

Project Name					
Client		Contractor		Authority Engineer	
NHAI					
					
INDIVIDUAL GRDATION (40MM)					
Source of Materials			Date of Sampling:-		
Type of Material		:40mm	Date of Testing:-		
Total Weight of Sample (gms):		24850	Sample No .		1
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4
53.0	0	0	0	100	
37.5	280	280	1.13	98.87	
19.0	23240	23520	94.65	5.35	
9.5	1310	24830	99.92	0.08	
4.75					
0.600					
0.300					
0.075					
PAN					
Remarks.....					
EPC Representative			A.E. Representative		

Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (40MM)						
Source of Materials				Date of Sampling:-		
Type of Material		40mm		Date of Testing:-		
Total Weight of Sample (gms):		22000		Sample No .		2
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	380	380	1.73	98.27		
19.0	20995	21375	97.16	2.84		
9.5	425	21800	99.09	0.91		
4.75						
0.600						
0.300						
0.075						
PAN						
Remarks.....						
EPC Representative A.E. Representative						

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (40MM)

Source of Materials		Date of Sampling:-	
Type of Material	40mm	Date of Testing:-	
Total Weight of Sample (gms)	20380	Sample No .	3

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	180	180	0.88	99.12		
19.0	19425	19605	96.20	3.80		
9.5	671	20276	99.49	0.51		
4.75						
0.600						
0.300						
0.075						
PAN						

Remarks.....

EPC Representative

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (40MM)					
Source of Materials :		Date of Sampling:- :			
Type of Material :		40mm	Date of Testing:- :		
Total Weight of Sample (gms) :		21678	Sample No . :		4

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	205	205	0.9	99.1		
19.0	20650	20855	96.20	3.80		
9.5	702	21557	99.44	0.56		
4.75						
0.600						
0.300						
0.075						
PAN						

Remarks.....					
EPC Representative			A.E. Representative		

Project Name:

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (20 MM)

Source of Materials	:		Date of Sampling:-	:	
Type of Material	:	20 mm	Date of Testing:-	:	
Total Weight of Sample (gms)	:	30930	Sample No .	:	1

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0.00	100		
19.0	3340	3340	10.80	89.20		
9.5	27085	30425	98.37	1.63		
4.75	240	30665	99.14	0.86		
0.600						
0.300						
0.075						
PAN						

Remarks.....

EPC Representative

A.E. Representative

Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (20 MM)						
Source of Materials :			Date of Sampling:- :			
Type of Material :		20 mm	Date of Testing:- :			
Total Weight of Sample (gms) :		20200	Sample No . :		2	
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	2855	2855	14.13	85.87		
9.5	17076	19931	98.67	1.33		
4.75	83	20014	99.08	0.92		
0.600						
0.300						
0.075						
PAN						
Remarks.....						
EPC Representative			A.E. Representative			

Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (20 MM)						
Source of Materials :			Date of Sampling:- :			
Type of Material :		20 mm	Date of Testing:- :			
Total Weight of Sample (gms) :		17000	Sample No . :		3	
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	2715	2715	15.97	84.03		
9.5	13940	16655	97.97	2.03		
4.75	208	16863	99.19	0.81		
0.600						
0.300						
0.075						
PAN						
Remarks.....						
EPC Representative				A.E. Representative		

Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (20 MM)						
Source of Materials :			Date of Sampling:- :			
Type of Material :		20 mm	Date of Testing:- :			
Total Weight of Sample (gms) :		16660	Sample No . :		4	
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	2720	2720	16.33	83.67		
9.5	13426	16146	96.92	3.08		
4.75	200	16346	98.12	1.88		
0.600						
0.300						
0.075						
PAN						
Remarks.....						
EPC Representative				A.E. Representative		

