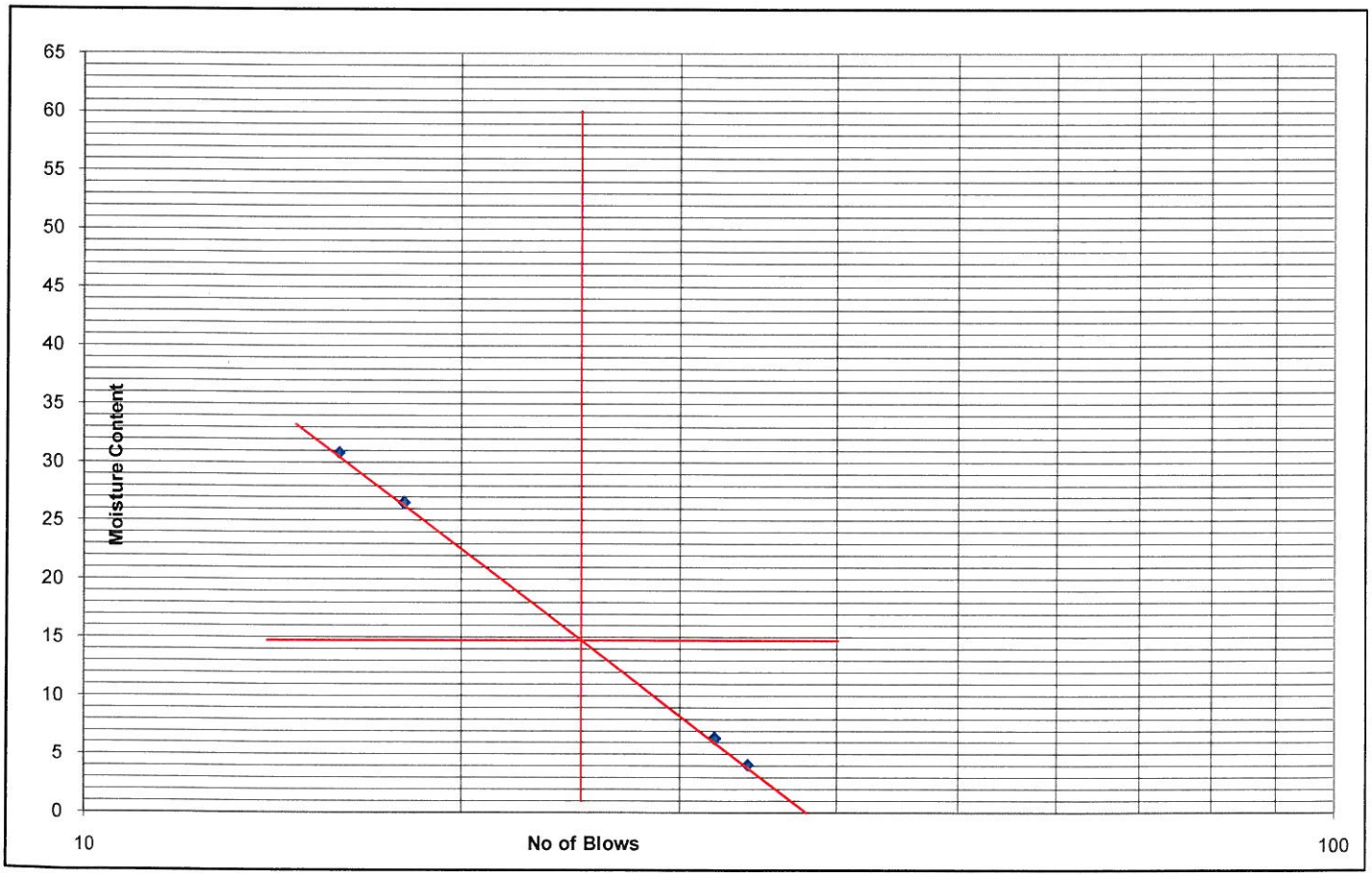
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	30.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	24.0m	Tested by	:	D.Mohanty

Number of Blows	34	32	18	16	Plastic Limit	
Container No.	D25	D26	D29	D31	NP	
Container Weight (gm) (W1)	33.58	34.18	36.84	31.87		
Container + Wt. of wet soil (gm) (W2)	80.60	92.36	95.34	108.08		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.73	88.87	83.07	90.11		
Wt. Of water (gm) (W2-W1)-(W3-W1)	1.86	3.48	12.27	17.96		
Wt. of oven dry soil (gm) (W3-W1)	45.15	54.69	46.23	58.24		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**4.13**	**6.37**	**26.53**	**30.84**		

