

Ore Dressing Workshop (*Seriba*)

Most of the gold extracted from the Sado mines was turned into oval-shaped coins called *koban*, which were an important form of coinage in Tokugawa-era Japan (1603–1868). *Koban* were produced on Sado from 1622 until 1819, when the government reorganized its minting operations and began sending gold from Sado to be minted in Edo (now Tokyo).

The dressing, refining, and minting all took place inside the well-guarded magistrate's compound. In the reconstructed building, illustrations and period equipment show the processes used to reduce mounds of mined ore to flecks of usable gold and, finally, to stamped coinage.

The Ore Dressing (Beneficiation) Process

Pure gold made up a tiny fraction of the ore taken from the mine. Making a single *koban* coin required as much as 3 tons of gold ore, and the process for extracting that gold had several steps.

Crushing: Workers used hammers to break apart the gold ore.

Sieving: Crushed ore was sifted over wooden buckets to separate finer particles.

Water Separation: Sifted ore was added to water and “panned” using a specialized wooden basin called a *yuri-ita*. Shaking the basin brought the lighter rocks to the surface, where they could be gradually rinsed away, leaving the gold behind.

Grinding: The separated but still impure gold was ground under a heavy stone mill to reduce it to fine powder.

Sluicing: The pulverized rock and gold was run through a sluice to separate and trap tiny particles of gold. This was achieved by laying lengths of cloth along the sluice that acted like nets to catch the heavier gold.

Minting the Koban

After all the crushing, grinding, and sluicing, the extracted gold was taken away for further processing. Although it had been separated from the ore, the gold itself still contained impurities, including a certain amount of silver. The majority of these impurities had to be

removed before the gold could be minted into *koban* coins.

First, the impure gold was smelted with lead, a process that removed some impurities from the metal. The resulting alloy of lead, gold, and silver was then remelted to separate out the lead. This was mixed with salt and heated again to turn the silver into silver chloride, which could be removed, leaving the mostly pure gold. Secondary processes were used to adjust the purity until it met the standard range for a *koban* coin. Metalworkers then pounded the gold into long, oval-shaped blanks, which were cut into uniform portions, minted, and stamped with the first kanji character of the name “Sado.”

The workshop also contains panels on the development of Aikawa and the magistrate's headquarters. The accompanying illustrations show how the discovery of gold transformed the settlement from a small seaside village into a boomtown of 50,000 residents.