Project Details:						
Client		Contractor		Authority Engineer		
NHAI						
						
Source of Materials		Date of Sampling:-				
Type of Material		19 mm		Date of Testing:-		
Total Weight of Sample (gms)		2805		Sample No.:-		1
INDIVIDUAL GRDATION (10MM)						
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0.00	100.00		
19.0	0	0	0.00	100.00		
9.5	134.65	134.65	60.65	39.35		
4.75	8390	28555	94.20	5.80		
0.600	1220	24775	99.08	0.92		
0.300						
0.075						
PAN						
Remarks:.....						
EPC Representative		A.E. Representative				

Project Details:						
Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (10MM)						
Source of Materials		Date of Sampling:-		2020-09-23		
Type of Material		19 mm		Date of Testing:-		2020-09-23
Total Weight of Sample (gms)		19060		Sample No.:-		2
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	0	0	0	100		
9.5	11201	11201	58.77	41.23		
4.75	6680	17881	93.81	6.19		
0.600	985	18866	98.98	1.02		
0.300						
0.075						
PAN						
Remarks:.....						
EPC Representative		A.E. Representative				

Project Details:						
Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (10MM)						
Source of Materials		Date of Sampling:-		2020-09-23		
Type of Material		19 mm		Date of Testing:-		2020-09-23
Total Weight of Sample (gms)		16480		Sample No.:-		3
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	0	0	0	100		
9.5	9792	9792	59.42	40.58		
4.75	5729	15521	94.18	5.82		
0.600	745	16266	98.70	1.30		
0.300						
0.075						
PAN						
Remarks:.....						
EPC Representative		A.E. Representative				

Project Details:						
Client		Contractor		Authority Engineer		
NHAI						
						
INDIVIDUAL GRDATION (10MM)						
Source of Materials		Date of Sampling:-				
Type of Material		19 mm		Date of Testing:-		
Total Weight of Sample (gms)		17903		Sample No.:-		4
Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	0	0	0	100		
9.5	8250	8250	58.01	40.99		
4.75	4980	13230	94.64	5.36		
0.600	568	13798	98.70	1.30		
0.300						
0.075						
PAN						
Remarks:.....						
EPC Representative		A.E. Representative				

Project Details:

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (Stone Dust)

Source of Materials		Date of Sampling:-	
Type of Material	Dust	Date of Testing:-	
Total Weight of Sample (gms):-	1000	Sample No .	1

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0.00	100.00		
19.0	0	0	0.00	100.00		
9.5	0	0	0.00	100.00		
4.75	0	0	0.00	100.00		
0.600	422	422	42.20	57.80		
0.300	139	561	56.10	43.90		
0.075	345	906	90.60	9.40		
PAN						

Remarks.....

EPC Representative

A.E. Representative

Project Details:

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (Stone Dust)

Source of Materials		Date of Sampling	
Type of Material	Sand	Date of Testing:-	
Total Weight of Sample (gms):-	1000	Sample No .	2

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	0	0	0	100		
9.5	0	0	0.00	100.00		
4.75	0	0	0.00	100.00		
0.600	460	460	46.00	54.00		
0.300	129	589	58.90	41.10		
0.075	326	915	91.50	8.50		
PAN						

Remarks.....

EPC Representative

A.E. Representative

Project Details:

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (STONE DUST)

Source of Materials		Date of Sampling	
Type of Material	Dust	Date of Testing:-	
Total Weight of Sample (gms):-	1000	Sample No .	3

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	0	0	0	100		
9.5	0	0	0	100		
4.75	0	0	0	100		
0.600	486	486	48.6	51.4		
0.300	138	624	62.4	37.6		
0.075	301	925	92.50	7.50		
PAN						

Remarks.....

EPC Representative

A.E. Representative

Project Details:

Client	Contractor	Authority Engineer
NHAI		
		

INDIVIDUAL GRDATION (STONE DUST)

Source of Materials		Date of Sampling	
Type of Material	Dust	Date of Testing:-	
Total Weight of Sample (gms):-	1000	Sample No .	4

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Specification Limits as per MORT&H 400-4	
53.0	0	0	0	100		
37.5	0	0	0	100		
19.0	0	0	0	100		
9.5	0	0	0.00	100.00		
4.75	0	0	0.00	100.00		
0.600	489	489	48.90	51.10		
0.300	140	629	62.90	37.10		
0.075	288	917	91.70	8.30		
PAN						

Remarks.....

