



*Japan Mint*

## CASE STUDY: JAPAN MINT

The Japan Mint was opened in Osaka in 1871, shortly after the Meiji Restoration when Japan embarked on modernization, with a view to introducing a unified coinage system to the new modern state. Since then, the Mint has been the sole producer of Japanese legal tender coins. In 2003, the Mint was separated from the Ministry of Finance to become a fully state-owned corporation.

The Mint has its head office in Osaka, and branches in Saitama and Hiroshima.



The major business lines of the Mint are,

- (1) Coin manufacturing,
- (2) Sale of collector coins (commemorative coins and coin sets),
- (3) Production of orders, medals of honor, and metallic art objects, and
- (4) Analysis and refining (fineness certification of precious metal wares, analysis and testing of metal ores and minerals, refining of precious metal, fineness certification of precious metal).

Employees: 843 as of April 1, 2019

### FY2017 Key Results

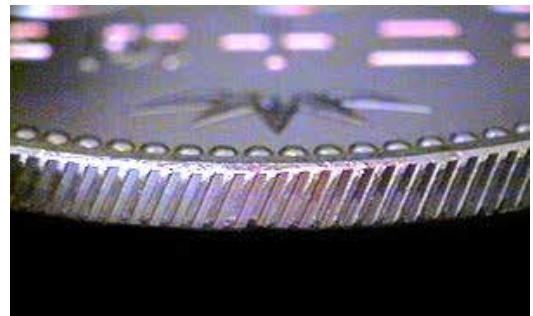
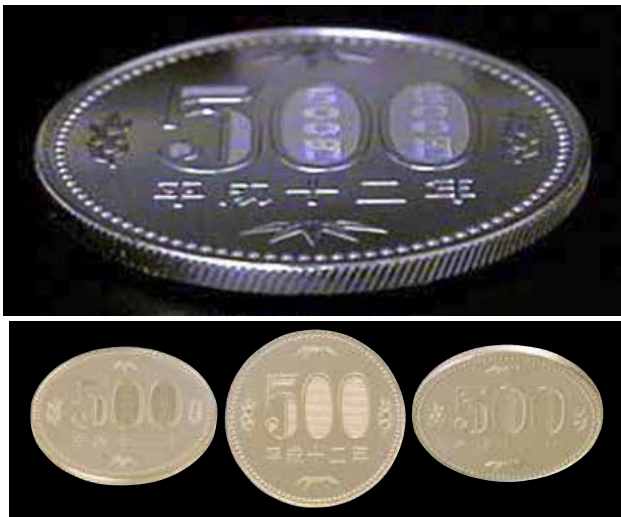
- Net sales : ¥23,912 million
- Operating profit : ¥510 million
- Visitors to the museums : 171 thousand
- Visitors to the factory tours : 79 thousand



Key Challenge: striving to improve its technology in order to produce and supply coins resistant to counterfeiting and uniform in standard and quality.

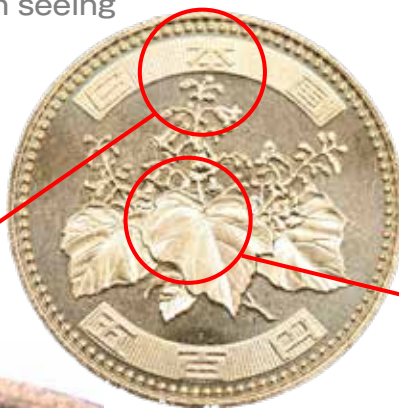
## Security features of the 500-Yen Coin

The 500-yen coin, one of the world's highest denomination coins used for daily transactions, is protected by advanced anti-counterfeit technologies.



Japan Mint realized the world's first coin with Helical Ridges in the field of mass-production.

Latent Image appear and disappear depending on the angle when seeing the coin.



Micro Stripes, thinner than human hair, cannot be replicated by ordinary processing machinery.



Micro Dots technology is a challenge to the limits of micro-processing.

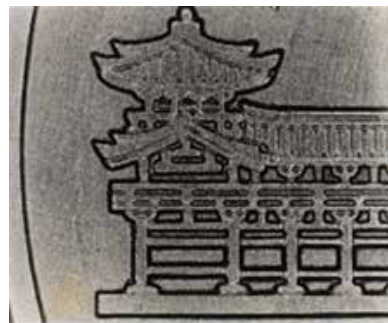




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Precision finishing of the master dies by skilled hands supports the anti-counterfeiting measures.

