

NIPPON KINZOKU Contributing to the Realization of Carbon Neutrality Through Rolling Process Technology Exhibits at “STAINLESS STEEL WORLD ASIA 2024”

We Exhibit High-performance Stainless Steel, High-precision Tube, Profile Rolled Products (Fine Profile), and Rolled Magnesium Alloy Materials.

NIPPON KINZOKU CO., LTD. (TOKYO: 5491, Headquarters: Minato-ku, Tokyo) and Tokyo Stainless Grinding Co., Ltd. (Headquarters: Sumida-ku, Tokyo) will jointly participate in STAINLESS STEEL WORLD ASIA 2024, an exhibition to be held at Singapore EXPO in Singapore from September 11 (Wed.) to 12 (Thu.), 2024.

We will exhibit our carbon neutral products such as high-performance stainless steel, high-precision tubes, profile rolled products (Fine Profile), and rolled magnesium alloy materials, along with examples of their applications.



● Exhibit Details

1. Stainless steel

① Wide width foil

The foil rolling mill can make the sheet thickness $\pm 1.0 \mu\text{m}$ of the tolerance. We assure the highest thickness precision in the world. Maximum width 620 mm can be provided. And, Tokyo Stainless Grinding Co., Ltd. also has mirror polished products which using our stainless foil.

② Realized low electric contact resistance L·Core finish

It is a product that achieved low electric contact resistance with stainless steel “Near Net Performance” (=Realizing complex molding process close to the final product shape) , the nickel plating process can be skipped to reduce costs. (Environmentally friendly products certified based on our own standards)

③ High surface insulation resistance and high film heat resistance temperature FI finish

It is a product that enables high insulation properties with materials “Near Net Performance”. This is an eco-product that eliminates the need for customers to apply their own coatings and films.

④ European Medical Devices Regulation (MDR) compatible medical stainless steel

For injection needles application, we provide stainless steel with excellent weldability and workability which based on the chemical composition of steel grade SUS304. In addition, components compliant with the cobalt regulation (Co: 0.1% or less) in the European Medical Devices Regulation (MDR). Which will come into effect in 2028, can also be selected.

2. New magnesium alloy with improved formability and heat dissipation (ZA10)

Magnesium alloys are the lightest of the common metals and have excellent radiation property and vibration damping properties as well as metallic strength. We have developed a new alloy with enhanced cold formability¹⁾ for magnesium alloys, which generally require warm forming. We have also confirmed that this alloy exhibits heat conduction equivalent to that of aluminum alloys, and can improve productivity by supplying materials in coils. We provide lightweight +α functions for various products such as PCs, smart phones, and medical equipment.

In addition, Tokyo Stainless Grinding Co., Ltd. also has mirror polished products which using our Magnesium alloy foils.

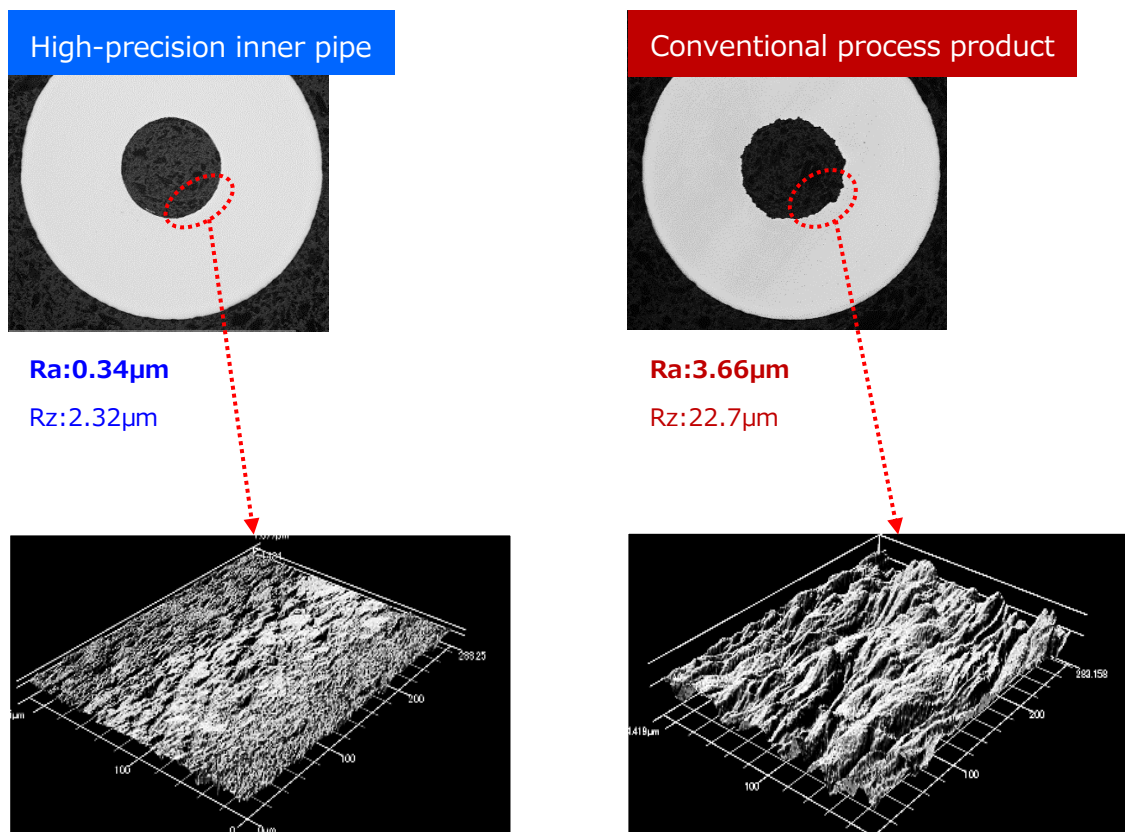
1) Co-developed National Institute of Advanced Industrial Science and Technology, Fuji Light Metal Co., Ltd.