EPC Representative

A.E. Representative

Client	Contractor	Authority Engineer
NHAI		
		

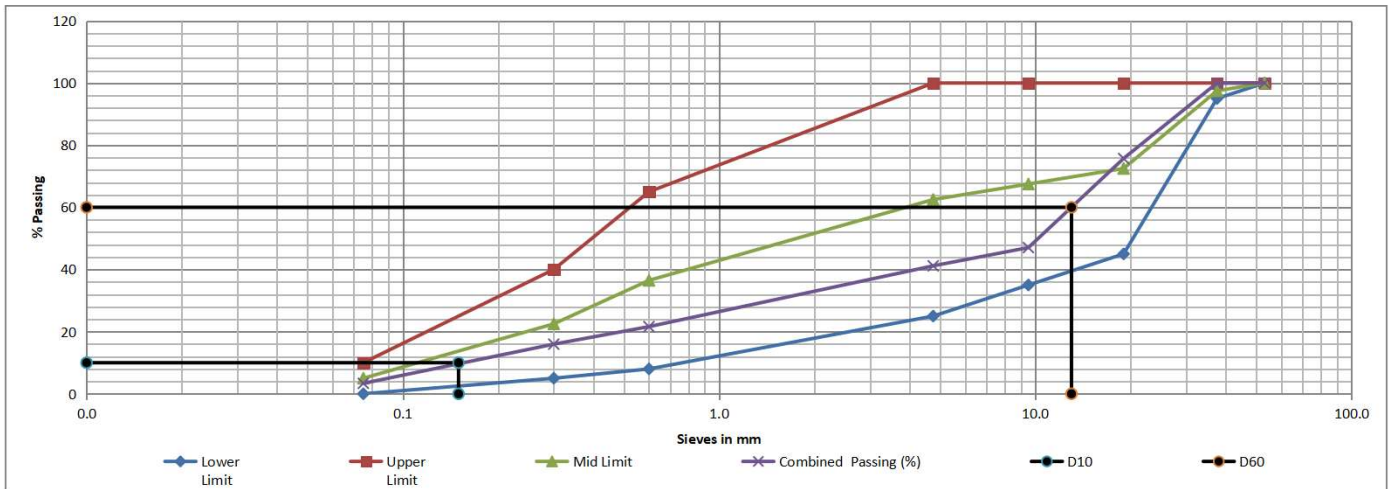
AVERAGE % PASSING

A. 40MM					
Sieves in mm	Sample No. 01	Sample No. 02	SampleNo.03	Sample No.04	Average
53.0	100	100	100	100	100
37.5	98.87	98.27	99.12	99.05	98.83
19.0	5.35	2.84	3.80	3.80	3.95
9.5	0.08	0.91	0.51	0.56	0.51
4.75					
0.600					
0.300					
0.075					
B. 20MM					
Sieves in mm	Sample No. 01	Sample No. 02	SampleNo.03	Sample No.04	Average
53.0	100	100	100	100	100
37.5	100	100	100	100	100
19.0	89.20	85.87	84.03	83.67	85.69
9.5	1.63	1.33	2.03	3.08	2.02
4.75	0.86	0.92	0.81	1.88	1.12
0.600					
0.300					
0.075					
C. 10MM					
Sieves in mm	Sample No. 01	Sample No. 02	SampleNo.03	Sample No.04	Average
53.0	100	100	100	100	100
37.5	100	100	100	100	100
19.0	100	100	100	100	100
9.5	39.35	41.23	40.58	40.99	40.54
4.75	5.80	6.19	5.82	5.36	5.79
0.600	0.92	1.02	1.30	1.30	1.13
0.300					
0.075					
D.Sand					
Sieves in mm	Sample No. 01	Sample No. 02	SampleNo.03	Sample No.04	Average
53.0	100	100	100	100	100
37.5	100	100	100	100	100
19.0	100	100	100	100	100
9.5	100	100	100	100	100
4.75	100.00	100.00	100.00	100.00	100
0.600	57.80	54.00	51.40	51.10	53.58
0.300	43.90	41.10	37.60	37.10	39.93
0.075	9.40	8.50	7.50	8.30	8.43

