

# LXHTR Introduces Modular Launder Insulation Solution for Smelting Operations

LOS ANGELES, CA, UNITED STATES, March 26, 2026 /EINPresswire.com/ -- As the metallurgical industry continues to pursue higher standards in energy efficiency and workplace management, improving thermal performance and on-site operating conditions has become an increasing priority. In molten material transfer processes, launders remain a critical yet often problematic component, where heat loss, uncontrolled fume dispersion, intense radiant heat, and maintenance challenges are frequently observed.



LXHTR modular launder insulation cover applied in a high-temperature molten metal transfer system

Against this backdrop, industrial thermal protection provider Hubei Liaoxin New Material Technology Co., Ltd. (LXHTR) has introduced an integrated, customized [launder insulation solution](#). Drawing on its experience in high-temperature protection for heavy industry applications, the company aims to address long-standing limitations of conventional insulation approaches through a modular and lightweight design concept.

Traditionally, launder insulation in metallurgical plants has relied on heavy steel covers filled with refractory materials. While these structures can provide basic thermal insulation, they are often associated with significant drawbacks in practical use. Their weight typically requires crane assistance for removal and installation, making routine cleaning and maintenance time-consuming and operationally disruptive. This, in turn, can affect production continuity.

In addition, some operations adopt temporary measures such as placing ceramic fiber blankets or slag over the launder surface. Although relatively simple to implement, these methods tend to offer inconsistent insulation performance and may contribute to dust generation, making them less suitable for modern production environments with stricter requirements on safety and environmental control.

LXHTR's solution takes a different approach by combining material selection and structural optimization. The system is based on a three-layer composite structure designed to balance thermal insulation, durability, and sealing performance under high-temperature conditions.

The outer layer consists of 310S stainless steel, reinforced with a stainless steel mesh to enhance resistance to deformation, oxidation, and high-temperature corrosion. This configuration is intended to ensure structural stability under prolonged exposure to radiant heat and molten splash.

The intermediate layer is composed of high-density aluminum silicate needle-punched blanket, serving as the primary thermal barrier. By reducing heat transfer, this layer helps limit energy loss during molten material transport. Insulation thickness can be adjusted according to operating conditions, with configurations exceeding 50 mm available for higher temperature requirements.

The inner layer utilizes high-temperature-resistant ceramic fiber fabric, designed to provide flexibility and sealing performance. By fitting closely to the launder edges, it may help reduce the escape of hot gases and limit fume dispersion, while also minimizing adhesion of molten residues to the insulation structure.

One of the defining features of the solution lies in its modular and lightweight design. Individual modules typically weigh between 10 and 20 kilograms, allowing handling and installation by a single operator without the need for lifting equipment. This shift from equipment-dependent maintenance to manual operation can significantly improve inspection and cleaning efficiency, while reducing downtime.

From an application perspective, the solution addresses multiple operational concerns simultaneously. Improved insulation performance can help stabilize molten material temperatures and reduce overall heat loss. At the same time, the semi-enclosed structure may contribute to lowering radiant heat intensity and limiting the spread of fumes and dust, which are key factors affecting workplace conditions.

Additional design refinements include reinforced handles for repeated handling, edge-forming techniques to enhance structural rigidity, and a simplified fastening system to streamline installation. The adoption of CNC machining processes further improves component precision and shortens production lead times.

Industry observers note that as metallurgical operations place greater emphasis on energy efficiency, environmental performance, and maintenance optimization, there is a growing shift toward solutions that are not only thermally effective but also easier to operate and maintain. In this context, modular and semi-sealed insulation systems are gaining increasing attention.

LXHTR's launder insulation solution reflects this broader trend, offering an alternative approach

to traditional heavy insulation systems and highlighting the role of design innovation in addressing long-standing operational challenges in high-temperature processing environments.

#### About LXHTR

LXHTR is the industrial brand of Hubei Liaoxin New Material Technology Co., Ltd., specializing in [high-temperature protection solutions](#) for metallurgy, mining, and other heavy industrial applications. The company develops and manufactures a range of products, including thermal insulation jackets, high-temperature [thermal barrier curtains](#), flexible sealing systems, flange spray shield, fire sleeve and equipment protection solutions.

With more than a decade of experience in demanding industrial environments, LXHTR has developed expertise in addressing challenges related to extreme heat, corrosion, and sealing under complex operating conditions. The company places a strong emphasis on customized solutions, working closely with clients to design products that match specific equipment configurations and process requirements.

Through continuous material optimization and structural design improvements, LXHTR aims to support enhanced energy efficiency, equipment reliability, and safer working environments across high-temperature operations.

Michael Ke

LXHTR Materials Technology

[email us here](#)

Visit us on social media:

[LinkedIn](#)

[Facebook](#)

[YouTube](#)

[X](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/901598731>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2026 Newsmatics Inc. All Right Reserved.