



NO.1 COLOR STAINLESSL STEEL MANUFACTURER

GREEN MATERIAL

SUSTAINABILITY



KAIST LYU KEUN-CHUL SPORTS COMPLEX

SUSTAINABILITY AND DSP MATERIALS

INOXTEEL – New Stainless Steel

INOXTEEL is a new stainless steel. It is a laminated sheet, which consists of 0.2mm stainless steel and try-alloy (Mg. Zn. Al.) plated high corrosion-resistant steel which comes in 0.6mm, 0.8mm, 1.0mm, 1.2mm, or 1.3mm. In between the two metal sheets, there is high-strength resin adhesive. The top material is stainless steel and it can come with PVD and NCC coating depending on your needs.

The three major features of INOXTEEL are: Color Uniformity, High Workability, Cost Efficiency. INOXTEEL can be used for both exterior and interior, as well as elevator cabins.

All DSP materials are designed, manufactured and supplied with sustainability in mind. When you choose DSP products, you choose to reduce your environmental footprint through:

- Efficient manufacturing processes with minimal waste
- High recycled-material content
- Enhanced thermal efficiency and solar reflectance
- Low VOC emissions and non-toxic materials
- Durability for long-term use
- Easy recyclability with nearly 100% material recovery

Let's shape a greener future!