Result Summary

Liquid Limit (WL)	15	%
Plastic Limit (Wp)	_	%
Plasticity Index (Ip)	_	%



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N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

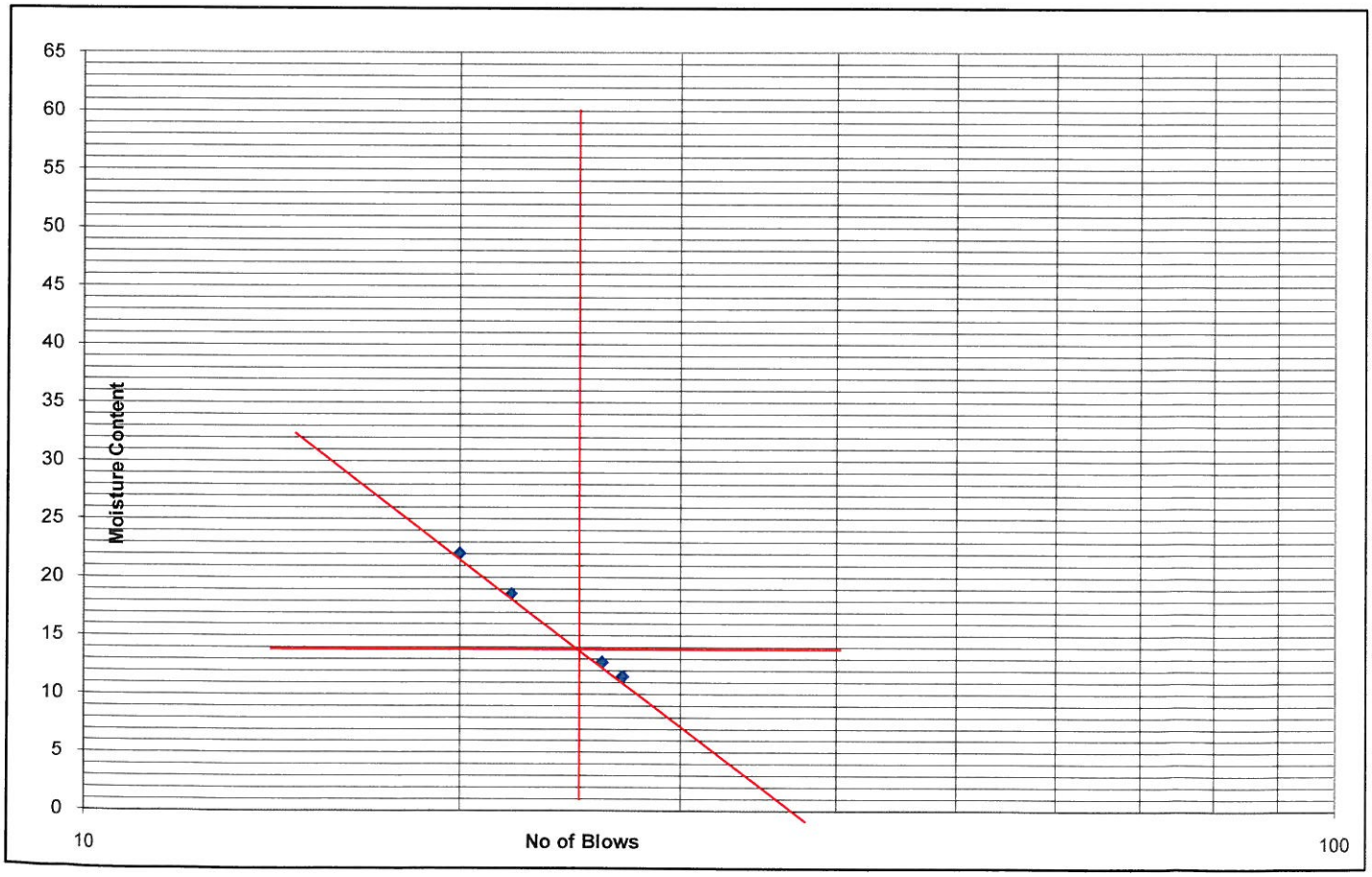
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	30.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	25.5m	Tested by	:	D.Mohanty

Number of Blows	27	26	22	20	Plastic Limit	
Container No.	D7	D8	D9	D10	NP	
Container Weight (gm) (W1)	35.82	31.27	34.13	32.45		
Container + Wt. of wet soil (gm) (W2)	83.79	96.42	92.30	102.96		
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.84	89.07	83.16	90.24		
Wt. Of water (gm) (W2-W1)-(W3-W1)	4.95	7.35	9.14	12.72		
Wt. of oven dry soil (gm) (W3-W1)	43.02	57.80	49.03	57.79		
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**11.51**	**12.72**	**18.63**	**22.02**		

