ACCELERATED CURED CONCRETE CUBE
COMPRESSIVE STRENGTH

Format No :- FMT-OBS-24

Sample ID :- _____ **Testing Date :-** _____

Material Description :- _____

Test Method :- IS:9013 :1978 Reaffirmed : 2018, IS : 516 (Part-1)(Sec-1) : 2021

Observation Table

Sr. No.	Concrete Grade	Specimen Dimensions			Casting Date of Specimen	Testing Date of Specimen	Weight	Density	Observed Failure Load	Compressive Strength (X)	Corrected Compressive Strength	Average Compressive Strength	Remarks
		Length	Breadth	Height									
	M	L	B	H			W	W / (L x B x H) x 10^9	P	P x 1000 / (L x B)	Y		
		mm	mm	mm			Kg	Kg / m^3	KN	N/mm^2	N/mm^2	N/mm^2	

Remarks :-

Checked By :- **Tested By :-**

ISSUE NO:01	ISSUE DATE: 01.07.2023		Prepared & Issued by	Reviewed & Approved by
AMEND NO:00	AMEND DATE:		(Quality Manager)	(Chief Executive Officer)

Concrete Core

Compressive Strength Test

Format No:- FMT-OBS-25

Sample ID :- _____ Testing Date :- _____

Material Description :- _____

Test Method :- As Per IS : 516 (Part-4) : 2018

Observation Table

Sr. No.	Casting Date of Specimen	Testing Date of Specimen	Age of Concrete Sample (Days)	Chain age/ Location of test specimen	Dimensions of Specimen (Cylindrical Piece)			Height / Diameter ratio	Correction Factor for Height/Diameter Ratio	Maximum Observed Failure Load	Compressive Strength	Corrected Compressive Strength	Equivalent cube strength of Concrete	Weight	Density,
					Height	Diameter (Lateral dimensions)	Area								
			Days		mm	mm	mm^2	--	--	KN	N/mm^2	N/mm^2	N/mm^2	gm	gm / cm^3

Remarks :-

Checked By :- Tested By :-

ISSUE NO:01	ISSUE DATE: 01.07.2023	Prepared & Issued by	Reviewed & Approved by
AMEND NO:00	AMEND DATE:	(Quality Manager)	(Chief Executive Officer)

MIX DESIGN

SLUMP TEST

Format No :- FMT-OBS-19

Sample ID :- _____ Testing Date :- _____

Material Description :- _____

Test Method :- As Per IS : 1199 (Part-1) : 2018

Observation Table

MIX DESIGN GRADE :- M - _____

Proportion Used								
Proportion	Water	Cement	Flyash	Admixture	All in Aggregates			
					40mm	20mm	10mm	Sand
Trial Mix								
By Weight (Kg)								

Slump Observation								
Trial Mix	Cement	Dose of Admixture	Initial	After 30 min	After 60 min	After 90 min	After 120 min	After 150 min
		ml	mm	mm	mm	mm	mm	mm

No. of Cubes Casted :- _____

Note * :-	Any Slump Specimen which Collapses or Shear off Laterally gives Incorrect Result and if this occurs the test shall be repeated with another sample.If in the Repeat test also Specimen Should Shear the Slump shall be Measured.

Remarks :-

Checked By :-	Tested By :-	

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AMEND NO:00	AMEND DATE:	(Quality Manager)	(Chief Executive Officer)

BITUMEN

MARSHALL STABILITY AND FLOW VALUE TEST

Format No:- FMT-OBS-17

Sample ID :- _____

Material Description -: _____ **Testing Date :-** _____

Bitumen Grade :- _____

Test Method :- As Per ASTM D : 6927 : 2022

Observation Table

Type of Sample :- ☐ Laboratory Mixed Sample ☐ Plant Mixed Sample ☐ Pavement Core Specimen