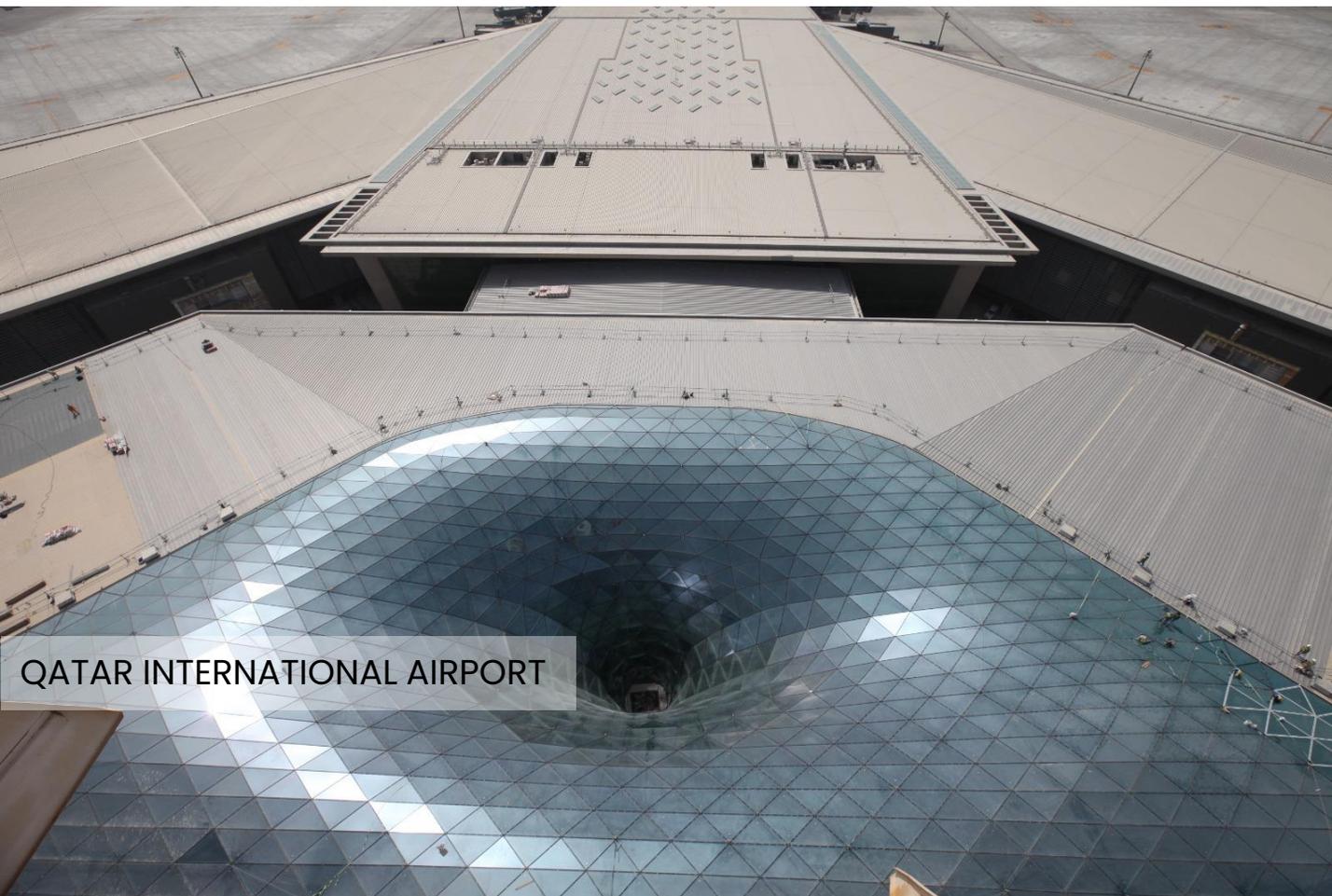




Hyundai Marine & Fire Insurance Division Center



NO.1 COLOR STAINLESSL STEEL



QATAR INTERNATIONAL AIRPORT



NO.1 COLOR STAINLESSL STEEL



OUR GOALS

OUR SUSTAINABILITY PROGRAM

DSP Co., Ltd. is committed to managing its business activities and products in a sustainable and environmentally responsible manner. We maintain an ongoing sustainability program to increase the post- and pre-consumer recycled material content of our products, to reduce the raw materials used in our manufacturing process through increased yields and efficiencies, and to increase the percentage of recycling of plant waste.

OBJECTIVES AND GOALS

- 1. OBJECTIVE:** Reduce the use of virgin materials while continually striving to increase the use of recycled materials.

GOAL: Increase maximum recycled material production through improvement and development of key materials used in the production of INOXTEEL.
- 2. OBJECTIVE:** Recycle plastic, wood, paper and metal waste in the production facility.

GOAL: Implement policy and practices to capture, re-purpose or recycle all segregable facility materials.
- 3. OBJECTIVE:** Reduce process raw material usage for each product line.

GOAL: Track process yields verses yearly budget standards, identifying opportunities to implement process or capital improvement.

KEY THEMES

WHY DSP MATERIALS ARE ECO FRIENDLY BUILDING MATERIALS

- 1. Reduced Stainless Steel Usage with the Same Performance**

INOXTEEL is a viable alternative to solid stainless steel. It utilizes a highly corrosion-resistant tri-element steel plate for the back layer while maintaining the same STS finish on the surface. This allows INOXTEEL to be used in the same applications as traditional stainless steel. Additionally, by utilizing a 0.2mm thinner STS material, it significantly reduces the amount of nickel required in production.
MR Credit: Sourcing of Raw Materials
- 2. High-Durability Stainless Steel Material**

INOXTEEL's surface is made of genuine stainless steel, renowned for its exceptional durability and corrosion resistance. Compared to many other materials, it offers a longer lifespan with minimal maintenance, making it a cost-effective and reliable choice.
MR Credit: Building Life-Cycle Impact Reduction
- 3. Use of recycled Content as Raw Materials**

INOXTEEL Products are manufactured using recycled materials. This may contribute to earning LEED Credits
MR Credit: Sourcing of Raw Materials, Environmental Product Declarations
- 4. Cool Roofing Solutions for Energy Efficiency**

Stainless steel (STS) is a low thermal conductivity metal, making it an ideal roofing material. Traditionally, its glossy surface limited its application in exterior finishes. However, with DSP Bead Blast surface treatment, INOXTEEL can now be used for exterior cladding, enhancing both aesthetics and functionality. By leveraging the low thermal conductivity of STS, it helps improve building energy efficiency and reduce cooling costs. EA Credit: Optimize Energy Performance
Innovation (ID) Credit: Cool Roofing Solutions

5. **Eco-Friendly Coating Technologies**

We utilize PVD and NCC Slot-Die Coating methods, which significantly reduce the emission of hazardous and toxic substances. Additionally, our Roll-to-Roll Coil Coating process minimizes material and resource waste while enhancing energy efficiency through an optimized manufacturing process.