Result Summary

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



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N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

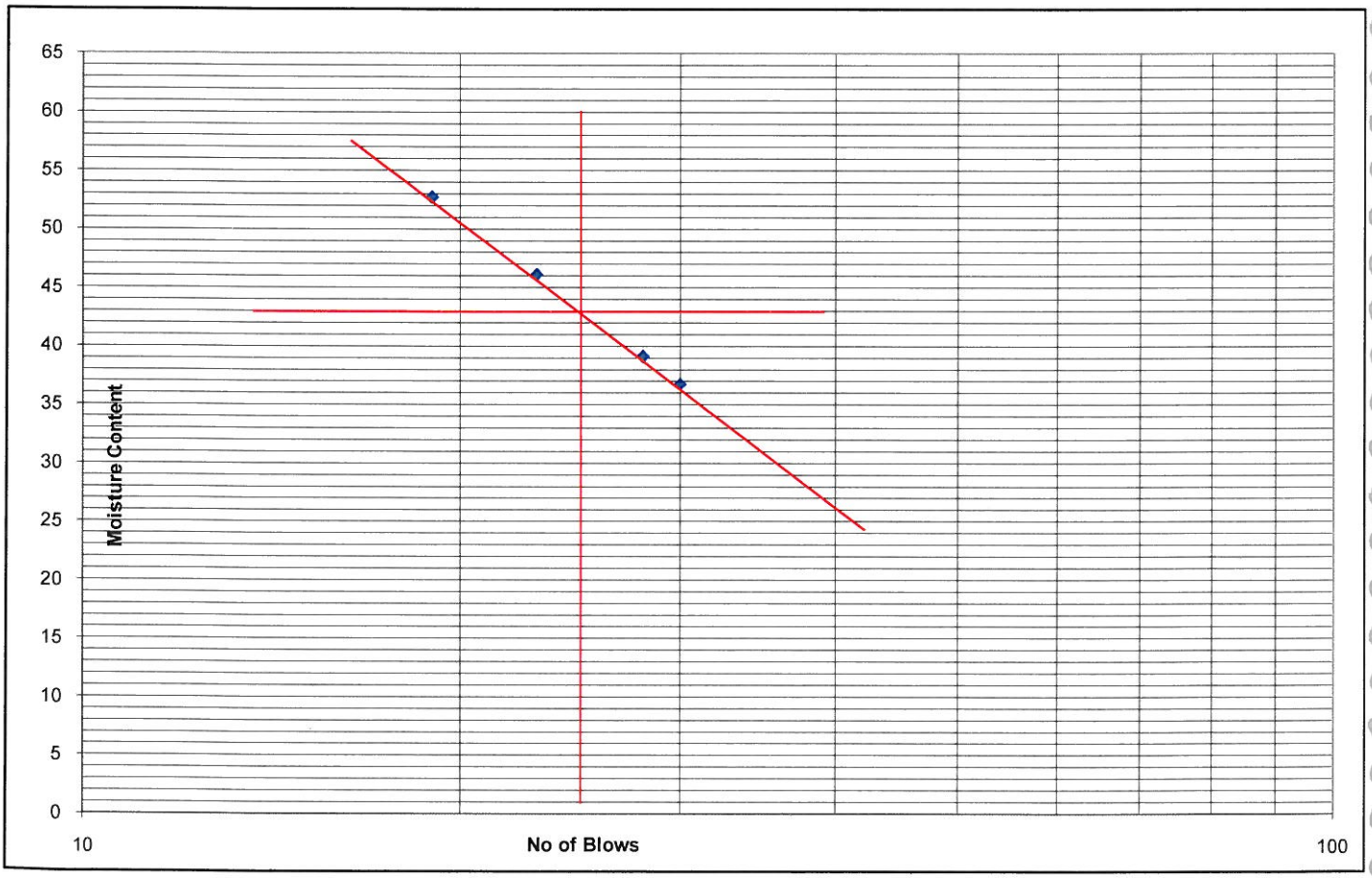
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	30.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	28.5m	Tested by	:	D.Mohanty