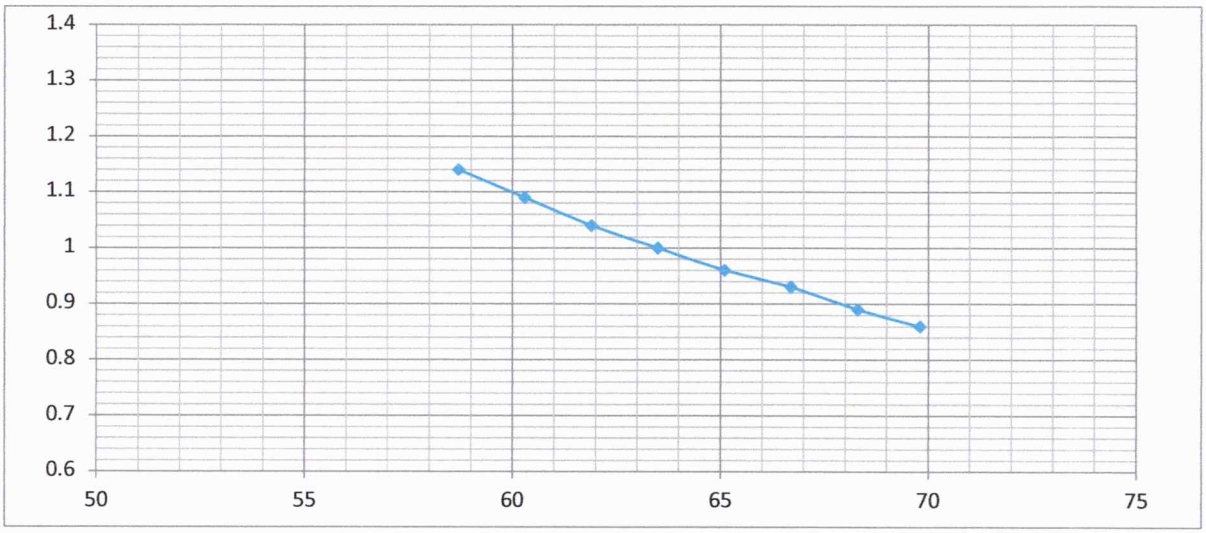
Proving Ring Capacity :- _____ KN **Proving Ring Constant :-** _____ N / Div

Rate of Strain :- 50 ± 5 mm / min

Sr. No.	Specimen Dimensions		Correction Factor	Marshall Stability Value		Corrected Stability Value	Marshall Flow Value
	Diameter	Thickness		Division	N	N	mm
	mm	mm					
1							
2							
3							
	Mean Marshall Stability Value :-				Mean Marshall Flow Value :-		

Stability Correlation Factors

Graph



Reference - As Per Table No.1 - ASTM - D6927 - 22

Remarks :-

Checked By :-		Tested By :-	

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AMEND NO:01	AMEND DATE: 01.10.2023	(Quality Manager)	(Chief Executive Officer)

BITUMEN

BITUMEN CONTENT TEST

Testing Date :- _____

Test Method :- IRC- SP: 112 : 2017

Observation Table

Sr. No.	Weight of Mix	Initial weight of Filter paper	Weight of Aggregate After Extraction	Weight of Filter Paper After Extraction with Fine Materials	Increased Weight of Filter		Weight of Binder		Binder Content
	W_1	F	W_2	W_3	W_4 =	W_3 - F	W_5 =	W1- (W2+W4)	$W_5 / W_1 X 100$
	gm	gm	gm	gm	gm		gm		%

Remarks :-

Checked By :- | Tested By :-

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AMEND NO:01	AMEND DATE: 01.10.2023	(Quality Manager)	(Chief Executive Officer)

BITUMEN

DUCTILITY TEST

Testing Date :- _____

Test Method :- As Per IS : 1208 (Part-1) 2023

Observation Table

Test Temperature :- _____ ^{0}C (25.0 ± 0.5^{0}C) Rate of Pull :- 50 ± 2.5 mm / min

Ductility Value :- (i) _____ cm (ii) _____ cm (iii) _____ cm

Ductility Mean Value :- _____ cm

Note*:- The Duplicate Result Should not differ by more than the following.

Repeatability	10 percent of the Mean
Reproducibility	20 percent of the Mean

FLASH & FIRE POINT TEST

Testing Date :- _____

Test Method :- As Per IS : 1209 : 2021 (Method A - Pensky Martens Closed Tester)

Observation Table

Rate of Stirrer :- 60 Revolutions / min

Flash Point Value :- (i) _____ ^{0}C (ii) _____ ^{0}C

Flash Point Mean Value :- _____ ^{0}C

Fire Point Value :- (i) _____ ^{0}C (ii) _____ ^{0}C

Fire Point Mean Value :- _____ ^{0}C

Notes*:- (i) The Bluish Halo that sometimes Surrounds the test flame shall not be Confused with the the True Flash.

(ii) The Duplicate Test Result should not be differ by more than the following

Flash Point	Repeatability	Reproducibility
Below 104^{0}C	2^{0}C	3.5^{0}C
Above 104^{0}C	5.5^{0}C	8.5^{0}C

BITUMEN

ABSOLUTE VISCOSITY TEST

Testing Date :- _____

Test Method :- As Per IS : 1206 (Part - 2) 2022, (By Canon Manning Viscometer)

Observation Table

Test Temperature :- _____ °C (60.0 ^{0}C) Vaccum:- 30 cm Hg

Sr. No.	Time Required by Bitumen to Cross the Bulb-B Mark	Calibration Constant for Bulb-B	Time Required by Bitumen to cross the Bulb-C Mark	Calibration Constant for Bulb-C	Absolute Viscosity
	t_1	K_1	t_2	K_2	$V = (K_1*t_1+K_2*t_2) / 2$
	Sec	Poises/Sec	Sec	Poises/Sec	Poises
				Mean Value	