Client	Contractor	Authority Engineer
NHAI		
		

CTB mix design Blending

Sieve Size	40MM	20MM	10MM	Stone Dust	Cement	40MM	20MM	10MM	Stone Dust	Combined Passing (%)	Lower Limit	Mid Limit	Upper Limit
						22%	22%	16.0%	40%	100%			
53.0	100	100	100	100	100.00	22.00	22.00	16.00	40.00	100.0	100	100	100
37.5	98.83	100	100	100	100.00	21.74	22.00	16.00	40.00	99.7	95	97.5	100
19.0	3.95	85.69	100	100	100.00	0.87	18.85	16.00	40.00	75.7	45	72.5	100
9.5	0.51	2.02	40.54	100	100.00	0.11	0.44	6.49	40.00	47.0	35	67.5	100
4.75	0	1.12	5.79	100	100.00	0.00	0.25	0.93	40.00	41.2	25	62.5	100
0.600	0	0	1.13	53.58	100.00	0.00	0.00	0.18	21.43	21.6	8	36.5	65
0.300	0	0	0	39.93	100.00	0.00	0.00	0.00	15.97	16.0	5	22.5	40
0.075	0	0	0	8.43	1.50	0.00	0.00	0.00	3.37	3.4	0	5	10



Determination of Uniformity Co-efficient (Cu)				
D60	13.0	D60/D10	86.67	> 5
D10	0.15			

EPC Representative

A.E. Representative

Client

Contractor

Authority Engineer

NHAI



CEMENT TREATED BASE MORT&H TABLE 400-4

SOURCES

40MM	:
20MM	:
10MM	:
STONE DUST	:
CEMENT	:

INDEX

SR NO.	DESCRIPTION
1	Summay of CTB Mix Design
2	Individual Grading of Coarse & Fine Aggregate
3	Average Grading of Coarse & Fine Aggregate
4	Combined Gradation & C_u of CTB Mix
5	Water Absorption of 40MM, 20MM, 10MM & Stone Dust
6	Atterberg Limit
7	Aggregate Impact Value
8	Proctor Test
9	UCS/Compressive Strength



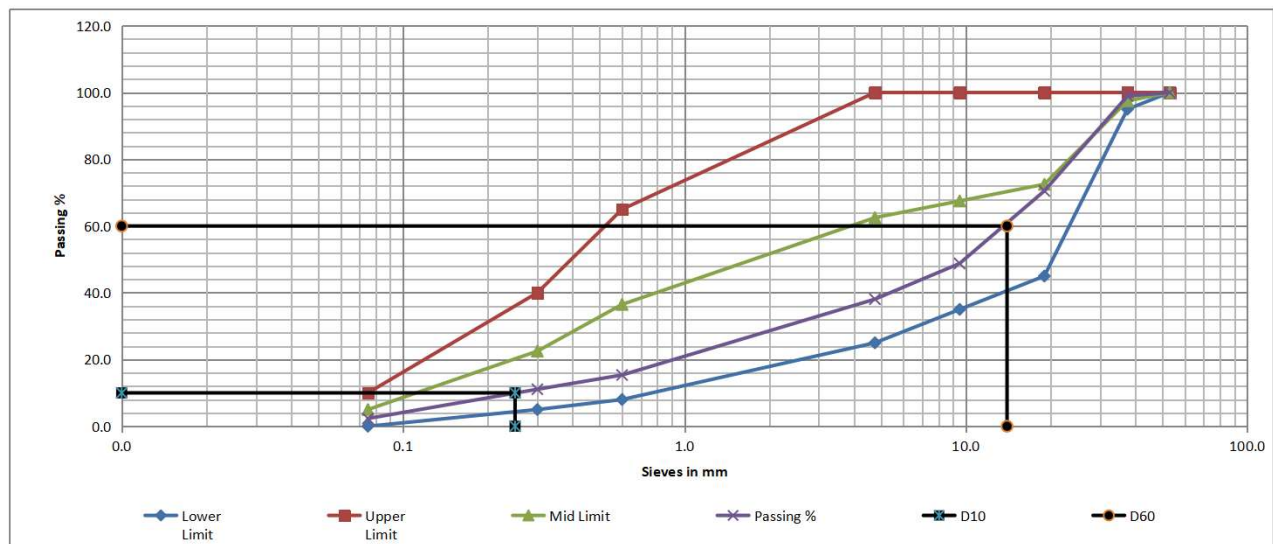
Project Details				
Client		Contractor		Authority Engineer
NHAI				
				
