NEWS RELEASE July 17th, 2025

NIPPON KINZOKU CO., LTD.

NIPPON KINZOKU Launches New Sales Expansion of Die Wear-Resistant Stainless Steel “L･DieL Finish” as an “Eco-Product”

NIPPON KINZOKU CO., LTD. (Headquarters: Minato-ku, Tokyo; President: Yasushi Shimokawa; Securities code: 5491) will strengthen sales of its environmentally friendly product, L･DieL (Long Die Life) finish stainless steel, which reduces die wear. L･DieL Finish modifies (softens) the passive oxide film on the surface of stainless steel, thereby reducing die wear during pressing operations and contributing to improved productivity and cost savings for our customers.
The passive oxide film that maintains the corrosion resistance of stainless steel is mainly composed of chromium oxide and is extremely hard. Although the film thickness is only about 10 nanometers, it has a detrimental effect (accelerated wear) on press dies that come into repeated contact. To soften this film and reduce die wear, we have developed the L･DieL finish as a surface treatment.

Bearing Retainer　Mobile Device　Connector

Figure1: Examples of Applications

We have certified our L･DieL finish as an “Eco-Product,” which improves productivity and reduces costs for our customers. Our goal is to achieve net zero CO_2 emissions by 2050, and we are committed to sustainable manufacturing through the widespread use of environmentally friendly materials.
Additionally, this product aligns with our 11th management plan, "NIPPON KINZOKU 2030," and is a unique product that meets customer needs based on the "Near Net Performance" keyword (achieving the required performance of the final product with the material).

Features of L･DieL Finish

1. Reducing die wear during press processing, expected to extend die life.
2. Compatible with most stainless steels, including SUS304, SUS430, and various surface finishes.
3. Chemical composition and mechanical properties comply with JIS standards.
4. Appearance and corrosion resistance are equivalent to those of general-purpose stainless steel.

L･DieL Finish Reduces Die Wear (Example)

* Base material: SUS304, 1/2H, 0.1mm, Clearance: 5μm, Stroke: 600spm

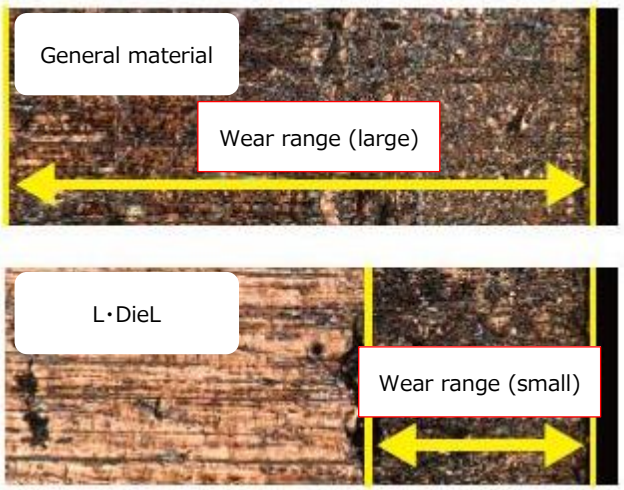

Figure2: Difference in Wear Range between L･DieL Finish and General Materials

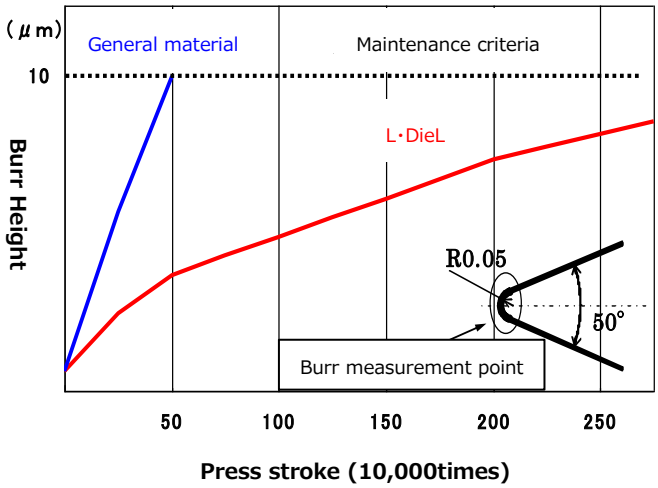

Figure3: Relationship between Press Stroke and Burr Height (Reference)

L･DieL Finish Structure (Image)

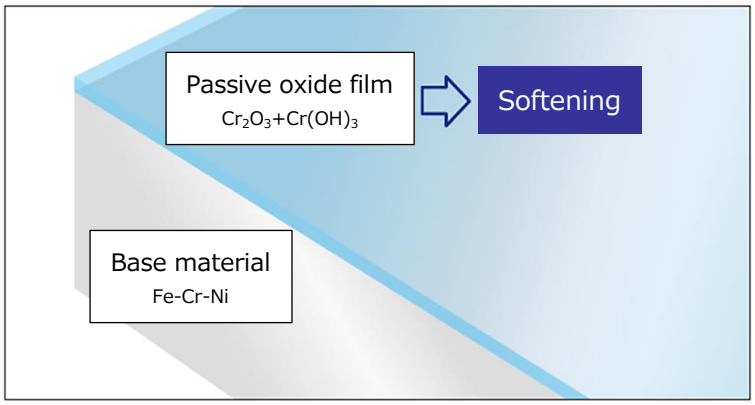

Figure4: Structural Image of L･DieL Finish

Our unique surface treatment technology softens the passive oxide film.
This reduces die wear and decreases the frequency of maintenance.

Manufacturing Range

Steel Types: SUS304, SUS430, etc.
Finish: Spring, BA
Thickness [mm]: 0.08–0.50
Width [mm]: 600 or less

[Steel Strip Products Overview]

Our unique equipment, which is designed based on our accumulated cold rolling expertise and the industry-leading technologies developed from it, enables us to meet all of our customers' needs.
URL: https://www.nipponkinzoku.co.jp/en/corporate-profile/business/cold-rolled-stainlesssteel-strip

●The 11th Business Plan "NIPPON KINZOKU 2030“

Our vision is to be a Multi & Hybrid Material company that creates new value in a way that is kind to people and the planet. We achieve this by rolling and composite forming a wide variety of materials to realize the performance required of final products, thereby contributing to a sustainable future for people and the planet. Focusing on the keywords Multi & Hybrid Materials (utilizing diverse materials to meet various needs) and Near Net Shape (achieving complex forming processes close to the final product shape), we are advancing product development with forward-looking technologies. Our goal is to transform our business structure by leveraging new technologies and products that respond to emerging needs.

Note: This document has been translated from a part of the Japanese original. It is provided for reference purposes only. If there's a difference between this translated document and the Japanese original, the Japanese original will take precedence.

＊＊＊Contact＊＊＊
Production Process & Support Dept.
NIPPON KINZOKU CO., LTD.
Email: sisaku-sc@nipponkinzoku.co.jp
https://www.nipponkinzoku.co.jp/en/inquiry