

International **mining**

Informed and in-depth editorial on the world mining industry

PUMPS & PIPELINES

MINE LIGHTING

TRAINING

LINERS & WEAR

**EPCM SERVICES &
CONTRACT MINING**

**HIGH PROFILE –
EPIROC AND FLUOR**

KOMATSU



Correct valve selection

ValvTechnologies, a global leader in the design and manufacturing of severe service, zero-leakage valves, says it “has been at the forefront of slurry valve technology for over 30 years. The company has supplied all long-distance slurry transportation pipelines around the world, as well as many tailings transportation pipeline operations.” The first valves were supplied to a copper operation in Chile in the late 1980s, and the most recent were supplied to an iron operation in Brazil.

“We are extremely proud of our reputation and position in the market as a leader in this field”, said ValvTechnologies’ President, Kevin Hunt. “Not only is our AbrasoTech® valve the only product able to provide true absolute zero-leakage, we stand with every customer to ensure they receive the best overall solution and lifetime support for their operation”.

Its experience covers a broad range of ores, concentrates and tailings including copper, iron, zinc, nickel and phosphates and widely diverse environments in extreme climates and remote locations. Hunt continues, “Every operation is unique and this needs to be

reflected in the valve designs proposed, if the customer is to receive the most appropriate solution.” ValvTechnologies considers many operational factors for each case such as, the properties and characteristics of the slurry, the effects from a changing orebody and the expectations of future throughputs.

Correct valve selection is a critical factor in the successful operation of a slurry transportation pipeline. Whether installed in pump station, choke station, valve station, terminal or header stations, all applications have one thing in common – the need for reliable and absolute zero-leakage isolation. ValvTechnologies has supplied over 7,500 AbrasoTech valves to slurry pipelines around the world.

Global Industry Director of Mining, Kenny Gorman, explains, “The unmatched success of this valve is credited to its unique internal design features, which are engineered specific to each application to achieve maximum reliability and long service life. The AbrasoTech valve’s unique and patented integral seat design significantly improves the reliability and wear-life of the valve by eliminating internal leak paths through which high-pressure slurry can pass and cause wear.”



ValvTechnologies says that with its AbrasoTech valve and its focus on customers’ operations it has established “a worldwide reputation for superior quality and dependability”

Choosing the best and most efficient valve is critical for the success of pipeline operation. An inferior valve selection can have significant negative impacts, not only on the valves and other pipeline equipment (pumps, piping, instruments, chokes, etc), but also on the pipeline operation itself, with risks of substantial downtime and related losses in revenue. ValvTechnologies’ engineers are involved in the early stages of a project and work closely with EPCs and mining companies to ensure all requirements are fully defined and the optimal package solution can be prepared. At existing pipeline operations, engineers work in a consultative capacity to provide expert knowledge to increase efficiencies, lower costs and achieve increased production targets.

Specifically, pump isolation is a crucial application and reliability of valves is more critical in this service than in any other. The customer’s operations and maintenance personnel must have complete confidence that secure zero-leakage isolation is achieved prior to routine pump switching or any intervention being made on the pumps. Likewise, service engineers must be assured a safe environment in which to carry out their maintenance activities. Any leakage at the pump isolation valves can jeopardise the integrity of the pumps and safety of the team.

ValvTechnologies says the AbrasoTech valve, “with its integral seat design, is the only valve that can guarantee such isolation.” Current industry standards for the testing of metal/metal seated ball valves (ANSI/FCI 70-2, ASME B16.34 & API 598) all permit a certain amount of leakage during factory acceptance tests. Gorman explained: “if a valve shows leakage during the factory test, this situation can only worsen when in service, as the valve is subjected to the slurry.” The company’s in-house test acceptance criteria exceeds all existing industry standards and requires, “no visually detectable leakage for the duration of the test.” This is equivalent to ISO5208 rate A - a criteria that previously only soft-seated valves could achieve. “The engineering and manufacturing time and precision that goes into each ValvTechnologies’ valve ensures that we achieve this most rigorous standard.”

The AbrasoTech valve ranges from ASME class 150 to 2500 and in sizes from 12.7 mm (½” to 40”). Materials are selected based on the requirements of the specific application and state-of-the-art HVOF RITech® coatings are robotically applied to critical areas in the valve to further protect against erosion and corrosion. Over the years, the design of the valve has been developed in direct collaboration with customers based on their actual operating regimes. The innovation continues today with current R&D projects underway to develop longer wear-life materials. Far from being merely a supplier of valves, ValvTechnologies says it “is considered by customers to be a reliable partner in the efficient operation of their pipeline and an integral part of their asset management strategy.”