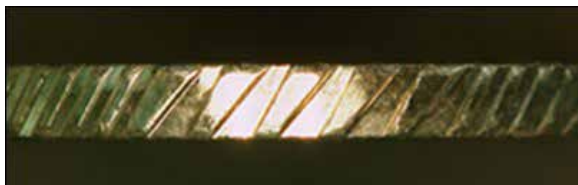


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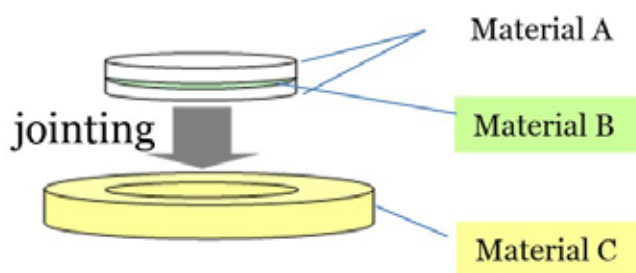


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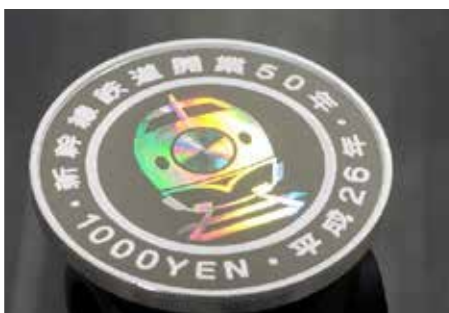
## Further advanced securities features



Helical Ridges With Two Different Pitches is the advanced version of Helical Ridges.



Bi-Color Clad Coin has the inner part with three layers of different metals, surrounded by the outer part made of another metal.



Iridescent Color Shining technology makes the coin shine with rainbow colors by using the interference of light reflected from micro-fabricated grooves.



## Production of Orders and Medals of Honor

Japan Mint produces orders conferred on those who have rendered service to the nation or the public as well as medals of honor awarded to those whose achievements or conduct have contributed in certain field of society.

These products must possess elements of beauty and dignity. Therefore they are mainly produced by hand with great care and fine technique.



Cutting out by jig saw



Collar of the Supreme Order of the Chrysanthemum

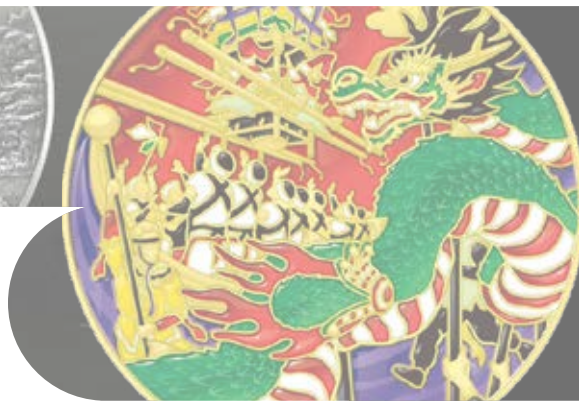


Orders and Medals of Honor





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## Production of Metallic Art Objects

Japan Mint produces metallic art objects in order to maintain and improve coin production techniques and anti-counterfeiting measures.



Gold-plated Silver Medallion with Cloisonné  
(Diameter: 60mm, Weight: 160g)



“National Treasure” Series Silver Medal  
(Diameter: 60mm, Weight: 160g)



## How to produce an electrotype plaque

A plaster model is graphitized on the surface and then soaked in a copper sulfate solution tank as negative electrode, while a copper plate is used as positive electrode. The tank is electrified for 120 to 220 hours to form 1 to 1.5 mm thick copper electrodeposit on the whole graphitized surface. The electro-deposited copper, peeled off from the plaster model, is polished and then finished with chemical dye or gold- or silver-plating.

Electrotype Plaque “Golden Pavilion”  
(Frame Size: 450mm x 450mm)



## Mint Museum and Factory Tour



The museums and factory tours play important roles of deepening public understanding of the Mint's operations as well as maintaining public confidence in coins.

The Mint Museum is located within the grounds of Osaka Head Office and exhibits about 4,000 items. Branches in Saitama and Hiroshima also have a museum and an exhibition room respectively.

Guided factory tours are available at the head office as well as two branches.

Further Information  
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