Hindavi Moraya RMC

Mix ID	M 10		Date:	
Client			Site	

Design stipulation				Code Reffered
Grade of Concrete		10	Mpa	IS 10262:2009Method
Characteristic strength at 28 days, N/mm2		10	Mpa	
Sp.gravity of cement		3.14	gm/cc	
Sp.gravity of Flyash		2.26	gm/cc	
Sp.gravity of Water		1.00	gm/cc	
Sp.gravity of Admixtuer		1.21	gm/cc	
Sp.gravity of coarse Agg.		2.66	gm/cc	
Sp.gravity of Fine Agg.		3.28	gm/cc	
Standard deviation, N/mm2		3.50		As Per IS:456:2009
Value Of 't'		1.65		As Per IS:456:2009
Target mean strength, at 28 dyas, N/mm2		15.78		
Exposure Condition		Modrate		
Free water Cement ratio		0.67		As Per IS:456:2000
Nominal maximum size of aggregate, mm		20.00		
Workability in terms of Flow , in mm		130-150		
Total Actual water Content		185.73		Replacing by Admixture by 15%
Minimum cement content, Kg/Cum		160		As Per IS:456:2000
Total cementitious content, Kg/Cum		277		
Volume of Coarse Aggregate		0.60		As Per IS:456:2000
Volume of Fine Aggregate		0.40		

Design Formula

Vol of cement=(Mass of cement/Sp.gravity of cement) * 1/1000

$\quad$ Vc = $\quad$ 0.088 $\quad$ m3

Vol of water=(Mass of water/Sp. Gravity of water) * 1/1000

$\quad$ Vw = $\quad$ 0.186 $\quad$ m3

Vol of Admixtuer=(Mass of admixtuer/Sp. Gravity of admixtuer) * 1/1000

$\quad$ Va = $\quad$ 0.003 $\quad$ m3

Vol.of entraped Air = 2 %

$\quad$ Vair = $\quad$ 0.02 $\quad$ m3

Vol.of All aggregate=Vol.of concrete-[Vc+Vw+Va+Vair]

$\quad$ Vt = $\quad$ 0.703 $\quad$ m3

Mass of Coarse Agg. = Vol.of all agg.x Ratio of agg.x Sp.gravity x 1000

$\quad$ Mcoarse = $\quad$ 1122.38 $\quad$ Kg

Mass of Fine Agg. = Vol.of all agg.x Ratio of agg.x Sp.gravity x 1000

$\quad$ Mfine = $\quad$ 922.66 $\quad$ Kg

Final Ingredients given as below (in SSD)			
Cement	186	Kg/M3	Ultratech OPC 53
Fly ash	91	Kg/M3	Solapur
20MM	730	Kg/M3	Shenoli
10MM	393	Kg/M3	Shenoli
R.Sand	0	Kg/M3	Shenoli
C.Sand	923	Kg/M3	Shenoli
Water	186	Kg/M3	TANKER
Admixture	2.77	Kg/M3	Universal-555UC
Density of Mix =	2511	Kg/M3	