

170 Slurry Seal Applications

170 Slurry Seal Application

Industry: Lime Processing
Location: United States
Equipment: GIW Pump
Quantity: 3
Fluid Sealed: Lime slurry; 65% solids
Speed: 1750 rpm
Temperature: 66 °C (150 °F)
Pressure: 3.4 bar g (50 psig)
Previous Seal: Competitor no flush slurry seal
Problem: Seal was failing every month, resulting in unscheduled plant shutdowns.
Current Seal: **170 – 3.937 inch TC/TC Aflas - no flush**
Current MTBF: Initial seal has been in operation for over two years; lasting 24 times longer than the competition and is still running!



170 Slurry Seal Application



Industry: Power - Fossil
Location: USA
Plant Area: SO₂ Absorber Lime Solution Tank
Equipment: Ekato Model HWL100R Agitator
Quantity: 6
Fluid Sealed: Lime Slurry, 3% - 4% solids
Speed: 50 rpm
Temperature: 38 °C (100 °F)
Pressure: Atmosphere
Previous Seal: Competitor slurry seal
Problem: Competitor's slurry seal was 35% more expensive with an undersized bearing arrangement; service life was marginal.
Current Seal: **170 – 100 mm SSC/SSC/FMK with bearing mount - no flush**
Operation: Seals have been in service for over 2½ years – leak-free.
Savings: Experienced longer seal life with acquisition cost savings of \$35,000.



170 Slurry Seal Application



Industry: Wastewater
Location: USA
Plant Area: Headworks
Equipment: Wemco Model C pump
Quantity: 3
Fluid Sealed: Water/Grit, 3% - 8% solids
Speed: 1750 rpm
Temperature: Ambient
Pressure: 2.8 bar g (40 psig)
Previous Seal: Competitive single seal with flush
Problem: Seals operated until flush system clogged, causing seal failure.
Current Seal: **170 – 2.500 inch TC/TC/FKM - no flush**
Operation: Initial seals have been in service for over 2 years
Savings: The plant is achieving greater reliability with the 170 Slurry Seal and is saving \$12K to \$15K per year in manpower.



170 Slurry Seal Application



Industry: Steel
Location: USA
Plant Area: Iron Slag Processing
Equipment: Goulds 3196 XLT
Quantity: 2
Fluid Sealed: Iron Ore Slag, 5% - 15% solids
Speed: 1750 rpm
Temperature: 49 °C (120 °F)
Pressure: 7 bar g (100 psig)
Previous Seal: Competitive single seal with flush
Problem: Slag would build up on seal faces & springs, causing premature seal failure; flush service unreliable. Seals would last 3 to 12 months.
Current Seal: **170 – 2.50 inch TC/TC/FKM - no flush**
Operation: In service for over 1½ years.
Savings: Flush savings are significant for this plant. Service water would plug lines routinely. Plant is very pleased with the 170 Seal performance.



170 Slurry Seal Application

Industry: Steel
Location: USA
Plant Area: Coke Plant, Chemical By-Processing
Equipment: Discflo 4 x 6 x 18 Pump
Quantity: 1
Fluid Sealed: Liquor-Tar, 1% solids
Speed: 1750 rpm
Temperature: 82 °C (180 °F)
Pressure: 7 bar g (100 psig)
Previous Seal: Tar is extremely aggressive and crystallizes around seal faces during intermittent operations. Seal faces would be lost on start-up.
Current Seal: **170 – 2.50 inch TC/TC/FKM - no flush**
Operation: Seal has been in service for over 1½ years
Savings: Savings in reliability and labor have been significant



170 Slurry Seal Application

Industry: Corn Processing
Location: USA
Plant Area: Wet Starch
Equipment: Goulds 3196XLT pump
Quantity: 20
Fluid Sealed: Steep/gluten mixture corn husk,
5% - 25% solids
Speed: 1750 rpm
Temperature: 52 °C (125 °F)
Pressure: 4.1 bar g (60 psig)
Previous Seal: Competitive single seal with flush
Problem: Seals failed within weeks of
installation causing major downtime.
Current Seal: **170 – 2.500 inch TC/TC/FKM -
no flush**
Operation: Initial seals have been operating for
over 2 years
Savings: The 170 Slurry Seal is operating 20
times longer than competitors seal.
Seal savings are \$5,000 per unit; 32
pumps are scheduled for conversion.



170 Slurry Seal Application



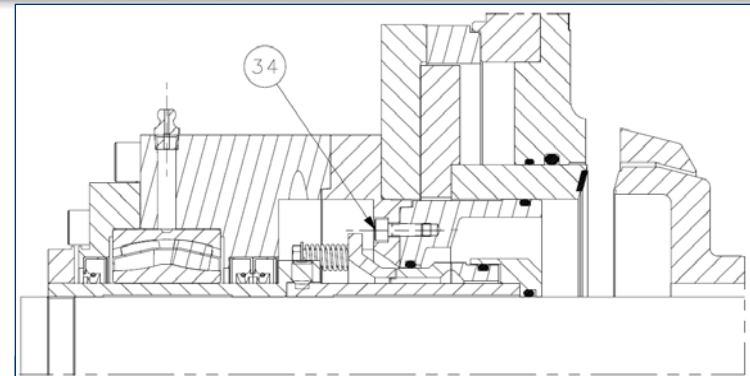
Industry: Power - Fossil
Location: USA
Plant Area: Flue Gas Desulphurization
Equipment: Goulds SRL-C 10x8-21 - Rubber Lined Slurry Pump
Quantity: 2
Fluid Sealed: Gypsum/Water Slurry, 20% - 30% solids
Speed: 778 rpm
Temperature: 32 °C (90 °F)
Pressure: 3.5 bar g (50 psig)
Previous Seal: New construction
Problem: Competitive bids were higher than the AWC.
Current Seal: **170 – 3.75 inch TC/TC/FKM Alloy 2205 wetted - no flush**
Operation: Seals have been in operation for 3 months.
Savings: Acquisition cost savings of \$500 - \$1,000 per seal!



170 Slurry Seal Application



Industry: Power - Fossil
Location: USA
Plant Area: Flue Gas Desulphurization
Equipment: Philadelphia Side Entry Agitator
Quantity: 29
Fluid Sealed: Gypsum/Water Slurry, 20% solids
Speed: 217 rpm
Temperature: 71 °C (160 °F)
Pressure: 2.8 bar g (40 psig)
Previous Seal: New construction
Problem: Competitive bids were higher than the AWC.
Current Seal: **170 – 3.437 inch SC/SC/FKM
Hastelloy C wetted - no flush**
Operation: Seal has been in service for 1 month.
Savings: Acquisition cost savings of \$500 - \$1,000 per seal!



170 Slurry Seal Application



Industry: Mining Gold
Location: Australia
Plant Area: Tailings
Equipment: Warman 12/10 FFAH Pump
Quantity: 4
Fluid Sealed: Mud Slurry Hypersaline Water, 24% solids
Speed: Variable, 700 - 1150 rpm
Temperature: 30 °C (85 °F)
Pressure: 12.4 bar g (180 psig)
Previous Seal: Packing with flush
Problem: Excessive sleeve wear caused equipment failure and production downtime.
Current Seal: **170 – 7.00 inch TC/TC/Aflas with flush**
Operation: Seal has been in service for 1 month.
Savings: Increased production & sleeve replacement and maintenance costs.

