



## Steel & Aluminum

### Customer Success Story



<b>Application</b>	Steel Industry
<b>Location</b>	Tamaulipas, Mexico
<b>Project</b>	Manufacture and installation of ceramic fiber for high-temperature application
<b>NUTEC Products</b>	<b>MaxBlock® 2600</b> Modules, <b>MaxRigidizer®</b>
<b>Use Temperature</b>	<b>1,345°C</b> (2,450°F)

**Ceramic fiber insulation is increasingly being used in various industries due to the advantages it offers over other types of insulators, such as refractory bricks.**

Recently, **NUTEC** carried out a project to manufacture and install **MaxBlock® 2600** ceramic fiber modules in a treatment furnace for stainless steel sinks. The **MaxBlock® 2600** ceramic fiber modules offer efficient high heat insulation that allow the furnace to reach its target temperatures quickly.

Learn more at [nutec.com](https://www.nutec.com)

## The Challenge.

The client asked **NUTEC** to provide the ceramic fiber manufacturing and installation service, which would replace the refractory brick previously used in this furnace. The aim was to reduce the heating time for the furnace to reach the necessary temperature for the heating process – treatment of stainless steel sinks – and therefore reduce gas consumption.

One of the most significant challenges during the installation process was that work had to be carried

out in an outdoor environment, under unfavorable environmental conditions for the equipment, such as high ambient temperature, wind, and dust.

In addition, the client's request for the application of a rigidizer to the modules represented an operational challenge, since the material had to be ordered in from our plant in Ramos Arizpe, Nuevo Leon, and sent to Reynosa, Tamaulipas in a timely manner in order for the project to be completed as scheduled.

## Solution and Product Selection.

The **NUTEC** team selected **MaxBlock® 2600** ceramic fiber modules for this application given its composition, which contains zirconia, a material that allows resistance to elevated temperatures, up to **1,425°C** (2,600°F)

In addition, the client requested the application of a stiffener, so **MaxRigidizer** was used. This product can be used for applications with high-velocity gas and direct flame impingement, among other characteristics that made it suitable for this project.

## Results and Benefits.

Despite the operational challenges, the project was carried out successfully in the expected time, delivering optimum results, thanks to the **NUTEC** team's extensive experience in installing modules for industrial furnaces.

This maintenance and installation service for **MaxBlock® 2600** ceramic fiber modules results in a number of advantages for the customer:



Reduction in gas consumption, thanks to the fact that the ceramic fiber allows rapid heating of the furnace and, as a thermal insulator, prevents heat leakage.



Savings in operating costs, due to reduced gas consumption.



Thanks to its composition, which makes ceramic fiber a strong and durable material, its useful life is longer than refractory bricks. In addition, its maintenance costs less and is more rapidly completed.



Reducing gas consumption in heating the furnace has a positive impact on the environment, making the process more sustainable.



Fig.1 **MaxBlock 2600** modules and **MaxRigidizer** stiffener application

## Conclusion.

As a leader in the thermal insulation industry, **NUTEC** offers complete solutions for the manufacture and installation of high temperature insulation fibers, designed and executed by experts with extensive experience who always seek to offer the best results and delivery schedules, guaranteeing greater efficiency for our clients' processes.