CEMENT TREATED BASE SUMMARY				
PROPORTIONS				
1	40MM	22%		
2	20M	22%		
3	10MM	16%		
4	STONE DUST	40%		
5	Cement Content	3.5% by weight	Shree Cement OPC43	More than 2.0%
PHYSICAL TEST SUMMARY				
Sr. No.	Description	Reference	Test Result	Within Specification Limit
1	Uniformity Coefficient (Cu)	MORT&H (Clause 403.2.1)	56.00	Min. 5
2	M.D.D (gm/cc)	IS:2720 (PART-VIII)	2.240	-
3	O.M.C (%)	IS:2720 (PART-VIII)	6.80	-
4	Liquid Limit (%)	IS:2720 (PART-V)	22.81	Max. 45%
5	Plasticity Index (%)	IS:2720 (PART-V)	N/A	Max. 20%
6	40 mm Water Absorption(%)	IS:2386 (PART-III)	0.56	Max. 2%
7	20 mm Water Absorption(%)	IS:2386 (PART-III)	0.62	Max. 2%
8	10 mm Water Absorption(%)	IS:2386 (PART-III)	0.92	Max. 2%
9	Stone Dust Water Absorption(%)	IS:2386 (PART-III)	1.56	Max. 2%
10	Aggregate Impact Value	IS:2386 (PART-IV)	22.15	-
11	UCS/Compressive Strength	IRC:37:2018	5.70	4.5 Mpa to 7.0 Mpa.
EPC Contractor's Representative				
AE's Representative				

Client	Contractor	Authority Engineer
NHAI		
		

COMBINED GRADATION FOR CTB AS PER MORT&H TABLE 400-4

Date of Sampling:	Date of Testing
Total Weight(gms): 40000	Type of Material : CTB Mix

Sieve Size (mm)	Retained wt. (gms)	Cum. Retained wt (gms)	Cum.Retained (%)	Passing (%)	Lower Limit	Mid Limit	Upper Limit
53.0	0	0	0	100	100.0	100.0	100.0
37.5	420	420	1.05	98.95	95.0	97.5	100.0
19.0	11375	11795	29.49	70.51	45.0	72.5	100.0
9.5	8695	20490	51.23	48.78	35.0	67.5	100.0
4.75	4280	24770	61.93	38.08	25.0	62.5	100.0
0.600	9090	33860	84.65	15.35	8.0	36.5	65.0
0.300	1710	35570	88.93	11.08	5.0	22.5	40.0
0.075	3500	39070	97.68	2.33	0.0	5.0	10.0



Determination of Uniformity Co-efficient (Cu)				
D60	14	D60/D10	56.00	> 5
D10	0.25			

