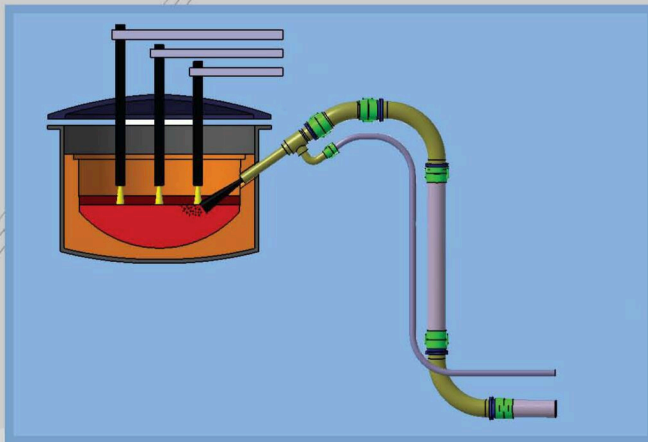
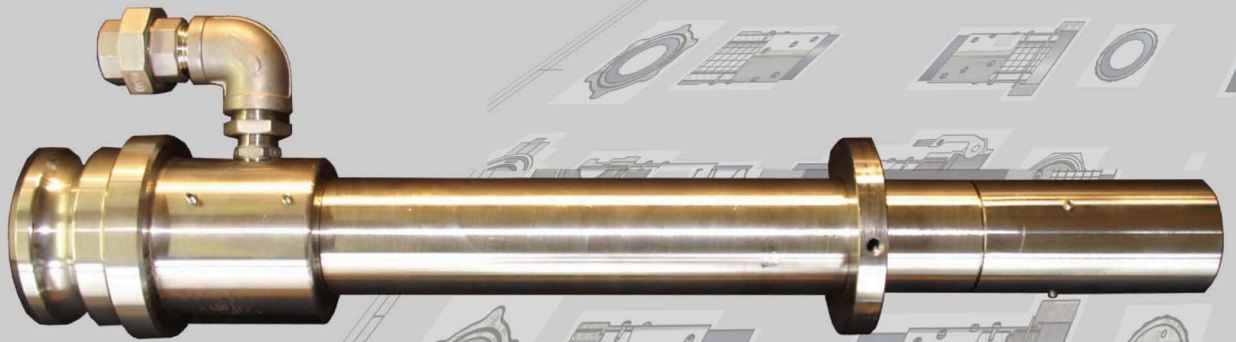


## Product presentation

## Ceramic Carbon Twin Injection Lance

decrease your production costs  
minimize downtime



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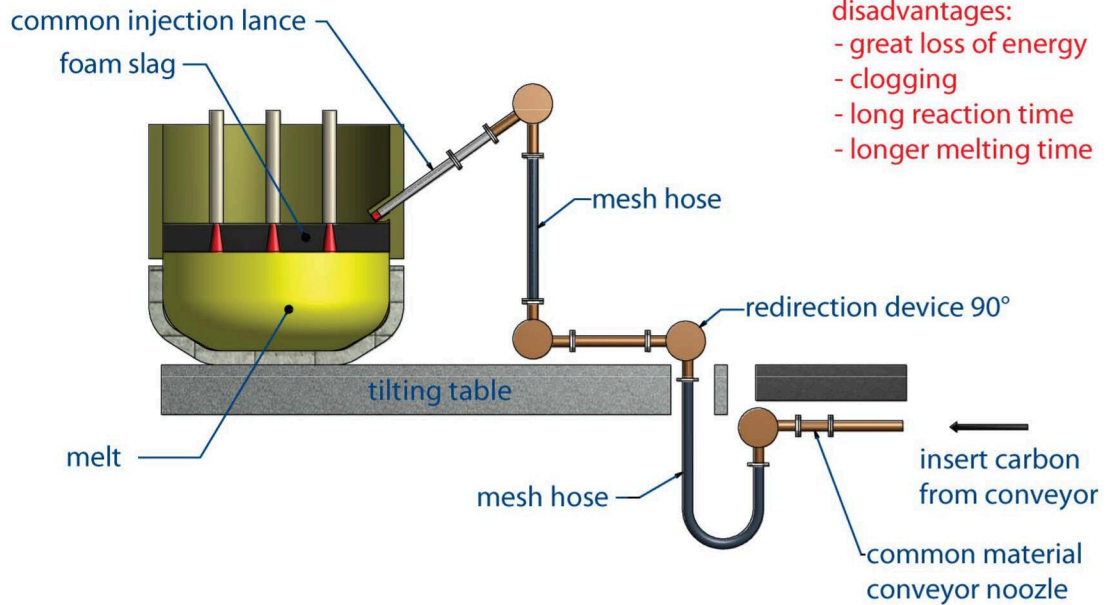
website: <https://www.friedrich-gerke.de>  
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## Technical description