Note*:-	The Duplicate Result Should not differ by more than the following.	
	Repeatability	7 percent of the mean
	Reproducibility	10 percent of the mean

KINEMATIC VISCOSITY TEST

Testing Date :- _____

Test Method :- As Per IS : 1206 (Part - 3) 2021, Clause No :- 6.2 (BS U Tube Viscometer)

Observation Table

Test Temperature :- _____ °C (135.0 ^{0}C)

Temperature Time for 38°C : _____ min

Temperature Time for 100°C : _____ min

Temperature Time for 135°C : _____ min

Sr. No.	Time Required by Bitumen to Cross the Bulb-C Mark	Calibration Constant for Bulb-C	Kinematic Viscosity
	t	C	V = K * t
	Sec	cSt / Sec	cSt
		Mean Value	

Note*:-	The Duplicate Result Should not differ by more than the following	
	Repeatability	1.8 percent of the mean
	Reproducibility	8.8 percent of the mean

BITUMEN

SOFTENING POINT TEST

Testing Date :- _____

Test Method :- As Per IS : 1205 : 2022

Observation Table

Test Temperature _____ ^{0}C (5.0±0.5°C) **Rate of Rise Temperature :- 5 ± 0.5 °C**

Sr. No.	Starting time for 5°C	Test Temperature in °C

Average of Test Temperature :- _____ ^{0}C **Rate of Rising Temperature :-** _____ ^{0}C

Softening Point :- (i) _____ ^{0}C (ii) _____ ^{0}C

Softening Point Mean Value :- _____ ^{0}C

Note*:- The Result shall not be diiffer from the mean by more than the following.

Softening Point ^{0}C	Repeatability ^{0}C	Reproducibility ^{0}C
40 to 60	1.0	5.5
61 to 80	1.5	5.5
81 to 100	2.0	5.5
101 to 120	2.5	5.5
121 to 140	3.0	5.5

BITUMEN

PENETRATION TEST

Format No :- FMT-OBS-16

Sample ID :- _____

Material Description :- _____ **Testing Date :-** _____

Bitumen Grade :- _____

Test Method :- As Per IS : 1203 : 2022

Observation Table

Test Temperature :- _____ ^{0}C (25.0 ± 0.1^{0}C) **Standard Weights :-** 100 ± 0.25 g / 200 ± 0.25 g

Standard Time :- 5 ± 0.1 S

Penetration (1/10 of mm) :- (i) _____ mm (ii) _____ mm (iii) _____ mm

Penetration (1/10 of mm) Mean Value :- _____ mm

Notes*:-

(i) The Value of Penetration Reported shall be the mean of not less than three determonations whose Value do not differ more than the amount given below.

Penetration	Maximum Diffrence
0 to 49	2
50 to 149	4
150 to 249	6
250 and above	8

(ii) The Duplicate Result Should not differ by more than the following.

Penetration	Repeatability	Reproducibility
Below 50	1 Unit	4 units
Above 50	3 Percent of their Mean	8 Percent of their Mean

SPECIFIC GRAVITY TEST

Testing Date :- _____

Test Method :- As Per IS : 1202 : 2021, (Method A - Pycnometer Method)

Observation Table

Test Temperature: _____ ^{0}C (27.0 ± 0.1 ^{0}C)

Sr no.	Mass of bottle + Stopper Weight	Mass of bottle + Stopper + Water Weight	Mass of bottle+ Stopper + Sample Weight	Mass of bottle + Stopper + Sample + Water Weight	Specific gravity
	a	b	c	d	(c-a) / ((b-a) - (d-c))
	gm	gm	gm	gm	--
1					
2					
				Mean Value	

Note* :- The Duplicate Result Should not differ by more than the following.

Repeatability	Reproducibility
0.002	0.005

FINENESS BY BLAINE AIR PERMEABILITY TEST

Testing Date :- _____

Test Method :- As Per IS : 4031 (Part-2) : 1999 Reaffirmed : 2018, Clause No :- 5

Observation Table

Room Temperature:- _____ °C (25 °C to 29 °C) Room Humidity :- _____ % (< 65 % RH)

Standard Sample Data		Test Material Data		
Amount of sample m (gm)		Volume of cement bed V (cm^3)		
Density ρ_o, (g/cc)		Density ρ, (g/cc)		
Porosity, e_0		Porosity, e		
Air Viscosity at the mean of three temperature, $\sqrt{0.1\acute{\eta}0}$		Air Viscosity at test temperaure taken, $\sqrt{0.1\acute{\eta}}$		
Time in Second - t_1		Time in Second - t_1 (Bed - 1)		
Time in Second - t_2		Time in S, t1 (Average of Bed-1)		
Time in Second - t_3		Time in Second - t_2 (Bed - 2)		
Time in Second - t_0 (Average of t_1, t_2 & t_3)		Time in S, t2 (Average of Bed-2)		
Specific Surface S_0, (cm^2/g)		Specific Surface S, (cm^2/g)	?	