EPC Representative

A.E. Representative

Client	Contractor		Authority Engineer	
NHAI				
				
<u>SPECIFIC GRAVITY AND WATER ABSORPTION TEST OF COARSE AGGREGATE</u> (As Per IS: 2386, Part-III)				
Sample No	: 01	Date of Sampling		
Location of Sampling	: Stock Pile (Base Camp)	Date of Testing		
Source of Material		Location		
Type of Material	: 40 MM Aggregate	Used for	: CTB	
Sr.No	Description	1	2	MEAN
A	Weight of Oven dry sample	2054.0	2066.0	
B	Wt. Of S.S.D. Sample in air	2066	2077.0	
C	Wt. Of Sample in Water	12.0	11.0	
5	Water absorption = $100(B-A)/A$	0.58	0.53	0.56
Remarks : 0.56 % < 2% Hence OK				
EPC Representative		A.E. Representative		

Client		Contractor		Authority Engineer
NHAI				
				
<u>SPECIFIC GRAVITY AND WATER ABSORPTION TEST OF COARSE AGGREGATE</u> (As Per IS: 2386, Part-III)				
Sample No	1	Date of Sampling		
Location of Sampling	Stock Pile (Base camp)	Date of Testing		
Source of Material		Location		
Type of Material	20 MM Aggregate	Used for	: CTB	
Sr.No	Description	1	2	MEAN
A	Weight of Oven dry sample (gm)	796.1	800.0	
B	Wt. Of S.S.D. Sample in air (gm)	800	806.0	
C	Wt. Of Sample in Water (gm.)	3.9	6.0	
5	Water absorption = $100(B-A)/A$	0.49	0.75	0.62
Remarks : 0.62 % < 2% Hence OK				
EPC Representative A.E. Representative				

Client	Contractor		Authority Engineer	
NHAI				
				
<u>SPECIFIC GRAVITY AND WATER ABSORPTION TEST OF COARSE AGGREGATE</u> (As Per IS: 2386, Part-III)				
Sample No	1	Date of Sampling		
Location of Sampling	Stock Pile (Base camp)	Date of Testing		
Source of Material		Location		
Type of Material	10 MM Aggregate	Used for	: CTB	
Sr.No	Description	1	2	MEAN
A	Weight of Oven dry sample	524.0	604.6	
B	Wt. Of S.S.D. Sample in air	529	610.0	
C	Wt. Of Sample in Water	5.0	5.4	
5	Water absorption = $100(B-A)/A$	0.95	0.89	0.92
Remarks : 0.92% < 2% Hence OK				
EPC Representative		A.E. Representative		

Client	Contractor	Authority Engineer
NHAI		
		

SPECIFIC GRAVITY AND WATER ABSORPTION TEST OF COARSE & FINE AGGREGATE
(As Per IS: 2386, Part-III)

Sample No 1 Date of Sampling

Location of Sampling Stock Pile (Base camp) Date of Testing

Source of Material Location

Type of Material Stone Dust Used for : CTB

Sr.No	Description	1	2	MEAN
A	Weight of Oven dry sample	507.0	517.0	
B	Wt. Of S.S.D. Sample in air	515	525.0	
C	Wt. Of Sample in Water	8.0	8.0	
5	Water absorption = $100(B-A)/A$	1.58	1.55	1.56

Remarks : **1.56%** < **2%** Hence OK

EPC Representative

A.E. Representative

Client	Contractor	Authority Engineer	
NHAI			
			
<u>AGGREGATE IMPACT VALUE TEST</u> (As per IS 2386, (Part-IV))			
Lab Job No.		Date of Sampling	
Type of Material	Passing 12.5 mm & Retained 10.0mm IS Sieve	Sampled by	Jointly
Source of Material		Date of Testing	
Location	Stock Pile (Base camp)	Tested by	Jointly
Proposed Use	CTB		
Description/Trial No:	1	2	3
(A) Weight of Aggregate before Testing (gm)	305.0	315.0	310.0
(B) Weight of Aggregate retained on 2.36mm sieve (gm)	238.0	243.0	243.0
(C) Weight of Aggregate passing through 2.36mm sieve (gm)	67.0	72.0	67.0
Aggregate Impact Value (%) C/A * 100	21.97	22.86	21.61
AVERAGE IMPACT VALUE (%)	22.15		
Remarks:			
EPC Contractor's Representative		AE's Representative	

