

5 TPH Gold Ore Processing and Thiourea Leaching Plant [Inventory ID #1429315]



5 TPH Gold Ore Processing and Thiourea Leaching Plant

Plant Includes: Crushing, Milling, Conveying, Pumping, Leaching, and Filtering Equipment.

Description: The process starts with filling the **hopper** with ore.

The ore is transported to **Jaw crusher** mill via a **conveyor belt**, then the ground ore falls in to the **Hammer mill**, and then into the fine grinding mill – **Impact mill**. The ground ore is transported via the **screw conveyor** to the **bucket conveyor**, which transports the ore to the **storage tank**.

The ore from the **hopper** is weighed via the **Belt conveyor with the processor-controlled scale**, before it goes into the **leaching reactors**.

After the leaching process: The process liquid is filtered on a **hydraulic membrane filter press**. The filtered liquid flows into the **storage tank**. When the leaching reactor is empty, liquid from the storage tanks is pumped back into the reactor. The same liquid is used until the appropriate concentration of gold in the liquid is reached.

When a high concentration of dissolved gold is reached, the liquid is stored in a **storage tank for the further process** of extracting gold from the liquid – absorption, desorption, reduction.

- Year: 2018
- Capacity: 5 Tons Per Hour
- Condition: Used, Reported in Good Condition

Equipment List:

- 10in x 16in Jaw Crusher:
 - Hours: Approx. 30 Hours
 - Capacity: 5 - 20 TPH
 - Feed Size: 9in
 - Discharge: 3/4 - 3in
 - Drive: Electric Motor
 - Power Output: 30HP
 - Rotation Speed: 1,175RPM
 - Voltage: 460 Volts
 - Frequency: 60Hz
 - Phase: 3-Phase
 - Soft Inverter
- 24in x 16in Hammer Mill:
 - Hours: Approx. 30 Hours
 - Capacity: 5 - 10 TPH
 - Feed Size: 5in
 - Discharge: 1/4in
 - Drive: Electric Motor
 - Power Output: 30HP
 - Rotation Speed: 1,779RPM
 - Voltage: 480 Volts
 - Frequency: 60Hz
 - Phase: 3-Phase
 - Soft Inverter
- Stutenroth Impact Mill:
 - Hours: Approx. 30 Hours
 - Capacity: 5 TPH
 - Feed Size: 1/2in
 - Discharge: 100mic.
 - Drive: Electric Motor
 - Power Output: 40HP
 - Rotation Speed: 1,770RPM
 - Voltage: 460 Volts
 - Frequency: 60Hz
 - Phase: 3-Phase
- Fiberglass Leaching Tanks and Agitators
 - Agitators:
 - Qty: 2
 - Hours: Approx. 50 Hours

- Drive: Electric Motor
 - Power Output: 40HP
 - Rotation Speed: 1,770RPM
 - Voltage: 230 Volts
 - Current: 610 Amps
 - Frequency: 60Hz
 - Phase: 3-Phase
 - Includes:
 - VFD Motor
 - Soft Start Inverter
- Leaching Tanks:
 - Qty: 2
 - Capacity: 16,500L
 - Diameter: 2,743mm
 - Height: 2,895mm
 - Wall Thickness: 16mm
 - Construction: FRP
 - Includes:
 - Heating System
 - Multi-Parameter Controller
- 12m³/Hour Pneumatic Double Diaphragm Pumps:
 - Qty: 3
 - Capacity: 12m³/hour
 - Discharge Pressure: 6 bar
 - Max Air Pressure: 7 bar
 - Max Air Consumption: 0.9m³/hour
 - For Chemicals Up to 1.5 PH
- 21m³/Hour Pneumatic Double Diaphragm Pumps:
 - Qty: 4
 - Capacity: 21m³/hour
 - Discharge Pressure: 5 - 8 bar
 - Max Air Pressure: 8.4 bar
 - Max Air Consumption: 1.5m³/hour
 - PTFE (Teflon)
- 35m³/Hour Pneumatic Double Diaphragm Pump:
 - Capacity: 35m³/hour
 - Discharge Pressure: 5 - 8 bar
 - Max Air Consumption: 1.5 - 2.5m³/hour
 - PTFE (Teflon)
- Hengda Double Screw Air Compressor
 - Make: Hengda
 - Hours: Approx. 20 Hours
 - Output: 2m³/min
 - Pressure: 10 bar
 - Air Tank Capacity: 600L