For m = (1 - e) ρ V _____ gm

$$\text{Specific Surface, S } (cm^2/g) = \frac{\rho_0}{\rho} \times \frac{(1-e_0)}{(1-e)} \times \frac{\sqrt{e^3}}{\sqrt{e_0^3}} \times \frac{\sqrt{0.1\acute{\eta}_0}}{\sqrt{0.1\acute{\eta}}} \times \frac{\sqrt{t}}{\sqrt{t_0}} S_0$$

Specific Surface for Bed-1	Specific Surface for Bed-2	Average of Specific Surface, Bed - 1 and Bed - 2
_____ cm^2/g	_____ cm^2/g	_____ cm^2/g
_____ m^2/kg	_____ m^2/kg	_____ m^2/kg

Notes* :-
1) The Accessories Conforming to IS : 5516 : 1996, Reaffirmed 2021 shall be used.
2) The Resulting value of S to the Nearest 10 cm^2/g shall be Reported as the Specific Surface of the Cement.

Remarks :-

Checked By :- **Tested By :-**

DENSITY TEST

Testing Date :- _____

Test Method :- As Per IS : 4031 (Part-11) : 1988 Reaffirmed : 2019, Clause No :- 6

Observation Table

Amount of Sample :- _____ gm **Room Temperature:-** _____ °C (25 °C to 29 °C)

Density by Lechatelier Flask

Initial Reading:- A_1 _____ cm^3 A_2 _____ cm^3

Final Reading :- B_1 _____ cm^3 B_2 _____ cm^3

Volume of Liquid :- (B_1-A_1) _____ cm^3 (B_2-A_2) _____ cm^3

Density (D) :- $\frac{\text{Mass of cement (gm)}}{\text{Displaced volume } (cm^3)}$ = D_1 _____ g/cm^3 D_2 _____ g/cm^3

Density Mean Value (D) :- $(D_1 + D_2) / 2$ = _____ g/cm^3

Note* :-	**If the deffrence between two values differ by more than 0.03 the test shall be repeated.**

SOUNDNESS TEST

Testing Date :- _____

Test Method :- As Per IS : 4031 (Part-3) : 1988 Reaffirmed : 2019, Clause No :- 5

Observation Table

Amount of Sample :- _____ gm

Room Temperature:- _____ °C (25 °C to 29 °C)

Standard Consistency (P) :- _____ %

Room Humidity :- _____ % (> 65 % RH)

Amount of Water to be Taken :- 0.78 P _____ gm

Soundness by Le-Chatelier Method

Initial Reading:- A_1 _____ mm A_2 _____ mm

Final Reading :- B_1 _____ mm B_2 _____ mm

Soundness :- (B_1-A_1) _____ mm (B_2-A_2) _____ mm

Soundness Mean Value :- $((B_1-A_1) + (B_2-A_2)) / 2$ = _____ mm

Notes*:-
1) Le Chatelier Apparatus Conforming to IS : 5514 : 1996, Reaffirmed 2021.
2) Calculate the mean of two values to the nearest 0.5 mm to represent the expansion of cement.

COMPRESSIVE STRENGTH TEST

Test Method :- As Per IS : 4031 (Part-6) : 1988 Reaffirmed : 2019, Clause No :- 6

Standard Consistency (P) :- _____ %

Room Temperature:- _____ °C (25 °C to 29 °C)

Amount of Water to be Taken :- ((P / 4) + 3) % of Combined Mass _____ gm

Room Humidity :- _____ % (> 65 % RH)

Cube Size :- 7.06 cm x 7.06 cm x 7.06 cm

Humidity in Closet :- _____ % (> 90 % RH)

Age of Specimen	Specimen Dimensions			Casting Date of Specimen	Testing Date of Specimen	Observed Failure Load	Compressive Strength	Average Compressive Strength
	Length	Width	Height					
	L	B	H			P	P x 1000 / (L x B)	
Hours / Days	mm	mm	mm			KN	N/mm^2	N/mm^2
72 ± 1 h / 3 days								
168 ± 2 h / 7 days								
672 ± 4 h / 28 days								

CEMENT CONSISTENCY TEST

Format No :- FMT-OBS-001

Sample ID :- _____ **Testing Date :-** _____

Material Description :- _____

Brand Name :- _____ **Cement Grade :-** _____

Test Method :- As Per IS : 4031 (Part-4) : 1988 Reaffirmed : 2019, Clause No :- 5

