

**Furuya Metal to Invest in  
Enhancing the Ruthenium Refining  
Capability of Tsuchiura Plant**

**Planning to Increase Capability to Approximately 60 Tons Per Year by December 2019 in  
Response to Growing Demand for High-Purity Ruthenium for Hard Disks Within and  
Outside Japan**

Furuya Metal Co., Ltd. (Head office: Toshima-ku, Tokyo; President: Takahito Furuya) announced that it will invest in enhancing the ruthenium (Ru) refining capability of its Tsuchiura Plant (located at Sawabe in Tsuchiura City, Ibaraki).



<Exterior view of Tsuchiura Plant (as of May 2014)>

Furuya Metal's Tsuchiura Plant has refining and recovery lines for high-purity ruthenium targets (thin film materials), catalysts, and other products, and is able to carry out high-purity refining within short time frames.

This capability-enhancement investment is in response to the growing demand, both within Japan as well as overseas, for high-purity ruthenium targets used in hard disks. The scale of the investment is 1.6 billion yen, with the first phase of 600 million yen planned to be invested by the end of December 2018. Through the first phase of investment, the refining and recovery capability for ruthenium will be increased by approximately one ton monthly, from the current 2.4 tons monthly to 3.5 tons monthly. This increases the annual capability by 12 tons.

Furthermore, the remaining one billion yen will be invested by December 2019 during the second phase of the investment. The plan is to put in place a system to handle the growing demand for targets as well as chemical products such as catalysts. Through the second phase of investment, ruthenium refining and recovery capability will be further increased, bringing it up to five tons per month. This will bring refining and recovery capability to approximately 60 tons each year, which is almost double the current capability.

## **Overview of Tsuchiura Plant**

Location: Tsuchiura Plant (located at Sawabe in Tsuchiura City, Ibaraki), Furuya Metal Co., Ltd.

Floor area: Approximately 6,400 m<sup>2</sup>

Business scope: Refining and recovery of ruthenium and iridium

## **Background of the investment for enhancing ruthenium refining capability**

With systems moving to the cloud, the spread and sophistication of smart phones, big data utilization, progress in IoT and AI, and coupled with other factors such as autonomous driving of cars, data centers are rapidly increasing around the world to record and store the enormous and rapidly-expanding data. Most of the data is stored on hard disk drives (HDD). Each hard disk drive contains several pieces of hard disks, and the number of hard disks within a drive continues to grow each year. High-purity ruthenium targets are essential for hard disks, and it is expected that there will be a long-term increase in demand for them. In addition, the demand for solid state drives (SSD) is also expected to increase, but hard disks can be said to have an advantage from cost and other aspects. Moving forward, it is expected that segregation based on their respective functions will be carried out while responding to the rapid expansion of data storage.

Furthermore, Furuya Metal's ruthenium targets have received high recognition in mass-production prototypes for the next-generation semiconductor memory known as spin-transfer torque magnetoresistive random-access memory (STT-MRAM)\*1. The increase in demand for ruthenium targets is expected to further grow together with the establishing of the market for STT-MRAM from 2020 onward. In addition, the demand for highly-functional chemical catalysts is also expected to increase with their use as an environmental measure. These and other factors make it essential to increase the refining and recovery capability for ruthenium, which led to the capability-enhancement investment this time.

\*1 STT-MRAM refers to magnetoresistive random-access memory (MRAM) which utilizes a technology known as spin-transfer torque (STT) for writing data.

## **[Overview of Furuya Metal Co., Ltd.]**

Furuya Metal manufactures industrial-use precious metal products utilizing precious metals with high scarcity value included among platinum group metals (PGM) such as platinum (Pt), iridium (Ir) and ruthenium (Ru). Due to the extreme difficulty in processing these precious metals, the number of industrial-use precious metal manufacturers specializing in PGM is limited even on a worldwide level. Industrial-use precious metals centered on PGM, could be considered to be materials with a vital role in supporting advancements in the fields of electronics, optical glass, clean energy, environment and medicine because of their excellent characteristics such as heat resistance, chemical stability and good electrical conductivity.

The Company specializes in PGM with particularly excellent properties among precious metals, and manufactures and sells industrial-use precious metal products such as crucibles (heat-resistant containers), thin film materials and thermocouples (thermometers).

Headquarters: MSB-21 Minami Otsuka Bldg., 2-37-5 Minami Otsuka, Toshima-ku, Tokyo

Representative: Takahito Furuya, President

Founded: March 1951

Incorporated: August 22, 1968

Capital: 5,445 million yen

Listed exchange: JASDAQ Standard (Securities code: 7826)

Employees: 305 (as of June 30, 2017)

Sales: 14,742 million yen (as of June 30, 2017)

Areas of business: Manufacture and sales of industrial-use precious metal products such as iridium and platinum, and thermosensors. Sales of electronic materials and semiconductor-related products. Manufacture and sales of thin film components.

Website: <http://www.furuyametals.co.jp/english/>

<Press inquiries>

Furuya Metal Co., Ltd.

America, Europe & Southeast Asian Markets, Sales Division

Hideki Kuwabara

E-mail: [kuwabara@furuyametals.co.jp](mailto:kuwabara@furuyametals.co.jp)