Number of Blows	30	28	23	19	Plastic Limit	
Container No.	E19	E20	E21	E22	E23	E24
Container Weight (gm) (W1)	31.69	35.24	37.88	34.61	35.8	32.51
Container + Wt. of wet soil (gm) (W2)	96.24	110.37	103.79	120.66	98.19	99.28
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.89	89.24	83.00	90.97	87.42	88.17
Wt. Of water (gm) (W2-W1)-(W3-W1)	17.35	21.13	20.79	29.69	10.77	11.11
Wt. of oven dry soil (gm) (W3-W1)	47.20	54.00	45.12	56.36	51.62	55.66
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**36.75**	**39.12**	**46.08**	**52.69**	**20.86**	**19.97**

Result Summary

Liquid Limit (WL)	43	%
Plastic Limit (Wp)	20	%
Plasticity Index (Ip)	23	%



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ARKITECHNO

N 3/91, IRC Village, Bhubaneswar

DETERMINATION OF LIQUID LIMIT AND PLASTIC LIMIT

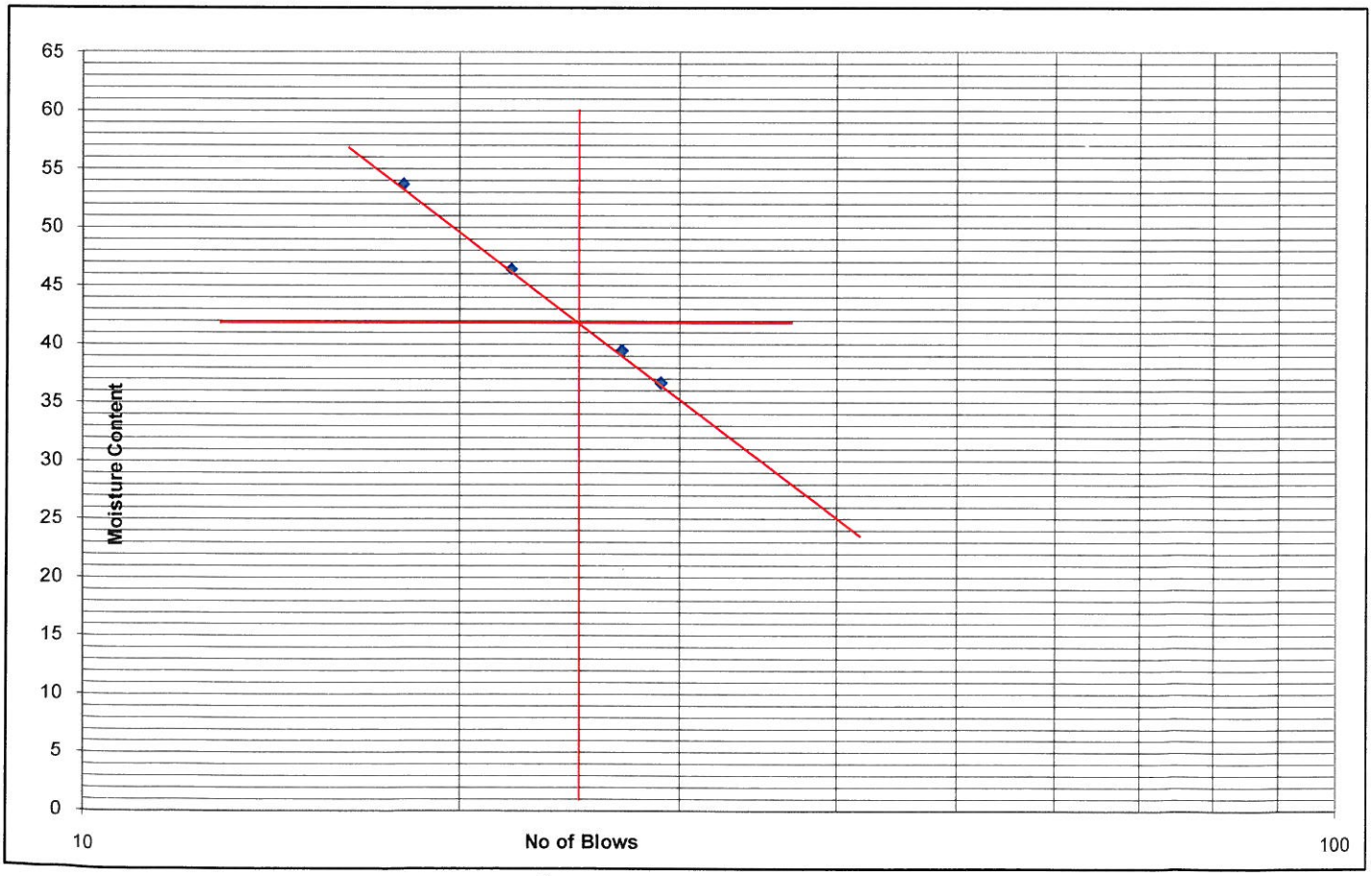
IS : 2720 (Part -5)

