

# Insulation system for iron and steel



# Challenges in the iron and steel industry

**All around the world, there are signs of optimism in the steel industry**

As energy prices soar, greater efficiencies are necessary in an energy-conscious world.

Emissions of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub>, and other noxious gases are gaining political awareness, which means it is important to address improved designs in steel-making processes. This can be achieved by implementing good insulation materials in the linings.

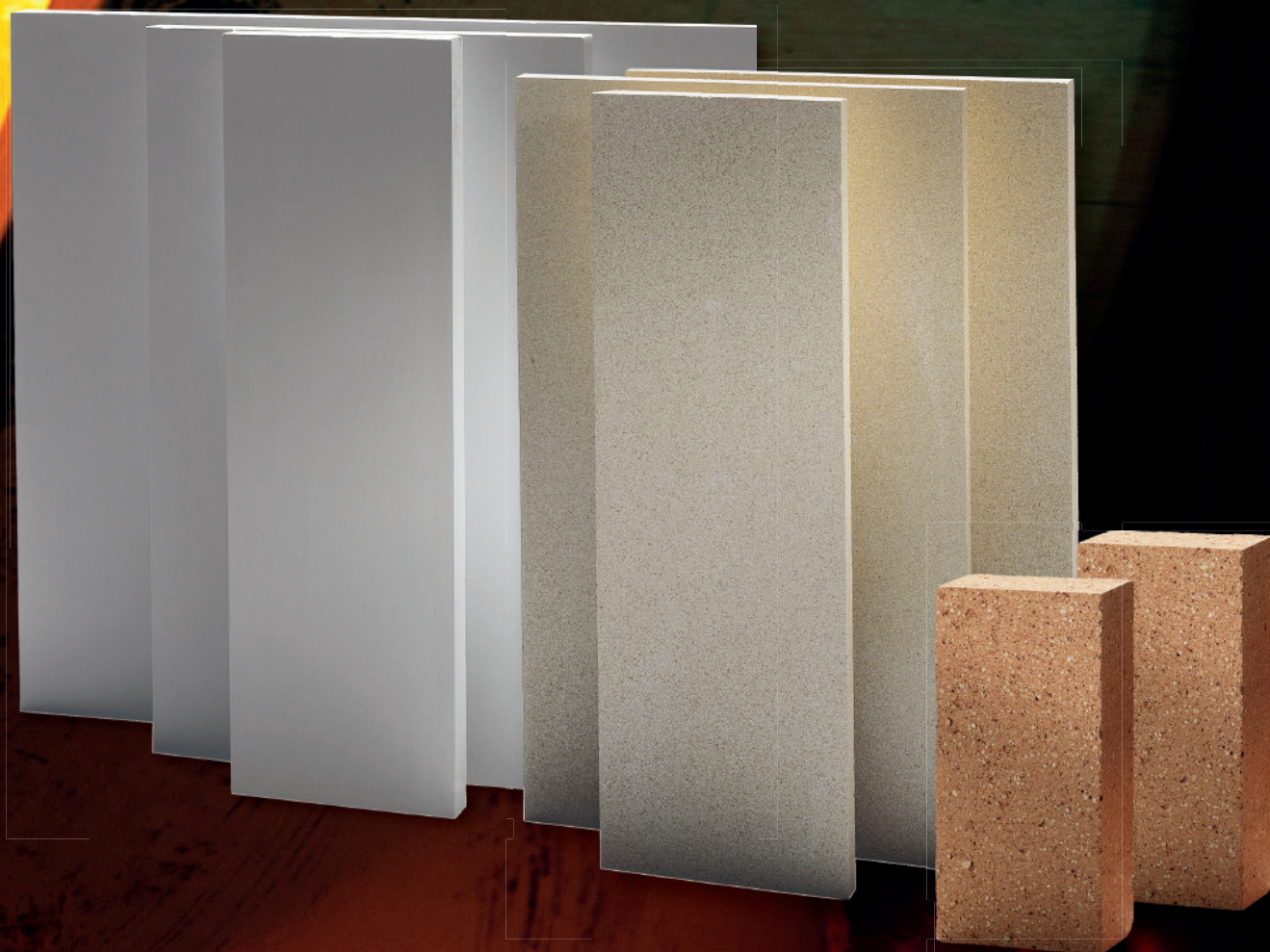
Many steel plants are already using Skamol systems, with documented savings in energy consumption and reduced CO<sub>2</sub> emissions.

Skamol's product range covers all steel plant applications. We have shipped to all of the world's steel-producing continents, and we continue to thrive as demand for our material grows. Thanks to the quality and the strength of our products, Skamol can be one of your key partners.