EA Credit: Optimize Energy Performance

IEQ Credit: Low-Emitting Materials

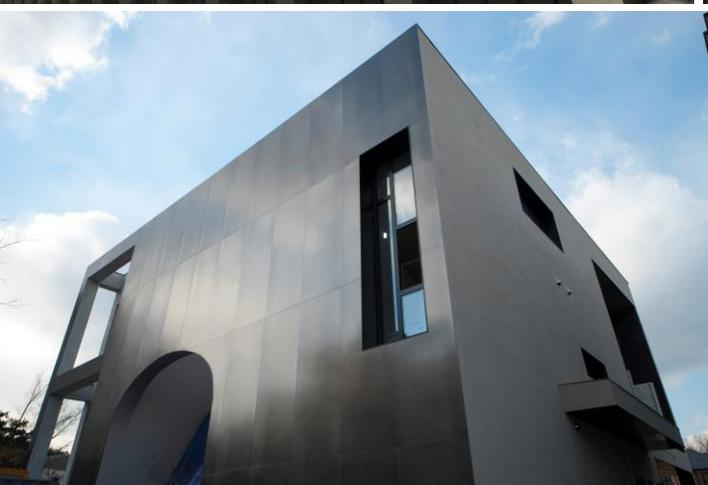
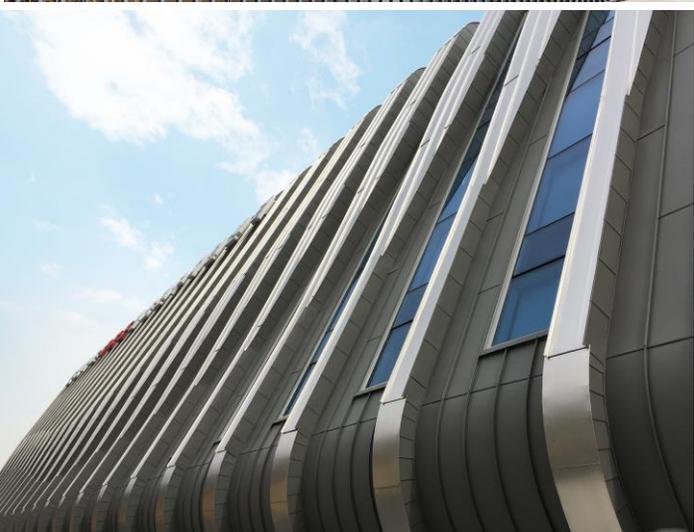
6. **FIRE SAFETY**

INOXTEEL is a fire-resistant A1 material that is ideal for applications where non-combustible construction is required.

MR Credit: Building Life-Cycle Impact Reduction









SUSTAINABILITY

WE ARE TAKING RECYCLING OF MATERIAL SERIOUSLY

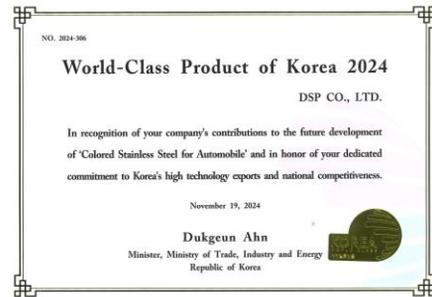
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DSP is one of the Sobujang (Materials, Parts, and Equipment) government approved companies in Korea. Sobujang refers to a strategic industry initiative focused on strengthening Korea's supply chain resilience in these three areas, which are crucial for various high-tech and manufacturing industries. Getting approved as a Sobujang supplier involves a process established by the Ministry of Trade, Industry, and Energy and some of the requirements include R&D and Innovation Capacity and passing government evaluation and audits.

Prior to the product sales, we go through a strict product examination, and we are working on a customer response system and our own quality management systems (ISO 9001, IATF 16949).

In addition, we hold related patent rights (No. 10-1440466), an eco-friendly certification (CE Certification), and Green guard Certificate.

DSP's products are also chosen as the World Class Product of Korea, which is a project in which the Ministry of Trade, Industry, and Energy and the Korea Trade-Investment Promotion Agency certify production companies. It consists of "currently first-class products" that rank within the top 5 and more than 5% of the global market share. Our products are recognized for their usability in next generation building materials.



