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AVE: 7760.58 (ZAR)

Take your ready-mix plant to the next level

Quality concrete and reduced operating costs are achieved with wet batching plants from Pan Mixer South Africa (PMSA).

Research by Istituto Italiano per il Calcestruzzo (Italian Institute for Concrete – IIC) on the comparison of the quality of concrete produced in dry vs. wet batching plants shows that a mixing plant produces concrete which is higher quality than that from the dry process.

PMSA has recently partnered with global batching plant contender, IMER, to offer the ready-mix sector specific wet batching plants with output capacities from 30 m^3 to over 240 m^3 per hour.

The IMER wet batching plants are fitted with either a planetary or twin-shaft mixer (depending on capacity of the plant) – and are notably more efficient than the traditional dry "Karoo" batching plants which are essentially materials handling plants.

Aggregate is batched automatically from bulk aggregate storage bins onto a weighing conveyor belt. The weighed aggregate is fed into the mixer where cement and water are automatically added. The concrete is then mixed by the forced action of mixing paddles before being discharged into the transit truck or even directly into a pump as may be required in the case of on-site batching.

The plants have an average of 90 second cycle time between mixes. Having completely mixed concrete reduces costs as a mixing plant eliminates the need for high-speed mixing in the truck, thus reducing wear and tear on the ready-mix plant's highest capital expense, the fleet of trucks. There is also no need for manually checking the truck before dispatch as the mix is completely homogeneous by the time it is discharged into the truck.

The IIC findings confirm that a mixing plant produces concrete which is undoubtedly higher quality for the following reasons:

The mixing effect of concrete mixers facilitates the complete cement hydration.

When using the same water/cement ratio, concretes produced in a wet batching plant have a higher workability, reducing this ratio for a higher strength concrete with the same cement content.

Lower permeability of the concrete produced.

Repeatability which can result in a reduction of the standard deviation.

Reduction in errors made by inexperienced or inattentive personnel.

Globally, mixing plants are the standard for ready-mix and site batching and in Southern Africa there is a noticeable shift towards mixing plants especially where high-strength and high-quality concrete is required.

For more information on IMER and PMSA contact Sean on sean@panmixers.co.za or visit www.pmsa.com

Further research information is available from the Italian Institute for Concrete here: www.istic.it ■