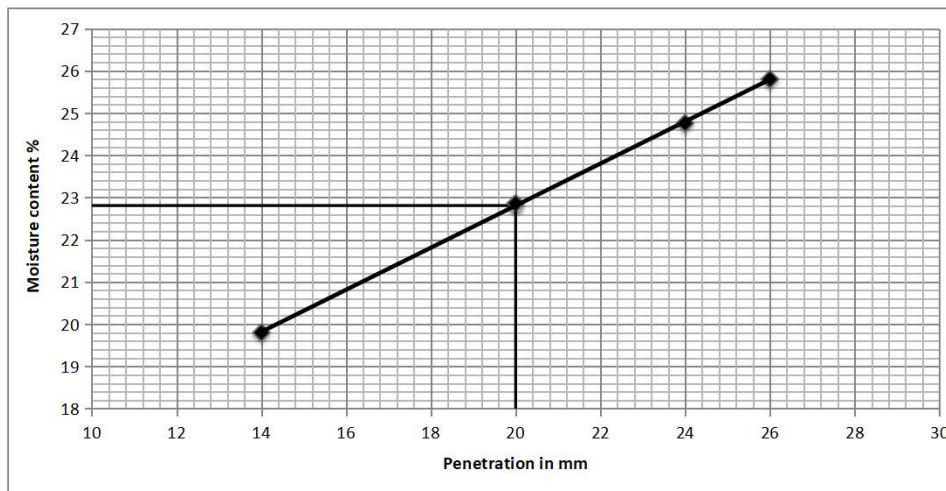
Client NHAI	Contractor	Authority Engineer
		

ATTERBERG LIMIT
(As per IS 2720, Part - 5)

Sample No.	01	Date of Sampling	
Location of Sampling	Stock Pile (Base camp)	Sampled By	Jointly
Source of Material		Date of Testing	
Type of Material	Stone dust	Tested By	Jointly

Cone Penetrometer

Sr no.	Description		LIQUID LIMIT (LL), %				PLASTIC LIMIT (PL), %		
			1	2	3	4	1	2	3
	Determination NO.	Unit							
1	Penetration in mm		14	20	24	26			
2	Container No.		1	2	3	4			
3	Wt. of Container + Wet Soil	gms.	53.82	53.38	51.63	52.71			
4	Wt. of Container + Dry Soil	gms.	48.83	47.86	46.04	46.74			
5	Wt. of Container	gms.	23.61	23.73	23.48	23.60			
6	Wt. of Water (3 - 4)	gms.	4.99	5.52	5.59	5.97			
7	Wt. of Dry Soil (4 - 5)	gms.	25.22	24.13	22.56	23.14			
8	Moisture Content, % ((6/7)x100)	gms.	19.80	22.86	24.76	25.80			



Liquid Limit (LL), % 22.81
(MAX 45 %)

Plastic Limit (PL), % N/A

Plasticity Index (PI) % N/P
(MAX 20%)

EPC Representative

A.E. Representative

Client

NHAI



Contractor

Authority Engineer

DRY DENSITY- MOISTURE CONTENT RELATION

(As per IS : 2720, Part - 8)

Sample No. : 01

Date of Sampling

Location of Sampling Stock Pile (Base camp)

Sampled By

Jointly

Source of Material

Date of Testing

Type of Material :CTB (Shree Cement OPC 43)