GREENGUARD ENVIRONMENTAL INSTITUTE CONGRATULATES DSP Co., Ltd. FOR ACHIEVING GREENGUARD CERTIFICATION FOR LOW EMITTING PRODUCTS AND MATERIALS UNDER THE STANDARDS OF THE INSTITUTE.



September 10, 2010

90301

CERTIFICATION DATE

CERTIFICATION NUMBER

Minji Seon, Director

OUR MATERIAL

THE USE OF DSP MATERIALS MAY CONTRIBUTE TO THE FOLLOWING LEED CREDITS:

1. Recyclability and Longevity – LEED MR Credit: Building Life-Cycle Impact Reduction & Sourcing of Raw Materials

INOXTEEL is an innovative material that serves as a viable alternative to traditional solid stainless steel.

It consists of 0.2mm stainless steel and PosMAC (a highly corrosion-resistant alloy-coated steel plate).

By using 0.2mm stainless steel instead of traditional solid stainless steel, INOXTEEL significantly reduces material consumption and decreases nickel usage.

Nickel is a highly carbon-intensive material due to its extraction process, and reducing its use leads to lower carbon emissions.

This contributes to a more favorable **Life Cycle Assessment (LCA)** outcome and helps earn **LEED MR Credit – Building Life-Cycle Impact Reduction**.

Additionally, INOXTEEL's stainless steel surface is highly resistant to corrosion, rust, and wear, ensuring a long lifespan with minimal maintenance.

Its durability minimizes the need for frequent replacements or repairs, reducing material waste and enhancing the sustainability of building materials.

Furthermore, stainless steel is 100% recyclable and can be reused indefinitely without any degradation in quality.

This high recyclability and responsible raw material sourcing support the achievement of **LEED MR Credit – Sourcing of Raw Materials**.

Thus, INOXTEEL is an eco-friendly building material that plays a crucial role in LEED-certified projects focusing on sustainability and environmental responsibility.

2. Innovative Surface and Coating

LEED IN Credit: Innovation & EA Credit: Optimize Energy Performance

The R2R (Roll-to-Roll) coating method applied to INOXTEEL provides **an innovative energy-saving process**. R2R is typically a continuous and automated process, reducing the energy required for starting and stopping operations. In conventional batch processing, repeated heating and cooling cycles consume significant amounts of energy.

However, R2R coating minimizes these energy-intensive cycles, reducing carbon emissions. Unlike the traditional Sheet-to-Sheet method, R2R improves productivity, minimizes raw material waste, and enhances energy efficiency.

Additionally, the bead-blast technology used in DSP's surface treatment can adjust the reflectivity of the stainless steel surface, contributing to energy savings in buildings when used as exterior cladding. While stainless steel has low thermal conductivity, its high reflectivity can make it unsuitable for exterior cladding due to excessive gloss.

However, with DSP's bead-blast technology, the reflectivity can be adjusted, making it more suitable for exterior applications. Stainless steel (STS) typically has an SRI (Solar Reflectance Index) value ranging from 50 to 85, which meets the criteria for Cool Roofing.

LEED IN Credit: Innovation & EA Credit: Optimize Energy Performance



COOL ROOFING

DSP material INOXTEEL is a metal material with a very low thermal conductivity because it uses stainless steel. It is the best material to use as a roofing material and has a high SRI value. The SRI value is a comprehensive value of the reflectance of reflecting solar heat and the heat dissipation rate that emits heat, and the higher the SRI value, the less heat absorption on the building surface, helping to lower the indoor temperature. It increases energy efficiency and has a low thermal conductivity of the material itself, so there is less heat dissipation and absorption in the building, which can reduce the cost of indoor cooling and heating of the building.

The reason why it was difficult to use stainless steel was that it was inappropriate because of its high light reflectance, but it can be used for roof or external materials by lowering light reflectance by surface treatment with DSP's beadblast technology.

