

## MIXERS

# New life for older plant

In a move that brings new life to older machinery, while assisting customers through the tough economic climate, Pan Mixers will upgrade customers' machinery wherever possible. There is a growing trend in this direction rather than replacing it, according to Robert Ebeling director of Pan Mixers.

"In the past 10 years, there have been massive advances in electronics and hydraulics, and we can control components and their movement more accurately than we did in the past," says Ebeling. "By installing linear transducers and/or rotary encoders to moving components, we can continually inform the PLC in the machine about the location of the component."

Clients can then control the speed of the component accurately. High-resolution hydraulic controls are used to control physical movement. The combination of the electronic sensing system, and a hydraulic system interacting through the PLC, means that a component can be started slowly and does not crash on start-up.

Speed can be levelled off at any point and slowed down rather than stopping suddenly to reduce wear



and tear. As the system ensures proportional control, components do not have to be moved at a fixed speed but they can accelerate and decelerate progressively for faster cycle times, greater productivity and lower maintenance.

In upgrades of older machinery, variable speed drives enable acceleration and deceleration of electric motors and brake resistor on the drive is added so motors stop faster than before – at 0,3 of a second compared to the conventional 1,5 seconds. This greatly improves quality. Compaction stays intact while

the cycle time is also decreased by 11% or 12% to improve the productivity of machinery.

On the large Pan Mixers RE1400 machines, instead of using rubber mountings to control the vibrational force of the mould, air bellows are used. They respond much faster; increasing vibrational force.

Customers have increased the compaction of their products dramatically by installing bellows on an existing plant – at a cost of around R20 000, according to Ebeling. The result is a better product which uses less cement.