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# Benefit from the insulation system **SkamoSteel**



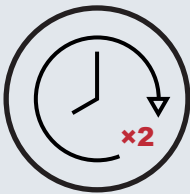
## ROI

By using Skamol products for insulation, you will reduce energy consumption and CO2 emissions in your steel plant.



## Fast and easy installation

Skamol clickboards are quick to install. With no cutting necessary, the installation time is short. "Fast", "effective" and "easy" are the words most commonly used to describe these products. Start a trial today and see for yourself.



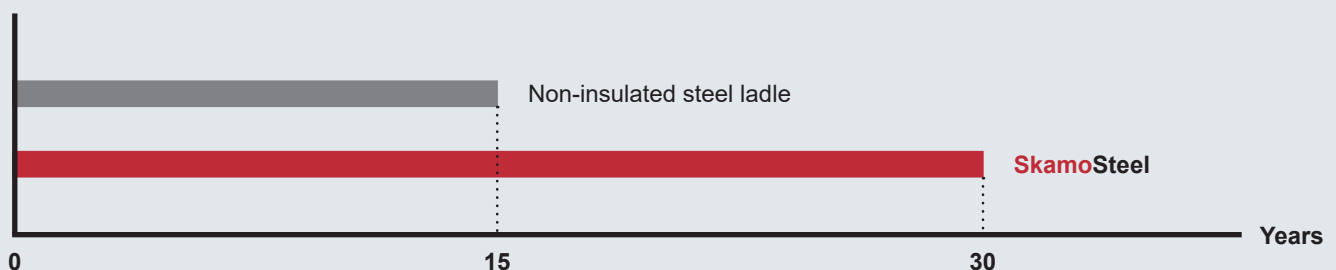
## Double the lifetime of your production equipment, at a minimum

If you have insulation in a steel ladle, you can increase the lifetime dramatically. Without insulation, a steel ladle must be replaced after 15 years, but with insulation from Skamol, the lifetime is doubled at a minimum.

### Example of savings

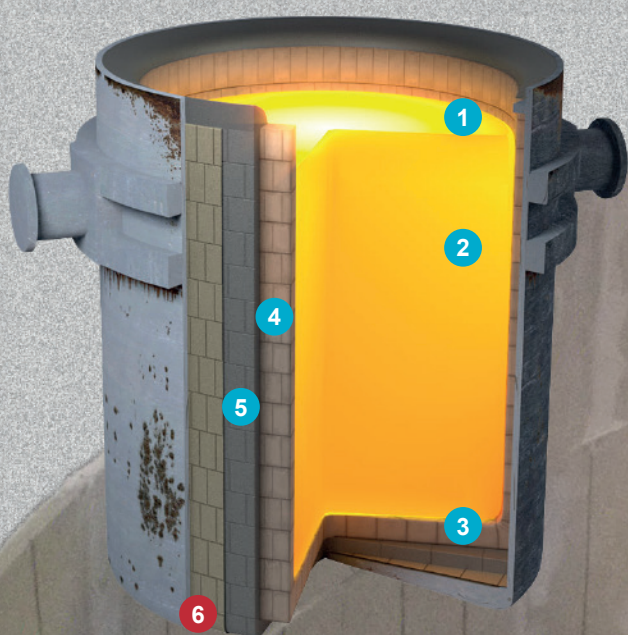
- Reduces shell temperature by 45 to 119°C
- Heat loss reduced by up to 29 to 64%
- Energy reduction of approx. 30 to 55%, depending on application type

### Example of product equipment lifetime





# ystem

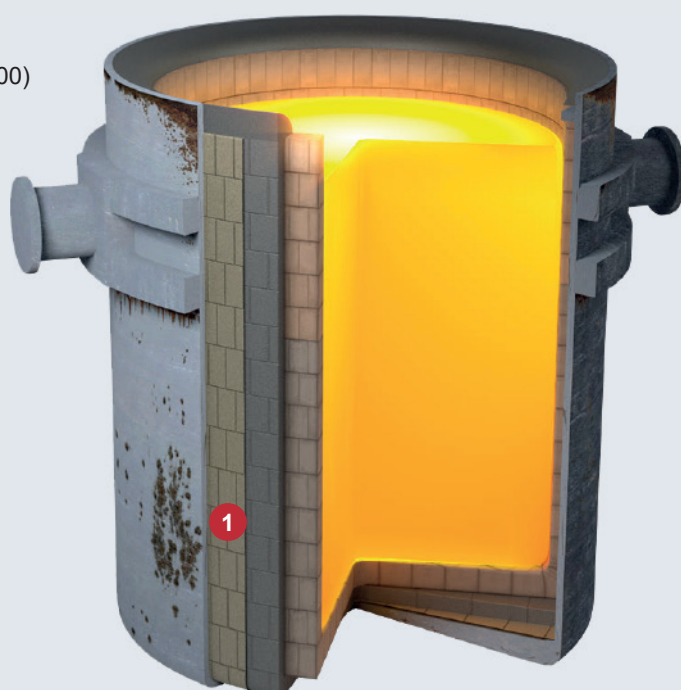


- 1 Slag zone
- 2 Barrel
- 3 Bottom
- 4 Working lining
- 5 Safety lining
- 6 SkamoSteel products

