

## Ensuring longevity

According to Pan Mixers director Robert Ebeling the company is seeing an increasing number of clients opting for upgrades that bring older equipment up-to-date. The company therefore undertakes upgrades for customers wherever possible.

**"THE PAST 10 YEARS** have brought about massive advances in electronics and hydraulics, while the machinery design has largely remained the same. We can now control components and their movement more accurately than we could in the past," Robert Ebeling says. "We do this by installing linear transducers and/or rotary encoders to moving components. We can then continually inform the programmable logic controller (PLC) in the machine on where the component is."

Knowing where the component is at any time means that clients can control the speed of the component accurately. "Once you have this accuracy of movement, you need to control the physical movement. This is done by using high resolution hydraulic controls," adds Pan Mixers co-director Walter Ebeling.

Sudden stops to the machine exert a force that increases wear and tear. Because the system ensures proportional control, components do not have to be moved at a fixed speed. This means that clients can make the speeds much faster because they can accelerate and decelerate progressively.

In upgrading older machinery, Pan Mixers uses variable speed drives (VSDs) on the vibrators, which has proved very successful. "VSDs also allow for acceleration and deceleration of the electric motors. The benefit of adding a brake resistor on the drive is that it can stop motors faster than ever before."

Pan Mixers has been supplying VSD in its equipment for the past 10 years, but is also able to install it on machinery older than that. "Upgrading rather than replacing equipment works in many instances," Walter explains, citing another important progression in Pan Mixers' large RE1400 machines: Instead of using rubber mountings to control the vibrational force of the mould, Pan Mixers has replaced the rubbers that hold the mould down with air bellows.

Robert Ebeling notes that customers have increased the compaction of their products dramatically by installing bellows on an existing plant - at a cost of around R20 000. "Producing a better product and using less cement offsets this relatively small cost."

With the economy that is unlikely to bounce back too quickly, Pan Mixers is ensuring that its clients are ready to meet the challenges of becoming more productive and more competitive.

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