

Hence we can draw the conclusion that internal curing helps in reduction of curing period from 28days to 7 days.

Table 5: Compressive Strength Results with Reduction in Number of Days of curing

MIX Designation	Curing period in days	Compressive Strength at 28 th Day of Testing (N/mm ²)				
		In air entire time	In air after 3days	In air after 7days	In air after 14 days	Moist cured entire time
Mix 1		21.92	27.8	40.84	43.2	52.1
Mix 2		27.55	33.02	44.08	49.4	55.1
Mix 3		28.6	36.4	45.6	53.2	56
Mix 4		30.7	38.8	48.8	55.9	59.4
Mix 5		30.3	36.23	47.1	54.2	58.72

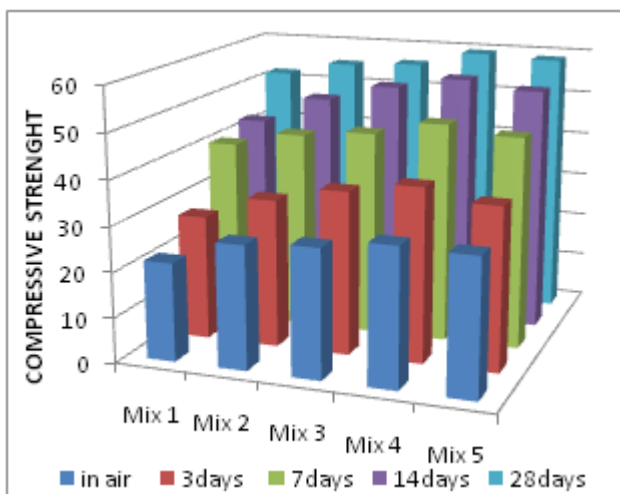


Figure 3: Compressive Strength Results with Reduction in Number of Days of curing.

6. Conclusion

Internal curing is not a substitute for external curing. As a minimum, evaporative moisture loss (after set) must be prevented using conventional external measures. It can be concluded that optimum partial replacement of coarse aggregate is 20%, for the economical mix of concrete. Disposal of flyash has become a vast problem; hence usage of flyash based Light weight aggregates gives a better solution for waste management problem.

From results it's clear, mix 7(20% LA: 80 % CA), obtained a strength nearby to mean target strength by 7 days of curing. Hence the curing period can be reduced to 7days. Above all wastage of water as well as time of building constructions can be reduced.

References

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