

Tailings transportation: Challenges and solutions

Tailings dams rank among the largest engineered structures on earth. An estimated 3,500 active tailings impoundments stand around the world. Data on dam failure is incomplete but in 2000, InfoMine estimated between 2 and 5 dams would have catastrophic failures annually, and 35 would have minor failures.

Since 1962, 11 of the deadliest tailings dam failures killed over 2,000 people.

Issues surrounding tailings transportation and storage are long standing. Not only is safety a major concern, environmental loss, associated collateral consequences of failures, and increasing universal constraints on water use present constant challenges to miners, engineers and end users.

In addition to these general challenges, there are also the site-specific challenges of individual projects; variability of tailings during a mine's lifecycle, placement and recovery options, geological and physical impingements and even mother nature herself!

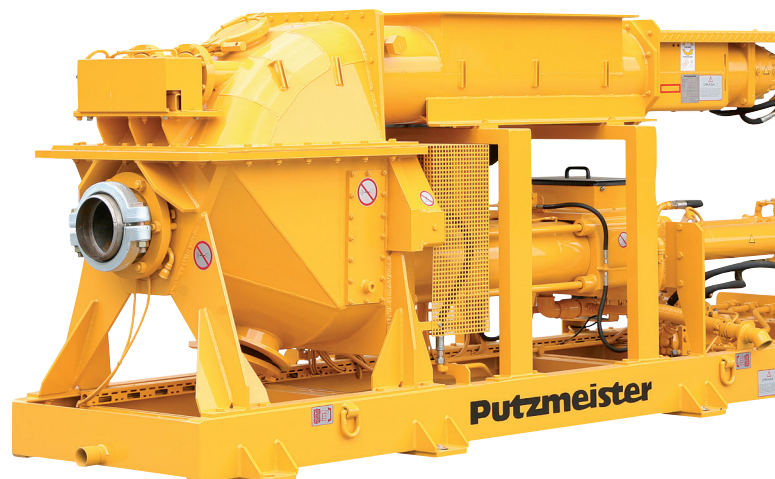
**No two projects are the same!
No two mines are the same!
No two solutions are the same!**

This platform of variability in regard to both known and unknown data impacts directly on the design process and continues to be a major test for engineers in recommending appropriate equipment, technologies, and processes.

As the Putzmeister Solids Pumps (PSP) Business Development Manager for Australia, PNG, and New Zealand, I spend a great deal of time on mine sites working with engineers and project managers, communicating first-hand experience and case studies from Putzmeister globally to assist the design and specification process.

“We find this approach successful, obviating future issues and increasing predictability of results by engaging with the client and engineering firm at the earliest possible opportunity.”

This has a twofold benefit. Firstly, it helps Putzmeister tailor the right pumping equipment for the system. Whilst there is a range of standard products available, it is often the customised design solution, and the ability to manufacture and deliver a client focussed product that appeals. Secondly, this approach enables the engineer or consultant to consistently engage with key stakeholders. This highly collaborative approach is enhanced through the use of seamless and transparent communication channels and contributes to optimal system design for each individual project.





Thus, the alliance between all stakeholders and decision makers from design through to end user must be frank, open, honest and clear on exactly what it is they require. The Putzmeister approach to this alliance is founded on the pursuit of exacting precision in every installation. Precision (as an outcome) is a product of knowledge and collaboration. If at any stage we feel we are missing a piece of the puzzle, we can access the global expertise of the Putzmeister and SANY group – some of the most highly experienced, technically competent, and specialised professionals in the world today.

We share this knowledge throughout the consultative process right through to thorough operator training that is specific to the project. What worked on one operation doesn't always translate successfully to another operation. Broad “manual-based” instruction

is a foundation for what should be a total immersion in the entire process. The consequences of failed vigilance and attention to the variables can quickly escalate to a substantial malfunction and costly down time with the associated (and often significant) collateral impact.

Regardless of the project, consultant, or client, disregarding the critical nature of the collaborative approach is problematic at the lowest level and potentially crippling at the highest level.

In my experience, these associated failures are almost always caused by a lack of leadership initiative. Providing communication leadership as a Putzmeister manager is my approach to minimising failure and optimising results for all stakeholders. When the stakes are so high, there is no substitute for installing anything but the most technologically advanced and resilient equipment. When the stakes are so high, Putzmeister insist on precision – not only in engineering, but in communication. The combined global research and knowledge bank of Putzmeister and SANY world wide separates us from the crowd. We don't just provide specs, information, manuals or advice. We manufacture precision.

Peter Beasley
Business Development Manager
Putzmeister PSP
Australia and New Zealand

Beasley's & Putzmeister

55 Charlie Triggs Cres, Bundaberg, QUEENSLAND 4670
Mail: sales@beasleys.com.au
Call us: (07) 4153 1258