Client	:	DFCC			
Project Name	:	G.I For 3 Nos. Important Bridges			
Type of Sample	:	SPT	Date Of Testing	:	30.10.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	30.0m	Tested by	:	D.Mohanty

Number of Blows	29	27	22	18	Plastic Limit	
Container No.	D39	D40	D5	D6	D11	D12
Container Weight (gm) (W1)	31.04	30.5	34.68	35.29	36.48	37.96
Container + Wt. of wet soil (gm) (W2)	96.40	112.72	105.55	120.91	97.60	96.99
Wt of Container + Wt. of oven dry soil (gm) (W3)	78.86	89.48	83.08	91.02	87.53	87.36
Wt. Of water (gm) (W2-W1)-(W3-W1)	17.54	23.24	22.47	29.89	10.07	9.64
Wt. of oven dry soil (gm) (W3-W1)	47.82	58.98	48.40	55.73	51.05	49.40
Moisture Content (%)= [(W2-W1)-(W3-W1)]/(W3-W1) X 100	**36.67**	**39.41**	**46.42**	**53.64**	**19.73**	**19.51**

Result Summary

Liquid Limit (WL)	42	%
Plastic Limit (Wp)	20	%
Plasticity Index (Ip)	22	%



4934

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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	:	29.10.12
Type of Sample	: SPT	Tested by	:	K.C.Sahoo
Location	: BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	: 28.5m	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	13.0	3.00	30	24	50%
2	10	12.2	2.20	22		
3	10	12.0	2.00	20		

Remarks:

4925

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	:	29.10.12	
Type of Sample	: SPT	Tested by	:	K.C.Sahoo	
Location	: BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das	
Depth	: 30.0m	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	13.3	3.30	33	26	50%
2	10	12.5	2.50	25		
3	10	12.0	2.00	20		

Remarks:

4926

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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 : SPT

Location : BH-3(Yamuna River-Ambala)

Depth : 37.5m

Date Of Testing : 29.10.12

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	13.0	3.00	30	22	50%
2	10	12.0	2.00	20		
3	10	11.5	1.50	15		

Remarks:

4927

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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	:	29.10.12
Type of Sample	:	SPT	Tested by	:	K.C.Sahoo
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	39.0m	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	13.0	3.00	30	23	50%
2	10	12.5	2.50	25		
3	10	11.5	1.50	15		

Remarks:

4923

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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	:	27.09.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	1.5m	Tested by	:	D.Mohanty

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	37.81	
3	Weight of bottle with soil and water W3 in gm	136.38	
4	Weight of bottle full of water W4 in gm	132.46	
5	Weight of dry soil (W2-W1)in gm	6.29	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.37	
7	Specific Gravity G = (5) / (6)	2.65	

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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	:	27.09.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	3.0m	Tested by	:	D.Mohanty

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	37.23	
3	Weight of bottle with soil and water W3 in gm	137.22	
4	Weight of bottle full of water W4 in gm	133.67	
5	Weight of dry soil (W2-W1)in gm	5.71	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.16	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	27.09.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	4.5m	Tested by	:	D.Mohanty

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	35.91	
3	Weight of bottle with soil and water W3 in gm	136.93	
4	Weight of bottle full of water W4 in gm	134.20	
5	Weight of dry soil (W2-W1)in gm	4.39	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.66	
7	Specific Gravity G = (5) / (6)	2.65	

4931

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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	:	27.09.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	6.0m	Tested by	:	D.Mohanty

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	38.22	
3	Weight of bottle with soil and water W3 in gm	138.81	
4	Weight of bottle full of water W4 in gm	134.65	
5	Weight of dry soil (W2-W1)in gm	6.70	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	2.54	
7	Specific Gravity G = (5) / (6)	2.64	

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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	:	27.09.12
Location	:	BH-3(Yamuna River-Ambala)	Sampled by	:	T.K.Das
Depth	:	9.0m	Tested by	:	D.Mohanty

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	36.22	
3	Weight of bottle with soil and water W3 in gm	136.89	
4	Weight of bottle full of water W4 in gm	133.97	
5	Weight of dry soil (W2-W1)in gm	4.70	
6	Weight of equal volume of water(W2 - W1) - (W3 - W4) in gm	1.78	
7	Specific Gravity G = (5) / (6)	2.64	

4933