Observation Table

Amount of Sample :- _____ **gm** **Room Temperature :-** _____ **°C (25 °C to 29 °C)**

Room Humidity :- _____ **% (> 65% RH)**

Description	Trial - 1	Trial - 2	Trial - 3	Trial - 4	Trial - 5	Final Value
Consistency (P) in %						
Amount of Water in gm						

INITIAL AND FINAL SETTING TIME TEST

Test Method :- As Per IS : 4031 (Part-5) : 1988 Reaffirmed : 2019, Clause No :- 5.2 & 5.3

Observation Table

Amount of Sample :- _____ **gm** **Room Temperature:-** _____ **°C (25 °C to 29 °C)**

Standard Consistency (P) :- _____ **%** **Room Humidity :-** _____ **% (> 65 % RH)**

Amount of Water to be Taken :- **0.85 P** _____ **gm** **Humidity in Closet :-** _____ **% (> 90 % RH)**

Initial Setting Time Test

Start Time :- _____ **AM / PM** **Finish Time :-** _____ **AM / PM**

Initial Setting Time :- _____ **Minute**

Final Setting Time Test

Start Time :- _____ **AM / PM** **Finish Time :-** _____ **AM / PM**

Final Setting Time :- _____ **Minute**

Notes* :-	
	Vicat Apparatus Conforming to IS : 5513 : 1996 Reaffirmed : 2021.
	The results of Initial and Final setting time shall be reported to the nearest five minutes.

PAVER BLOCK

COMPRESSIVE STRENGTH

Format No :- FMT-OBS-15

Sample ID :- _____ Testing Date :- _____

Material Description :- _____

Test Method :- As Per IS : 15658 : 2021 - Annex B & D

Observation Table

Paver block Shape :- _____

Sample Identification No.	Thickness of Specimen	Rectangular Cardboard Weight (200 mm x 100 mm)	Paver Block Shape Cardboard Weight	Plan Area		Observed Failure Load	Compressive Strength		Correction Factor Based on Thickness	Corrected Compressive Strength	
				Asp =	20,000 m_{sp} / m_{std}						
		m_{std}	m_{sp}			P	s =	P / A	T_c	s_c =	s X T_c
	mm	N	N	mm^2		KN	N/mm^2		--	N/mm^2	
						Average Compressive Strength :-					

WATER ABSORPTION TEST

Material Description :- _____ Testing Date :- _____

Test Method :- As Per IS : 15658 : 2021 - Annex C

Observation Table

Paver block Shape :- _____

Sample Identification No.	Dry Weight	Wet Weight	Water Absorption			
			W =	(Ww-Wd) / Wd	X	100
	W_d	W_w				
	N	N	%			
		Average Water Absorption :-				

Remarks :-

Checked By :- Tested By :-

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PAVER BLOCK

COMPRESSIVE STRENGTH

Format No :- FMT-OBS-15

Sample ID :- _____ Testing Date :- _____

Material Description :- _____

Test Method :- As Per IS : 15658 : 2021 - Annex B & D

Observation Table

Paver block Shape :- _____

Sample Identification No.	Thickness of Specimen	Rectangular Cardboard Weight (200 mm x 100 mm)	Paver Block Shape Cardboard Weight	Plan Area		Observed Failure Load	Compressive Strength		Correction Factor Based on Thickness	Corrected Compressive Strength	
				Asp =	20,000 m_{sp} / m_{std}						
		m_{std}	m_{sp}			P	s =	P / A	T_c	s_c =	s X T_c
	mm	N	N	mm^2		KN	N/mm^2		--	N/mm^2	
						Average Compressive Strength :-					

WATER ABSORPTION TEST

Material Description :- _____ Testing Date :- _____

Test Method :- As Per IS : 15658 : 2021 - Annex C

Observation Table

Paver block Shape :- _____

Sample Identification No.	Dry Weight	Wet Weight	Water Absorption			
			W =	(Ww-Wd) / Wd	X	100
	W_d	W_w				
	N	N	%			
		Average Water Absorption :-				

Remarks :-

Checked By :- Tested By :-

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HARDENED CONCRETE CUBE
COMPRESSIVE STRENGTH

Format No :- FMT-OBS-002

Sample ID :- _____ Testing Date :- _____

Material Description :- _____

Test Method :- IS : 516 (Part-1)(Sec-1) : 2021

Observation Table

Sr. No.	Concrete Grade	Specimen Dimensions			Casting Date of Specimen	Testing Date of Specimen	Weight	Density	Observed Failure Load	Compressive Strength	Average Compressive Strength	Remarks
		Length	Breadth	Height								
	M	L	B	H			W	W / (L x B x H) x 10^9	P	P x 1000 / (L x B)		
		mm	mm	mm			Kg	Kg / m^3	KN	N/mm^2	N/mm^2	