- Drive: Electric Motor
 - Pressure Output: 20HP
 - Rotation Speed: 1,770RPM
 - Voltage: 230 Volts
 - Current: 610 Amps
 - Frequency: 60Hz
 - Phase: 3-Phase
- Includes: Refrigerated Air Dryer with Filters
- Outdoor Ore Hopper:
 - Hopper Capacity: 15m³
 - Vibrating Feeder
- Indoor Ore Hopper:
 - Hopper Capacity: 15m³
 - Vibrator 1:
 - Drive: Electric Motor
 - Power Output: 0.75kW
 - Rotation Speed: 1,680RPM
 - Frequency: 60Hz
 - Vibrator 2:
 - 0 - 5 kN
 - Drive: Electric Motor
 - Power Output: 0.4kW
 - Rotation Speed: 1,729RPM
 - Voltage: 240 Volts
 - Current: 1.62 Amps
 - Frequency: 60Hz
- 0.8m x 15m Belt Conveyor
 - Hours: Approx. 30 Hours
 - Belt Width: 800mm
 - Belt Length: 15m
 - Belt Speed: 0.8m/second
 - Drive: Electric Motor
 - Power Output: 7.5kW
 - Voltage: 240 Volts
 - Current: 17 Amps
- 6m Mobile Stainless Steel Screw Conveyor:
 - Length: 6m
 - Feeder Hopper: 1m³
 - Drive: Electric Motor
 - Power Output: 0.75kW
 - Voltage: 240 Volts
 - Current: 3.51 Amps
 - Frequency: 60Hz
- 4.6m Screw Conveyor:
 - Hours: Approx. 30 Hours

- Length: 4.6m
- Screw Diameter: 28cm Dia.
- Drive: Electric Motor
 - Power Output: 3kW
 - Rotation Speed: 1,728RPM
 - Voltage: 210 Volts
 - Current: 10.2 Amps
 - Frequency: 60Hz
- Bucket Elevators:
 - Qty: 2
 - Hours: Approx. 30 Hours
 - Height: 8m
 - Angle: 90°
 - Drive: Electric Motor
 - Power Output: 2.2kW
 - Rotation Speed: 1,704RPM
 - Voltage: 240 Volts
 - Current: 7.7 Amps
 - Frequency: 60Hz
- Belt Conveyor with Scale:
 - Hours: Approx. 10 Hours
 - Capacity: 10 TPH
 - Length: 5.3m
 - Width: 85cm
 - Drive: Electric Motor
 - Power Output: 4kW
 - Rotation Speed: 1,740RPM
 - Voltage: 240 Volts
 - Frequency: 60Hz
- Hydraulic Membrane Plate Filter Press:
 - Capacity: 5.4 TPH
 - Filter Chamber Volume: 1,500L (396gal)
 - Filter Area: 100m² (1,076.4ft²)
 - Design Pressure: 0.6Mpa
 - Plates: 57 Plates
 - Plate Size: 1m x 1m (3ft 3/8in x 3ft 3/8in) Plates
 - Cake Thickness: 30mm
 - Cake Size: 2.7 Ton Cake per Batch
 - Drive: Hidravlik Electric Motor
 - Power Output: 3kW
 - Rotation Speed: 1,728RPM
 - Voltage: 210 Volts
 - Frequency: 60HZ
- Belt Conveyor under Filter Press:

- Length: 12.5m
- Drive: Electric Motor
 - Power Output: 3.8kW
 - Rotation Speed:
 - Voltage: 240 Volts
 - Current: 13.5 Amps
 - Frequency: 60Hz
- Weight: 4,290kg (9,457lbs)
- Storage Tanks:
 - Qty: 4
 - Capacity: 15,000L
 - Diameter: 2,500mm
 - Overall Height: 3,400mm
 - Wall Thickness: 16mm
 - Construction: Polyethylene
 - 2 Tanks Equipped with Heating Systems
- Reactor for Reduction Process:
 - Qty: 2
 - Tank:
 - Capacity: 1,000L
 - Diameter: 800mm
 - Height: 1,300mm
 - Wall Thickness: 6mm
 - Mixer:
 - Power Output: 1/3HP
 - Rotation Speed: 1,720RPM
 - Voltage: 208-230 Volts
 - Frequency: 60Hz
 - Pump:
 - Model: AC-3CP-MD
 - Power Output: 1/15HP
 - Rotation Speed: 3,000RPM
 - Voltage: 115 Volts
 - Current: 2.3 Amps
 - Frequency: 60Hz
- Carbon Towers:
 - Tanks:
 - Qty: 3
 - Capacity: 100L
 - Construction: FRP
 - Pump:
 - Qty: 1
 - Model: AC-3CP-MD
 - Flowrate: 15L/min
 - Power Output: 1/15HP

- Rotation Speed: 3,000RPM
 - Voltage: 115 Volts
 - Current: 2.3 Amps
 - Frequency: 60Hz
 - Filter Housing:
 - Capacity: 50L
 - Construction: Stainless Steel
- CAT Diesel Generator:
 - Year: 1994
 - Hours: 2,150 Hours
 - Condition: Used, Reported in Good Condition
 - Voltage: 600 Volts
 - Current: 800 Amps
 - Frequency: 60Hz
- Electrical Panel:
 - Make: Sun Valley Electric
 - Model: SW WCTML8-8-4 D
 - Year: 2016
 - 4 Wire
 - Voltage: Voltage: 480/277 Volts
 - Supply Current: 800 Amps
 - Frequency: 60Hz
 - Phase: 3-Phase
- Transformer:
 - Make: Hammond Power Solutions
 - kVA: 300kVA
 - Primary Voltage: 480 Volts
 - Secondary Voltage: 240 Volts
 - Phase: 3-Phase
 - Temp. Rise: 150°C
- Location: Southwest USA