China Electric gold melting furnace wholesale

Electric Gold Melting Furnace manufacturers & suppliers in China, Desorption electrolytic + smelting; Roasting gold-loaded carbon for smelting

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1: Desorption electrolytic + smelting

We use the high temperature and high pressure desorption electrolysis system. It is a system for obtaining gold mud from gold-loaded carbon by desorption and electrowinning under high temperature and high pressure conditions.

The desorption electrolysis system consists of desorption column, electrolytic cell, filter, circulating pump, electric heater, air compressor, desorption liquid tank, control cabinet and other equipment.

Features:

1.Fast: under the conditions of high temperature and high pressure, the desorption electrolysis speed of gold-loaded carbon is relatively fast, and all the desorption electrolysis of a batch of gold-loaded carbon can be completed within 12 hours to 14 hours, which is nearly three times shorter than the working time of conventional systems.

2. Cyanide-free desorption, low energy consumption: the system only needs to add sodium hydroxide instead of sodium cyanide, which not only reduces operating costs, but also keeps the environment clear. The desorption temperature in the system is the same as the electrolysis temperature, there is no heat exchange device, and the heat preservation effect is good. And also because the working speed is relatively fast, the power consumption of the system is 1/2 to 1/4 of that of the conventional system.

3. Automatic control settings:

2: Roasting gold-loaded carbon for smelting

It is traditional way to get the final pure gold. The materials needed are refractory brick, metallic lead(Electrolytic lead), coke, blower, activated carbon combustion drum, cooling crucible, graphite crucible, stainless steel, etc.

The operation procedures as below:
1. Burining the gold-loaded carbon

2. The carbon slag is crushed after cooling, then add pure lead and borax, and mix well.

3. The uniformly stirred carbon slag is put into a crucible and calcined

4. After calcining for 1-2 hours, the carbon residue is dissolved into a liquid and stirred as water, then take out the furnace for cooling . After cooling, the carbon residue is poured out. At this time, gold and lead have settled into the bottom of the pot and knocked out and are available.

5. Removing lead. Put the lead-containing gold in a cement-filled cauldron, put coal balls or coke on it, blow it with a fan, and then stop blowing to let it naturally rise to more than 1300 degrees. At this time, the lead will vaporize and evaporate. This process takes 2-3 hours.

6. The refinement step is after removing lead. After removing lead, obtain gold with low purity, add silver (preferred) or lead to melt, so that the alloy reaches 15% -25% gold content, and then slowly drop into a large amount of cooling water to make the alloy into small particles, which is beneficial to achieve a good reaction with nitric acid, replace nitric acid continuously with new ones to remove silver and lead, and finally obtain high-purity gold powder. After removing moisture, melt into a ceramic crucible to obtain a gold ingot.

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