



UHMWPE(ultra high molecular weight pe)pipe project cases



Client Details

Client:	Thiess/Peabody
Location:	Burton Downs CHPP, Central QLD
Pipe Size:	Sold 219 ID 20 WT
Qty:	1.6km (4 lines of 300m + spare)
Connection Type:	Stub flange – Table E
Date of Purchase:	September 2012
Date of Install:	March 2013

Process Details

Process Type/ Service:	Co-disposal Tailings Slurry
Solid Size:	Max 150mm
Density/ Composition:	Rock, mud, sand stone. 1.2 SG
Flow/Velocity rate:	7.4 m/s max @ 46,000 tonne per month per line (4 lines) 5.2 m/s median. 270 TPH max, 97 TPH mean, 86 TPH median.
Total Dynamic Head:	6-8 bar at pump/plant
Wall thickness:	Testing occurred at a minimum 120 points per visit, every 3 months. WT readings were taken at the flange, where failure would normally occur. On average the lines lost 8mm WT p/a each.



Summary

Results indicate that UHMWPE pipe is outperforming the previously used PE100 4 to 1 in terms of wall thickness lost per co-disposal ton, on this site.

Furthermore, as a by-product of the smoother pipe, it has been indicated that blockage frequency was greatly reduced.

Comments

UHMWPE pipe, Lower velocity, lower pressure, and, most significant lower max solid size will provide a HUGE improvement in this performance when compared with Steel or PE100.

