



# Manufacturing & Technology

April 2017

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## MANUFACTURING

**ramsetreid's graphic concrete™ increasing in popularity**

graphic concrete™ is increasingly being used by architects for both small and large projects.

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## Sequencing in concrete mix design



Precasters must consider order when establishing proper mix designs. The most important factor affecting sequencing is the type of mixer used.

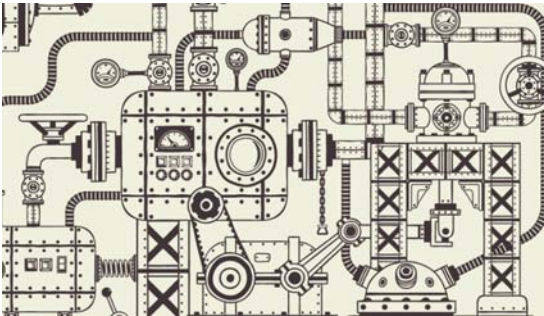
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## Research: Operational flexibility

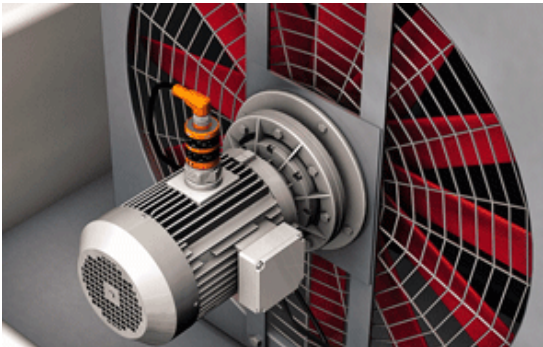
In a 10 year study of nearly 250 manufacturers, 78% have improved their ability to fill demand, but have also lost control of costs. Chasing the often elusive customer came at a cost many had overlooked. They'd failed at operational flexibility!

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## Condition-based monitoring



Condition-based monitoring is an essential component of predictive maintenance, recording changes in equipment that could lead to a fault.

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## New Bridge Code seeks to help build Australia

The highly anticipated AS(NZS) 5100:2017, Bridge Design series has been published.

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## TECHNOLOGY

### World's first 3D printed skyscraper

A construction technologies firm based in Dubai has announced plans to build the world's first 3D printed skyscraper using a new construction technique called 'crane printing'. This involves the use of cranes with added units that are specifically created for building 3D printed structures 80 metres and above.

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### GRC exoskeleton tower forming in Miami



Every week, a ship leaves Dubai loaded with an entire floor's worth of structural pieces bound for an outlandish, tower in Miami. The pieces, made of lightweight GRC, form the sinuous skeleton that coils up along the exterior of the tower... like the bones of an alien life form.

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### 3D-Printed house...construction time, 1 day

A San Francisco-based start up company can 3D-print concrete walls for a small house (38m<sup>2</sup>) in under 24 hours.

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## INTERESTING APPLICATIONS

## Precast concrete tunnels for zoo enclosures

A proposed building for a new zoo in Western Sydney will include three precast concrete tunnel structures to serve as habitat enclosures for nocturnal animals, aquatic animals and reptiles and insects.

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## Precast rules the roost



Due to declining forestland in the region, bird life such as Vaux's swifts, which typically rely on large, hollow trees for nesting and roosting, have limited options available. A precast concrete tower is the solution!

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## PUBLICATIONS



[Click to purchase your copy of the Precast Concrete Handbook](#)



[Contact Amy to purchase your copy of fib](#)  
(Planning & Design handbook on precast building structures, \$120, limited supply)

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