# SkamoSteel for steel ladles

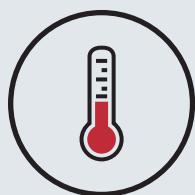
## 1 SkamoSteel:

- SkamoSteel V-1100 (700)
- SkamoSteel Vip 900
- SkamoSteel Vip 12 HS
- SkamoSteel Vip 12 HT



To meet the need for high mechanical strength, good thermal shock resistance and high service temperatures in steel ladles, Skamol has designed the SkamoSteel Vip 12 HS and SkamoSteel Vip 900 vermiculite-based insulation boards. These products help save energy and reduce costs.

When insulating with these insulating boards, the steel ladles preserve heat better due to the increased insulation value, and the temperature inside the ladle can be kept at a high level for longer, which minimizes heat loss and fuel consumption.



Shell temperature  
is reduced by

**90°C**



Heat loss  
is reduced by

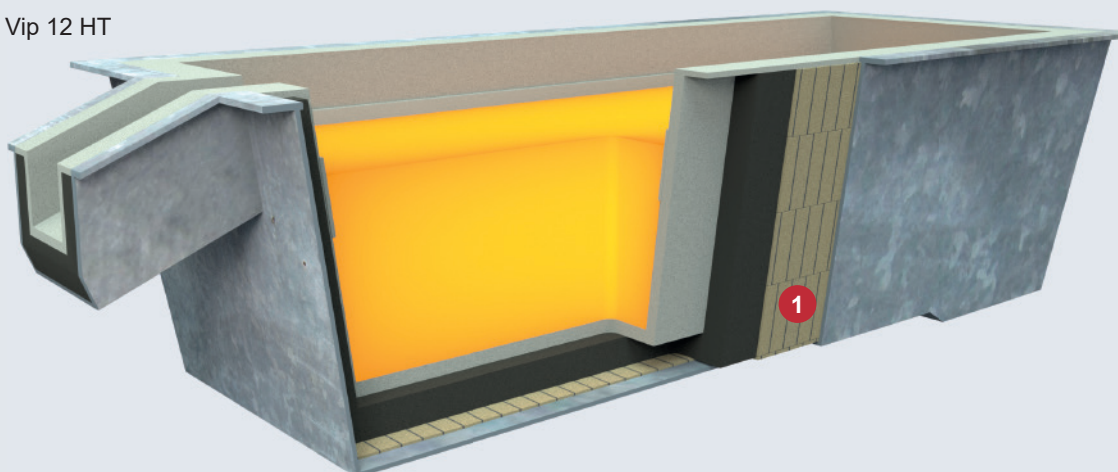
**35%**



# SkamoSteel for tundishes

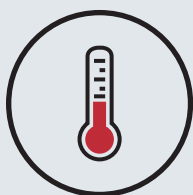
## 1 SkamoSteel:

- SkamoSteel V-1100 (600)
- SkamoSteel V-1100 (700)
- SkamoSteel Vip 900
- SkamoSteel Vip 12 HS
- SkamoSteel Vip 12 HT



To protect the steel shell around the tundish and obtain the right temperature for steel prior to casting, the tundish is lined by refractory and insulating materials. The preferred insulating materials must be able to resist the high intermediate temperatures in the tundish and a relatively high compressive force.

Dense vermiculite boards of bulk density between 700 and 1,400 kg/m<sup>3</sup> can be applied in this position, e.g., SkamoSteel V-1100 (700), SkamoSteel Vip 900, SkamoSteel Vip 12 HS or SkamoSteel Vip 12 HT.



