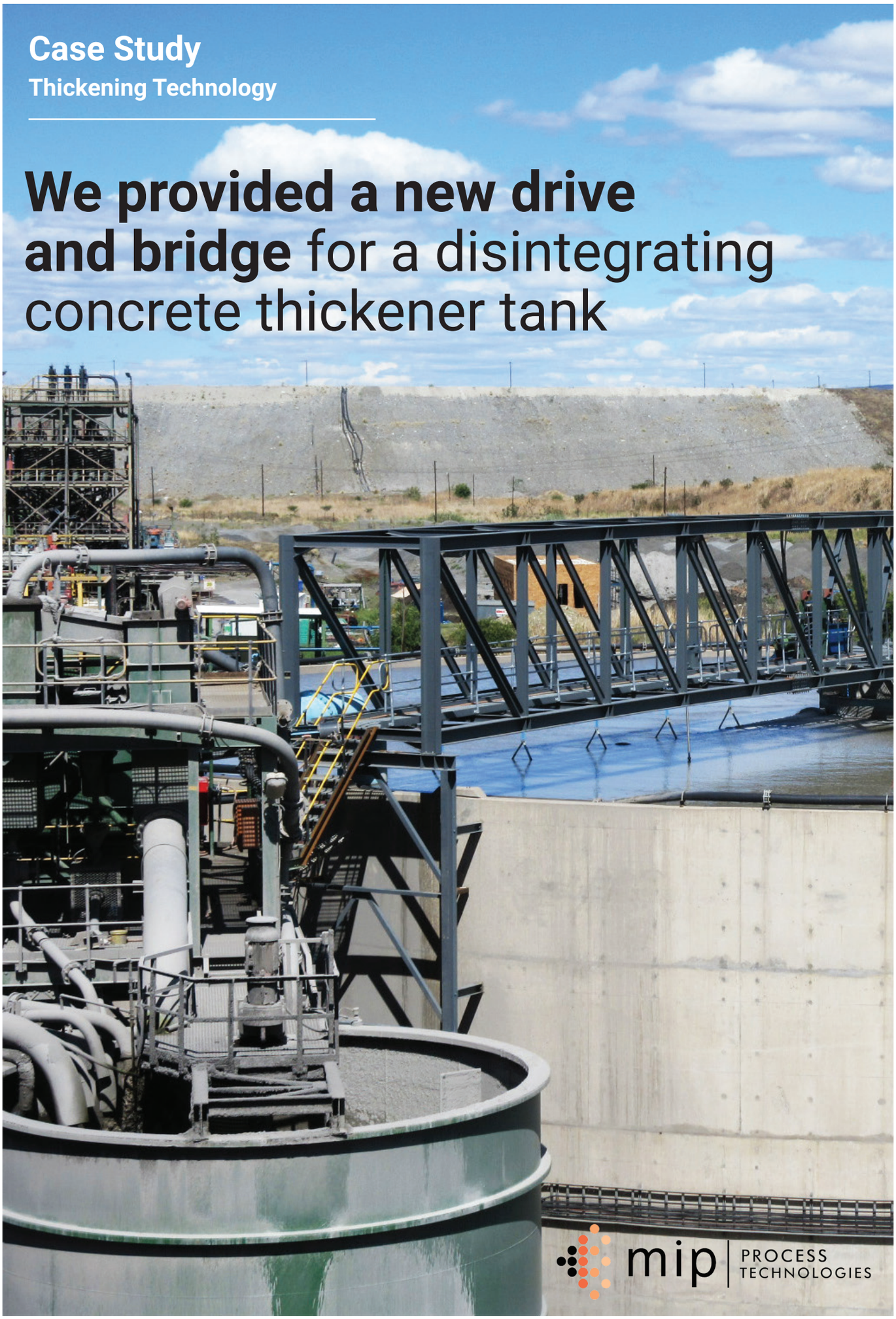
Case Study

Thickening Technology

We provided a new drive and bridge for a disintegrating concrete thickener tank



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Background:

In the first half of 2017, a customer approached MIP Process Technologies (Pty) Ltd.

MIP Process Technologies is a Level 1, (the highest achievable) BBBEE supplier. They provide a range of mineral processing and dust extraction equipment, customed designed to meet the customer's requirements.

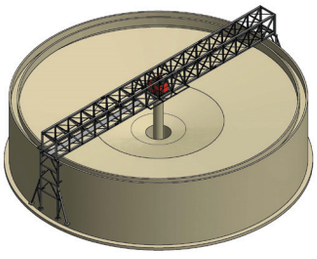
The customer had a forty-five (45)m diameter Platinum Tailings thickener. Thickeners are used in the mineral processing industry to recover water (to the overflow) and thickened slurry (to the underflow).

The customer's thickener was constructed in 2011 with the tank manufactured from concrete.
The design was that of a centre column with a half span bridge. The bridge was supported on one end at the edge of the thickener, the other on the centre column in the middle of the thickener tank.

The concrete centre columns started to disintegrate which would mean that the thickener drive and internals would potentially collapse. This in turn would mean, a plant stoppage with millions in lost revenue.

Solution:

- In stepped MIP Process.
- MIP Process designed a new bridge to go over the Completed tank.
- A full span bridge (45m long) and a new modern five-stage planetary gearbox was supplied.



Some of the challenges include:

- Work to be done on site
- Removal of the old parts
- Converting the existing rakes to suit the new drive design
- Supplying a 48m long bridge over the thickener tank
- Tie-in with existing controls and control philosophy
- All this doing the project over a thirty-six (36) hour shutdown

Results:

The end result was a thickener operating at much lower torque and producing higher and more consistent underflow density.

The project team worked day and night to complete the project.

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