Remarks :-

Checked By :- Tested By :-

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BRICK

Format No:- FMT-OBS-004

Sample ID :- _____ Testing Date :- _____

Material Description :- _____

Test Method :- IS : 3495 (Part-1) : 2019, IS : 3495 (Part-2) : 2019, IS : 3495 (Part-3) : 2019, IS : 14858 : 2000 Reaffirmed 2021, IS : 5454 : 1978 Reaffirmed 2020 , IS : 1077 : 1992 Reaffirmed 2021

Observation Table

Dimension Test

Sr. No.	Identification Mark	Length (L) of 20 Bricks	Width (W) of 20 Bricks	Height (H) of 20 Bricks
		mm	mm	mm
1				

Temperature of Water :- _____ °C (27 ± 2 °C)

Sr. No.	Identification Mark	Individual Brick Dimensions			Compressive Strength		Water Absorption			Efflorescence	Remarks
		L	W	H	Observed Failure Load	Strength	Dry Weight	Wet Weight	Water Absorption		
		mm	mm	mm	P	P / (L x W) x 1000	M_1	M_2	(M_2-M_1 / M_1) *100		
					KN	N/mm^2	Kg	Kg	%		
01											
02											
03											
04											
05											
		Average Compressive Strength :-					Average Water Absorption :-				

Remarks :-

Checked By :- Tested By :-

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AMEND NO:00	AMEND DATE:		(Quality Manager)	(Chief Executive Officer)

FINE AGGREGATE

SOUNDNESS TEST

Testing Date :- _____

Test Method :- As Per IS : 2386 (Part-5) : 1963 Reaffirmed : 2021, Clause No :- 6

Observation Table

Chemical Used :- Na_2So_4 / $MgSo_4$

Amount of Sample taken :- _____ gm **Temperature :-** _____ °C

Sieve Designation		Weight of Each Fraction before test	Weight of Each Fraction (For Constant Weight Verification)					Grading of Original Sample Percent	Percentage Passing Finer Sieve After test (Actual Percent Loss)	Weighted Average (Corrected Percent Loss)
Passing	Retained									
mm	mm	A	T1	T2	T3	T4	T5	D = 100 x A / (Wt)	E = 100-(100 x T5) / A	F = D x E /100
		gm	gm	gm	gm	gm	gm	%	%	%
10.0	4.75									
4.75	2.36									
2.36	1.18									
1.18	0.600									
0.600	0.300									
Total										

Remarks :-

Checked By :- **Tested By :-**

FINE AGGREGATE

SPECIFIC GRAVITY & WATER ABSORPTION TEST

Testing Date :- _____

Test Method :- As Per IS : 2386(Part-3) : 1963 Reaffirmed : 2021, Clause No:- 2.4 (Method III - Aggregate Smaller Than 10mm)

Observation Table

Amount of Sample taken :- _____ gm (1000 gm for Size 10 mm to 4.75 mm & 500 gm for Size Smaller than 4.75mm) Temperature :- _____ °C

Sr. No.	Sample ID	Wt. of Saturated Surface Dry Sample, A (g)	Wt. of Pycnometer Containing Sample & Filled With Distilled Water, B, (g)	Wt. of Pycnometer Filled With distilled Water only, C (g)	Wt. of Oven Dry Sample, D (g)	Specific Gravity Based on Dry Aggregate $G = \frac{(D)}{(A-(B-C))}$	Specific Gravity Based on Saturated Surface Dry Aggregate $G = \frac{(A)}{(A-(B-C))}$	Apparent Specific Gravity $G = \frac{(D)}{(D-(B-C))}$	Water Absorption $100 \times \frac{(A-D)}{D}$
1									
2									
					Average =				
1									
2									
					Average =				
1									
2									
					Average =				

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FINE AGGREGATE

SIEVE ANALYSIS TEST

Format No:- FMT-OBS-014

Sample ID : _____ **Testing Date :-** _____

Material Description :- _____

Test Method :- As Per IS : 2386 (Part-1) : 1963, Reaffirmed : 2021, Clause No :- 2

Observation Table

Amount of Sample taken :- _____ gm

Sieve Designation	Weight Retained on Individual Sieve	Cummulative Weight Retained	Cummulative Weight Retained Percentage	Percentage Passing
mm	gm	gm	%	%
10.0				
4.75				
2.36				
1.18				
0.600				
0.300				
0.150				
0.075				
Total				

Fineness Modulus = (Summation of Cummulative Weight Retained Percentage on 10 mm to 150 micron Sieve) / 100 = _____

Zone Classification = _____ (Zone-I / Zone-II / Zone-III / Zone-IV)