3. Ultra-thin electrical steel strips

We are the only one manufacturer of the ultra-thin electrical steel strips with the thickness less than 0.10mm in Japan. Grain oriented electrical steel strips are used in reactors as the use of renewable energy is promoted worldwide toward a decarbonized society and the DC power grid is expanding. Non-grain oriented electrical steel strips are eco-products that meet the needs for motor miniaturization and energy saving, and has both high rotation speed and high efficiency, features low iron loss (high efficiency) due to its thin wall thickness which is used in vacuum cleaners and other products.

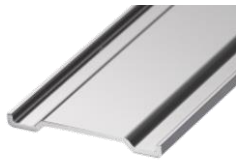
4. "Fine Pipe" with high-precision inner surface

Among our high-precision pipes (fine pipes), they are pipes with improved inner surface for small-diameter capillary piping. Ra 0.5μm or less is possible with an inner diameter of φ0.5mm or more. We can meet the needs of various applications such as high-precision piping and parts, HPLC/GC columns, capillary piping, flow meters (mass flow controllers), and medical parts (surgical instruments, analyzers).



5. Fine Profile

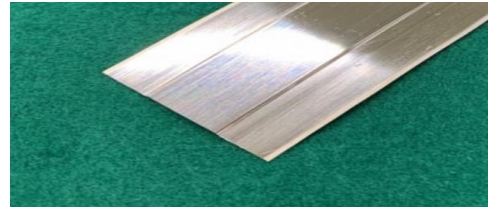
By our shape control and highly rigid frame deformed rolling equipment which realize high precision for Fine Profile. Fine Profile is an eco-product that can reduce cutting loss by switching from cutting. In addition, the market for BEVs is moving toward higher current applications, and there is an increasing need for cross sections that are thicker in high current areas and thinner in areas where they are not needed. We also handle nonferrous metals (Cu and Al), and have established section forming technology that exceeds cold forging for thick (standard) and thin (thickness reduction (75%))



Fine Profile products combined with roll



Fine Profile



C5210 Concave (T) cross-section 0.8t×0.2t×25w



C1020 Convex (U) cross-section 3.0t×0.9t×123w

● Exhibition Outline

STAINLESS STEEL WORLD ASIA 2024 is an exhibition of cutting-edge material technologies from around the world.

Date: September 11 (Wed.) - 12 (Thu.), 2024 9:30 - 18:00

Venue: Singapore EXPO, Hall 6 F52-25

Address: 1 Expo Drive, #02-01, Singapore 486150

Exhibition Official Website



<https://stainless-steel-world-asia.com/>

Venue Official Website



<https://www.singaporeexpo.com.sg>

● Website of us and our group companies

NIPPON KINZOKU
CO.,LTD.



<https://www.nipponkinzoku.co.jp/en/>

NIPPON KINZOKU
(THAILAND) CO.,
LTD.)



https://www.fact-link.com/mem_content.php?pl=th&mem=00003164&page=00013873

NIPPON KINZOKU
(MALAYSIA) SDN.BHD.



<https://www.malaysibrand.com.my/website/kinzoku/>

●About the 11th Management Plan “NIPPON KINZOKU 2030

Our vision is to be a “Multi & Hybrid Material Company that co-creates new value friendly to humans and the earth - Contributing to the future of humans and the earth by achieving the performance required of end products with materials through rolling and composite molding of a wide variety of materials”. (=Utilizing a wide variety of materials to meet various needs), “Near Net Shape” (=Realizing complex molding process close to the final product shape), and “Near Net Performance” as our keywords, we will promote product development with an eye on the future using our proprietary technologies, and aim to reform our business structure with new technologies and new products that meet new needs as our mainstay. We are aiming to reform our business structure by focusing on new technologies and new products that meet new needs.

Note: This document has been translated from a part of the Japanese original for reference purposes only. In the event of any discrepancy between this translated document and the Japanese original, the original shall prevail.

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