Tested By

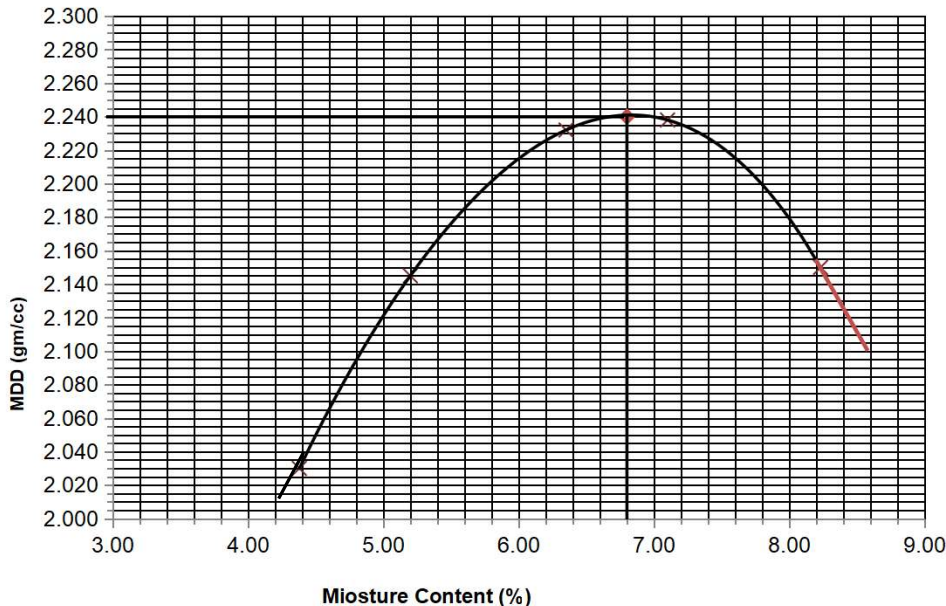
Jointly

DRY DENSITY DETERMINATION

Sr. No.	Determination No.	Unit	1	2	3	4	5	6
1	Wt. of Mould + Compacted CTB Mix	gms.	10302	10611	10875	10927	10770	
2	Wt. of Mould	gms.	5534	5534	5534	5534	5534	
3	Wt. of Compacted CTB Mix (1-2)	gms.	4768	5077	5341	5393	5236	
4	Volume of Mould	cc	2250	2250	2250	2250	2250	
5	Wet Density (3/4)	gms./cc	2.119	2.257	2.374	2.397	2.327	

MOISTURE CONTENT DETERMINATION

6	Tray No.		1	14	11	15	2	
7	Wt. of Tray + Wet CTB Mix	gms.	217.9	239.1	299.1	385.4	363.3	
8	Wt. of Tray + Dry CTB Mix	gms.	211.3	230.3	285.0	364.1	340.2	
9	Wt. of Empty Tray	gms.	61.1	61.2	62.4	64.5	59.7	
10	Wt of Water (7- 8)	gms.	6.6	8.8	14.1	21.3	23.1	
11	Wt of Dry CTB Mix (8- 9)	gms.	150.2	169.1	222.5	299.6	280.5	
12	Moisture Content [(10/11) x100]	%	4.38	5.20	6.35	7.10	8.23	
13	Dry Density [5/(1+(12/100))]	gms./cc	2.030	2.145	2.232	2.238	2.150	



Maximum Dry Density (MDD) gm/cc = 2.240gm/cc

Optimum Moisture Content (OMC) % = 6.80 %

Remarks

Client	Contractor	Authority Engineer
NHAI		
		

UCS/COMPRESSIVE STRENGTH OF CTB CUBES

Location		BASE CAMP			Date of Casting :-			
Type Of Mix		CTB			Date of Testing :-			
Volume of Cube		3375 cc			Area of Cubes :-		225cm ²	
CEMENT CONTENT		3.5% by weight			Cement Brand		Shree Cement OPC 43	
Sr. No.	Testing Date	Age of cube	Wt.of cube (gm)	Density gm/cc	Load in KN	Comp.St N/mm2	Avg. Comp.St N/mm2	Remarks
1		7 Days	8069	2.391	135	6.00	5.70	4.5 Mpa to 7.0 Mpa. (IRC:37:2018)
2			8094	2.398	120	5.33		
3			8120	2.406	135	6.00		
4			8034	2.380	120	5.33		
5			8042	2.383	125	5.56		
6			8050	2.385	135	6.00		

Remarks.....

EPC Contractor's Representative

AE's Representative