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[Thermal Conductivity by Material]

Material	Temperature (°C)	Heat Conductivity (kcal/°C)
Pure Silver	20	360
Copper	20	320
Gold	20	254
Aluminum	20	196
Stainless Steel	20	14





REDUCE, REUSE AND RECYCLE

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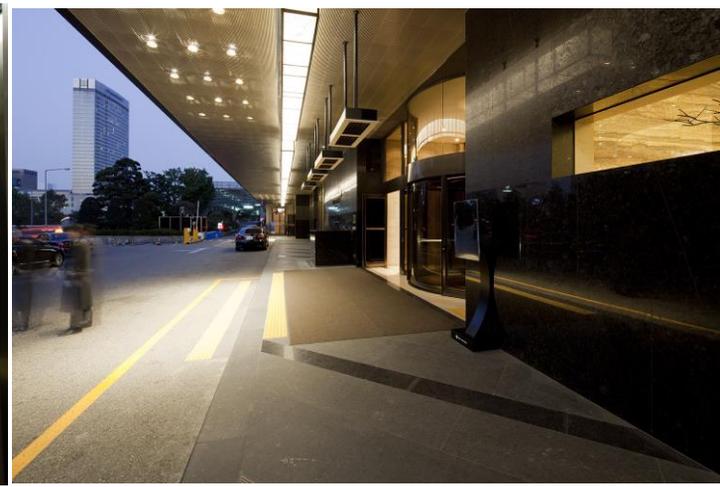
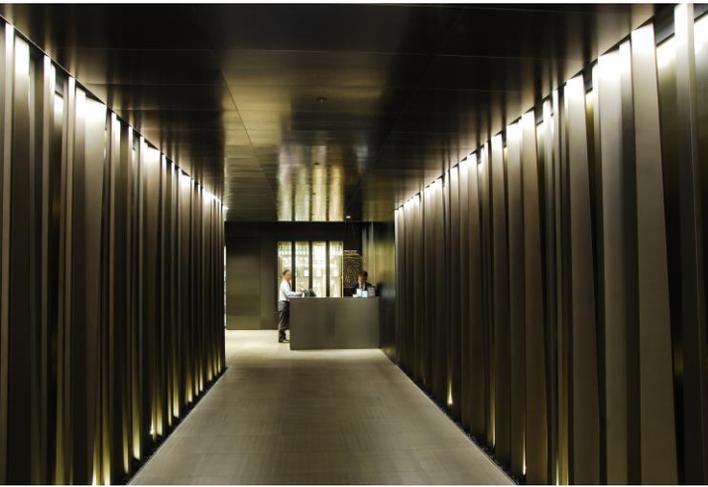
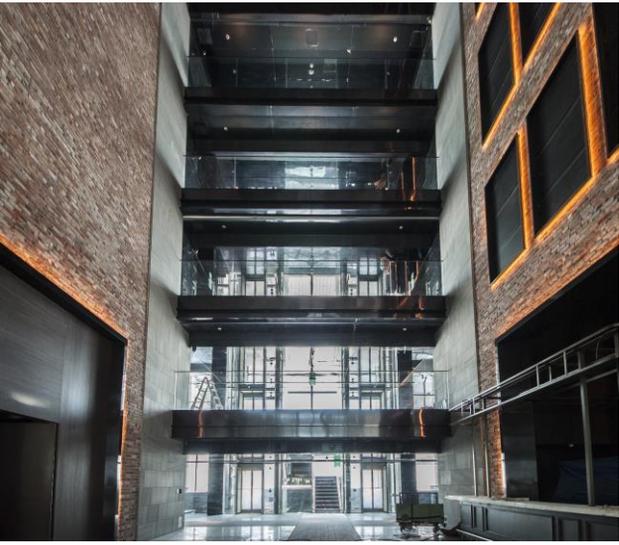
At DSP, in order to carry out environmental management, we have established the direction of 'reducing the emission of environmental substances' and has established short-term goals for investment in eco-friendly facilities. We have staff members in charge of environmental management, and we continue to manage certification and respond flexibly to changes in internal and external environmental factors. In addition, we manage data on resources (electricity, oil, water) and environmental substances (waste, air pollutants) to carry out environmental management.

Also at DSP, we are planning to change all processes for input materials into eco-friendly processes. Based on the coil to coil manufacturing process, DSP's process is changing the surface treatment, color coating, and functional coating processes for input materials to be eco-friendly.

CONTACT US

Let us know if you want to make your design
come into reality using DSP materials.

To get more information about the appropriate
product and processing guidelines for the project,
contact us by sending an email to dsp@daejindsp.com.



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