DENSITY TEST

Amount of Sample taken :- _____ gm **Testing Date :-** _____

Test Method :- As Per IS:2386 (Part-3) : 1963, Reaffirmed : 2021, Clause No :- 3

Observation Table

Amount of Sample taken :- _____ Kg **Method :-** Loose Density / Compacted Density

Sr. No.	Volume of Container	Container Weight with Sample	Container Empty Weight	Weight of Sample	Bulk Density
	M_1	M_2	M_3	$M_4 = M_2 - M_3$	$g = M_4/M_1$
	litre	Kg	Kg	Kg	kg/litre
1					
2					
3					
				Average Bulk Density =	

COARSE AGGREGATE

SIEVE ANALYSIS TEST

Format No:- FMT-OBS-13

Sample ID :- _____ **Testing Date :-** _____

Material Description :- _____

Test Method :- As Per IS : 2386 (Part-1) : 1963, Reaffirmed : 2021, Clause No :- 2

Observation Table

Amount of Sample taken :- _____ gm

Sieve Designation	Weight Retained on Each Individual Sieve	Cummulative Weight Retained	Cummulative Percentage Retained	Percentage Passing
mm	gm	gm	%	%
Total				

DENSITY TEST

Test Method :- As Per IS:2386 (Part-3) : 1963, Reaffirmed : 2021, Clause No :- 3

Observation Table

Amount of Sample taken :- _____ gm **Method :-** Loose Density / Compacted Density

Sr. No.	Volume of Container	Container Weight with Sample	Container Empty Weight	Weight of Sample	Bulk Density
	M_1	M_2	M_3	$M_4 = M_2 - M_3$	$g = M_4/M_1$
	litre	Kg	Kg	Kg	kg/litre
1					
2					
3					
				Average Bulk Density =	

Sr. No.	Sample ID	Weight of Fraction Passing on 12.5 mm and Retained on 10 mm IS Sieve	Weight of Fraction Passing on 2.36 mm IS Sieve	Weight of Fraction Retained on 2.36 mm IS Sieve	Aggregate Crushing Value
		A	B	C	B/A X 100
		gm	gm	gm	%
1					
2					
				Average Crushing Value :-	

IMPACT VALUE TEST

Testing Date :- _____

Test Method :- As Per IS : 2386 (Part-4) : 1963 Reaffirmed : 2021, Clause No :- 4

Observation Table

I.S. Sieves :- 12.5 mm, 10 mm and 2.36 mm

Amount of Sample taken :- _____ gm

Sr. No.	Sample ID	Weight of Fraction Passing on 12.5 mm and Retained on 10 mm IS Sieve	Weight of Fraction Passing on 2.36 mm IS Sieve	Weight of Fraction Retained on 2.36 mm IS Sieve	Total Weight of Fraction Passing and Retained on 2.36 mm IS Sieve	Aggregate Impact Value
		A	B	C	B + C	B/A X 100
		gm	gm	gm	gm	%
1						
2						
					Average Impact Value :-	

Note - If the Total Weight (B+C) is less than the Initial Weight (Weight A) by more than one gram, the Result shall be Discarded and a Fresh test made.

ABRASION VALUE TEST

Testing Date :- _____

Test Method :- As Per IS : 2386 (Part-4) : 1963 Reaffirmed : 2021, Clause No :- 5.3

Observation Table

I.S. Sieve :- 1.70 mm

Amount of Sample taken :- _____ gm

Sr. No.	Sample ID	Initial Weight	Weight of Fraction Retained on 1.70 mm IS Sieve	Weight of Fraction Passing on 1.70 mm IS Sieve	Aggregate Abrasion Value
		A	B	C = A - B	C/A X 100
		gm	gm	gm	%
1					
2					
				Average Abrasion Value :-	

COARSE AGGREGATE

CRUSHING VALUE TEST

Testing Date :- _____

Test Method :- As Per IS : 2386 (Part-4) : 1963, Reaffirmed : 2021, Clause No :- 2

Observation Table

I.S. Sieves :- 12.5 mm, 10 mm and 2.36 mm **Diameter of Mould used :-** 75 mm / 150 mm

Amount of Sample taken :- _____ gm

COARSE AGGREGATE

SPECIFIC GRAVITY & WATER ABSORPTION TEST

Testing Date :- _____

Test Method :- As Per IS : 2386(Part-3) : 1963 Reaffirmed : 2021, Clause No:- 2.4 (Method III - Aggregate Smaller Than 10mm)

Observation Table

Amount of Sample taken :- _____ gm **(1000 gm for Size 10 mm to 4.75 mm & 500 gm for Size Smaller than 4.75mm)** **Temperature :-** _____ °C