Shell temperature  
is reduced by

**119°C**



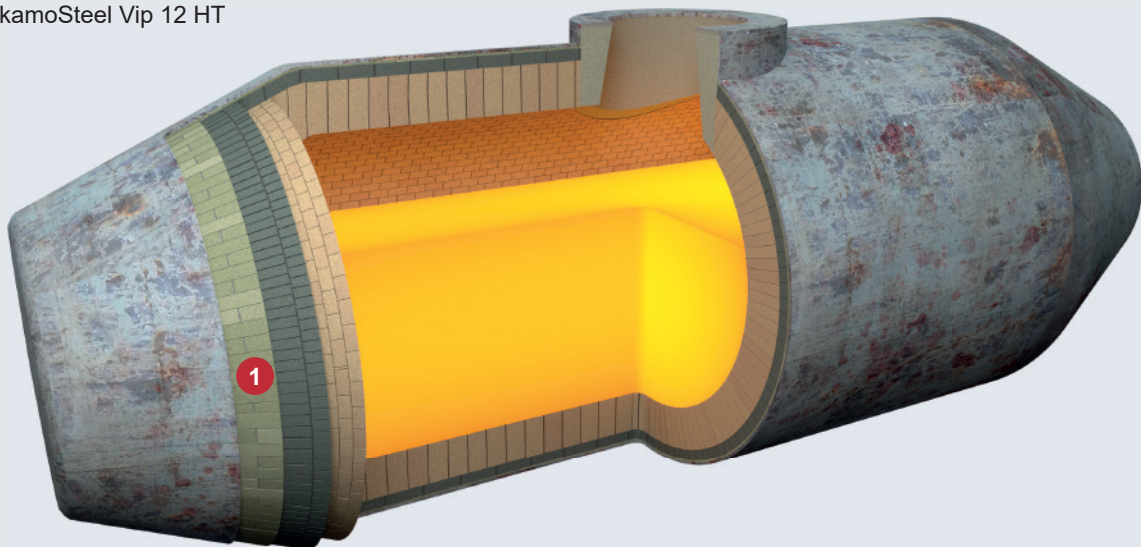
Heat loss  
is reduced by

**54%**

# SkamoSteel for torpedo cars

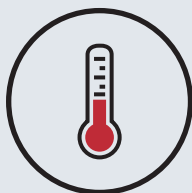
## 1 SkamoSteel:

- SkamoSteel Vip 900
- SkamoSteel Vip 12 HS
- SkamoSteel Vip 12 HT



The transportation of hot metal constitutes one of the most important steps of the production chain in the iron and steel industry – a step that is made more complex by resisting the re-oxidization of the hot metal, securing both a high, stable temperature, and the structural integrity of the refractory lining.

To meet the need for high mechanical strength, good thermal shock resistance and high service temperatures, Skamol has designed the SkamoSteel Vip 12 HS and SkamoSteel Vip 12 HT vermiculite-based insulation boards. These products help save energy and reduce costs.



Shell temperature  
is reduced by

**87°C**



Heat loss  
is reduced by

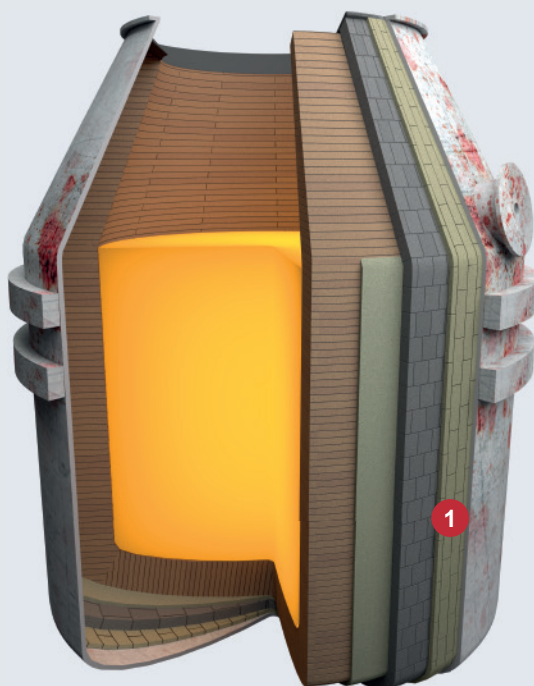
**29%**



# SkamoSteel for converters

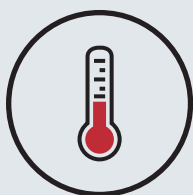
## 1 SkamoSteel:

- SkamoSteel Vip 12 HS
- SkamoSteel Vip 12 HT



To protect the steel shell of the converter and prolong the lifetime of the entire application, the converter is lined with refractory and insulating materials. The preferred insulating materials must be able to resist the high intermediate temperatures in the converter and a relatively high compressive force.

Dense vermiculite boards of bulk density of between 1,225 and 1,400 kg/m<sup>3</sup> can be applied in this position, e.g., SKAMOL SkamoSteel Vip 12 HS or SkamoSteel Vip 12 HT.



Shell temperature  
is reduced by

**49°C**



Heat loss  
is reduced by

**28%**

# Notes



Lined area for notes, consisting of multiple horizontal lines on a light gray background.



# Notes

[illegible]

All in  **one**



See more at [www.skamol.com](http://www.skamol.com)

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