

Gold Silver Refinery Equipment

Appendix 1 - DRD Gold Refinery Equipment List

P&ID No.	Description	Type	Duty Capacity
R 1	REACTOR Gold Leaching	Fiber Glass (ØID=1300 h=1730 20°)	Actual (2400 l) Active (1800 l)
R 2	REACTOR Gold Precipitation	Fiber Glass (ØID=1180 h=1640 45°)	Actual (2000 l) Active (1500 l)
T3a/b	TANKS SX Feed	Fiber Glass (ØID=1221 h=1710)	Actual (2000 l) Active (1500 l)
T4a/b	TANKS Scrub Liquor	Fiber Glass (ØID=900 h=1260)	Actual (800 l) Active (600 l)
T5	TANK Strip Liquor	Fiber Glass (ØID=585 h=820)	Actual (220 l) Active (cont.)
T6a/b	TANKS Raffinate Holding	Fiber Glass (ØID=1221 h=1710)	Actual (2000 l) Active (1720 l)
T7a/b	TANKS Loaded Strip Liquor	Fiber Glass (ØID=1221 h=1710)	Actual (2000 l) Active (1250 l)
T8	TANK Organic Reservoir	Fiber Glass (ØID=682 h=985 45°)	Actual (400 l) Active (300 l)
T9	TANK Gold Precipitation Filtrate	Fiber Glass (ØID=1221 h=1710)	Actual (2000 l) Active (1500 l)
T12	TANK Storage	By supplier	100 l
Sc1 to Sc5S1 to S4	MIXER SETTLER CELLS E1 to E3	Fiber Glass	65 l cells
H1	HOPPER Gold Sludge Feed	Mild Steel lined	125 l
Me1	MIXER Gold Leach	Mixer Shaft Seal & Motor	227 rpm 2.2 kW motor
Ma1 to Ma12	MOTORS Mixer Settler Cells	Pneumatic Motors Impellers	Pneumatic
LP1	PUMP Mechanical Seal	By Supplier	0.02 kW motor
LP2	PUMP Leach Slurry	Air Diaphragm Pump	0 - 120 l/min
LP3	PUMP Extraction Feed	Peristaltic Pump & 380 V Inverter	0.15 – 7.4 l/min 0.37 kW motor
LP4	PUMP Scrub Liquor Feed	Peristaltic Pump & 380 V Inverter	1 l/min 0.25 kW motor
LP5	PUMP Strip Liquor Feed Peristaltic	Pump & 380 V Inverter	0.15 – 7.4 l/min 0.37 kW motor
LP6	PUMP Organic Recycle Peristaltic	Pump & 380 V Inverter	0.15 – 7.4 l/min 0.37 kW motor
LP7	PUMP Raffinate Recycle	Air Diaphragm Pump	0 - 120 l/min
LP8	PUMP Loaded Strip Liquor	Magnetic Drive Pump	115 l/min
LP9	PUMP Gold Product Filter	Bredel Pump	100 l/min
LP10	PUMP Gold Product Filtrate Discharge	Magnetic Drive Pump	115 l/min
LP11	PUMP Organic Feed	Air Diaphragm Pump	0 - 50 l/min
LP12	PUMP Loaded strip Liquor	Air Diaphragm Pump	0 - 50 l/min
LP13	PUMP Raffinate Holding	Air Diaphragm Pump	0 - 50 l/min
LP14	PUMP Precipitation Off-gases	Magnetic Drive Pump	35 l/min 0.2 kW motor
LP15	PUMP Membrane Inflation	By supplier (Filter Solutions)	2.2 kW motor
FT1	FILTER PRESS Leach Liquor	Mild Steel – Includes filter cloth	470 x 470 mm sidebar press
FT3	PAN FILTER Product	Fiber Glass	1170 x 1170 x 500 mm high
FT4	INLINE FILTER Waste Solution	PP/PVC	35 – 45 l/min (water based sol.)
SK1	OFF-GAS SCRUBBER	Fiber Glass	h = 1435 mm ø = 1484 mm
BL1	BLOWER	Radial Plastic Fan with PP inserts	141 Nm ³ /h
TD1	TRAY DRIER	Stainless steel 304 interior	400 l Heating elements – 12 kW
LP16	De-ionized water pump	Wilden Pump	

Appendix 2 - DRD Silver Refinery Equipment List

ER1	ELECTROWINNING THUM CELL	Fiber Glass	-
ER2	ELECTROWINNING THUM CELL	Fiber Glass	-
ER3	ELECTROWINNING THUM CELL	Fiber Glass	-
ER4	ELECTROWINNING THUM CELL	Fiber Glass	-
P1	PUMP	Magnetic Drive Pump	0.015 kW 220 V
P2	PUMP	Magnetic Drive Pump	0.015 kW 220 V
P3	PUMP	Magnetic Drive Pump	0.015 kW 220 V
P4	PUMP	Magnetic Drive Pump	0.015 kW 220 V
TD2	TRAY DRIER	304 ss ms impelle rwool insulation	Truck Dryer TD 20
CC	CALCINER	Keegor standard 30 kW 3-tray furnace	30 kW
F	FURNACE	See comments	75 kW Continuous 3-10 kHz