Sr. No.	Sample ID	Wt. of Saturated Surface Dry Sample, A (g)	Wt. of Pycnometer Containing Sample & Filled With Distilled Water, B, (g)	Wt. of Pycnometer Filled With distilled Water only, C (g)	Wt. of Oven Dry Sample, D (g)	Specific Gravity Based on Dry Aggregate $G = \frac{(D)}{(A-(B-C))}$	Specific Gravity Based on Saturated Surface Dry Aggregate $G = \frac{(A)}{(A-(B-C))}$	Apparent Specific Gravity $G = \frac{(D)}{(D-(B-C))}$	Water Absorption $100 \times \frac{(A-D)}{D}$
1									
2									
					Average =				
1									
2									
					Average =				
1									
2									
					Average =				

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AMEND NO:00	AMEND DATE:	(Quality Manager)	(Chief Executive Officer)

COARSE AGGREGATE

SPECIFIC GRAVITY & WATER ABSORPTION TEST

Testing Date :- _____

Test Method :- As Per IS : 2386 (Part-3) : 1963, Reaffirmed : 2021, Clause No:- 2.2 (Method I - Aggregate Larger Than 10mm)

Observation Table

Amount of Sample taken :- _____ gm **(Shall be not less than 2000 gm)** **Temperature :-** _____ °C

Sr. No.	Sample ID	Weight of Basket and Aggregate in Water	Weight of Basket in Water	Weight of Saturated Aggregate in Water	Weight of Saturated Surface Dry Aggregate in Air	Weight of Oven Dry Aggregate in Air	Specific Gravity Based on Dry Aggregate	Specific Gravity Based on Saturated Surface Dry Aggregate	Apparent Specific Gravity	Water Absorption
		A_1	A_2	$A = A_1 - A_2$	B	C	$G = \frac{(C)}{(B-A)}$	$G = \frac{(B)}{(B-A)}$	$G = \frac{(C)}{(C-A)}$	$\frac{100 \times (B-C)}{C}$
		gm	gm	gm	gm	gm				
						Average Value =				
						Average Value =				
						Average Value =				

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AMEND NO:00	AMEND DATE:	(Quality Manager)	(Chief Executive Officer)

COARSE AGGREGATE

FLAKINESS INDEX TEST

Testing Date :- _____

Test Method :- As Per IS:2386 (Part-1) : 1963 Reaffirmed : 2021, Clause No :- 4

Observation Table :-

Aggregate Size		Weight of Fraction Retained on Each Sieve	Mass of Pieces Passing through Appropriate Gauge	Percentage of the Mass of Total Number of Pieces Pass in Each Fraction	Percentage of Each Fraction of Pieces to the Total Mass of Sample	Weighted Percentage of the Mass of Pieces Passing
Passing through IS Sieve	Retained on IS Sieve	a	b	X = b / a x 100	Y = a / A x 100	F =X xY / 100
mm	mm	gm	gm	%	%	%
63	50					
50	40					
40	31.5					
31.5	25					
25	20					
20	16					
16	12.5					
12.5	10					
10	6.3					
Total		A=	B=			F=

Flakiness Index, F = _____ %

ELONGATION INDEX TEST

Test Method :- As Per IS:2386 (Part-1) : 1963 Reaffirmed : 2021, Clause No :- 5

Observation Table :-

Aggregate Size		Sample Retained on Each Sieve Fraction	Mass of Pieces Retained through Appropriate Gauge	Percentage of the Mass of Total Number of Pieces Retained in Each Fraction	Percentage of Each Fraction of Pieces to the Total Mass of Sample	Weighted Percentage of the Mass of Pieces Retained
Passing through IS Sieve	Retained on IS Sieve	a	b	X = b / a x 100	Y = a / A x 100	F =X xY / 100
mm	mm	gm	gm	%	%	%
50	40					
40	25					
25	20					
20	16					
16	12.5					
12.5	10					
10	6.3					
Total		A=	B=			E=

Elongation Index, E = _____ %

REINFORCED STEEL

Format No:- FMT-OBS-003

Sample ID :- _____ Testing Date :- _____

Material Description :- _____ Brand/Sample ID :- _____

Test Method :- IS : 1608 (Part-1): 2022, IS : 1786 : 2008, Reaffirmed : 2018, IS : 1599 : 2023

Observation Table

Temperature :- _____ °C (Required between 10°C to 35°C)

Sr. No.	Diameter of Bar	Weight of Bar	Length of Bar	Nominal Mass	Cross Sectional Area	Initial Gauge Length	Final Gauge Length	Observed Yield Load	Yield Stress	Observed Ultimate Load	Ultimate Stress	Elongation	Bend Test	Rebend Test
	mm	Kg	m	Kg/m	mm^2	mm	mm	KN	N/mm^2	KN	N/mm^2	%		
		a	b	c = a / b	d = c / 0.00785	e	f	g	g / d x 1000	h	h / d x 1000	$\frac{(f-e) \times 100}{e}$		

Remarks :-

Checked By :- Tested By :-

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