## Ceramic Carbon Twin Injection Lance

### Extraction of foam slag from insert-carbon in the Electric Arch Furnace

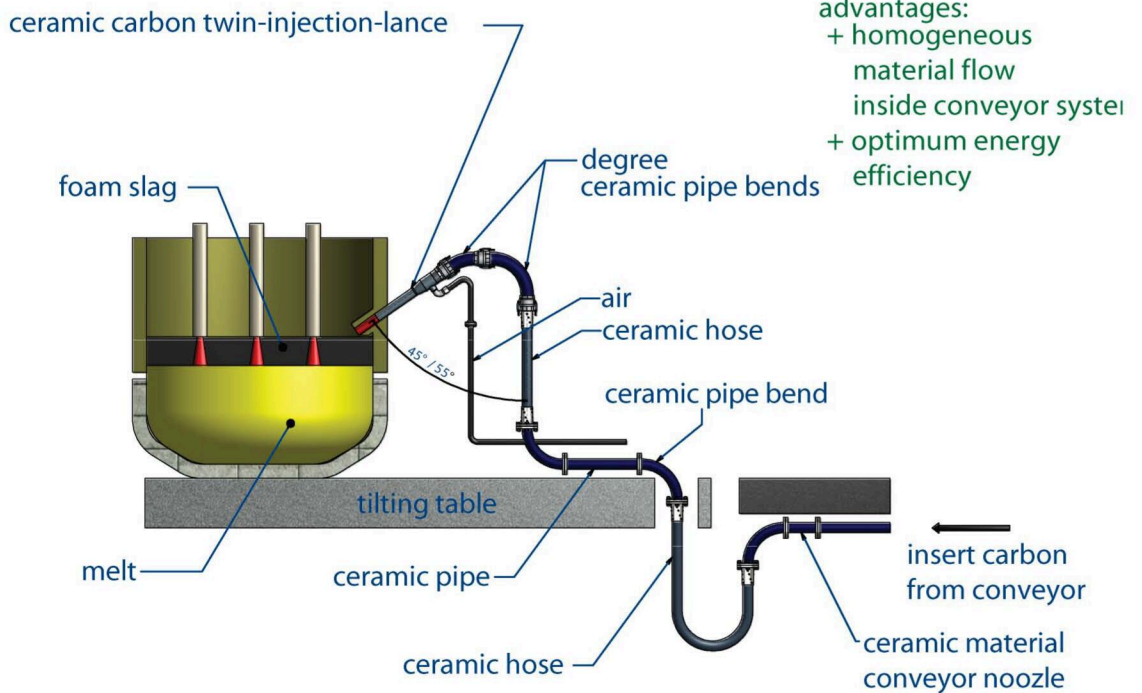
common technique



disadvantages:

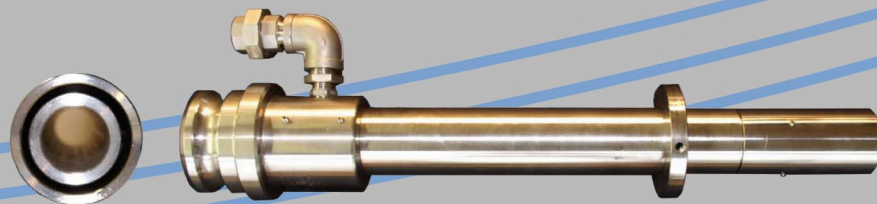
- great loss of energy
- clogging
- long reaction time
- longer melting time

improvement with ceramic carbon twin-injection-lance \*



advantages:

- + homogeneous material flow inside conveyor system
- + optimum energy efficiency



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## Range of Use

## Ceramic Carbon Twin Injection Lance

- applicable in EAF, ladle-, blast- and cupola furnaces and rotary kilns
- energy-saving due to gentle use of material and fast supply of material into the process
- due to specific modification the material is supplied to the process in a concentrated manner
- rapid configuration of foam slag
- any medium to be conveyed: mineral solid material as well as recycled and mixed additive energy sources can be added easily in a pre-determined grain size
- long-lasting durability because of AL203- and SIC-ceramics
- heat-resistant to max. 1050°C
- easy handling because of low weight
- fast changing owing to Camlock-, Quick- or Clamp joints in connection with a flexible ceramic hose

### Important notes

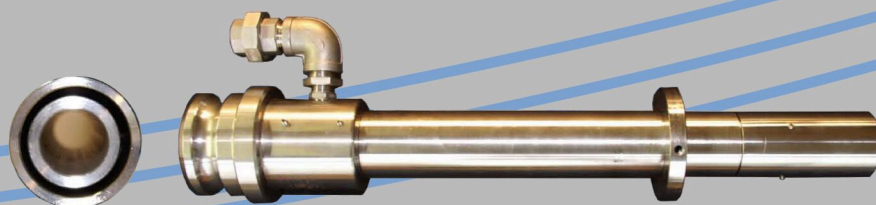
The lance should generally be equipped with ceramic pipe bends.

*Our advice: finishing the lance with ceramic pipe bends and fitting quick joints saves time and money. This procedure is successfully realized in several steel mills with different furnace types.*

The lance should generally be operated with air flow before and after use to avoid splatter and sedimentation at the vent of the lance.

The first 100-150mm of the lance should be made of heat-resistant steel when used in some particular furnace types.

Compared to common lances, which usually consist of metallic injection lance and joint, the lances mentioned are evidently reaching a far longer operational lifetime.



## Specification

## Ceramic Carbon Twin Injection Lance

**Sizes:** dimensions DN 25, DN 32, DN 40, DN 50

### Construction

Inside: Al2O3-ceramic / SiC-ceramic

Outside: regular steel / stainless steel of different grades / heat-resistant steel

The lances can be equipped with heat-resistant joints (ceramic/steel) for the permanent use in various furnaces up to a maximum temperature of 1050°C.

### Electrical Arch Furnace (EAF)

- production of foam slag by using centre punched coal
- injection of recycled, mixed and selected energy sources of determined grain size: wood /plastic / synthetic material / rolled tinder
- injection of filter dust to increase proportion of zinc
- injection of alloy material

### Ladle Furnace

- injection of insertion coal for enrichment on the molten pool (bubble eye)
- injection of metallurgical machining allowances for fine tuning (bubble eye)

### Blast Furnace

- injection of fire-resistant material to stabilize and mend the brick

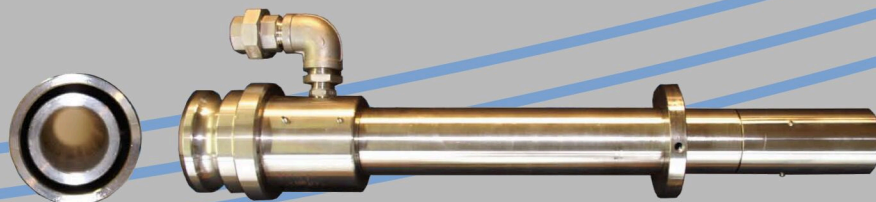
### Linning of the Furnace

- injection of additional energy sources
- injection of recycled and grinded hazardous waste cupola furnace and rotary kiln
- injection of additional energy sources and filter dust

### Joint Components

- camlock coupling: V2A / regular steel / brass
- flange joint
- clamp joint
- tank truck joint
- hose joint for quick lance changing at furnace edge
  - ceramic hose for different types and joint components
  - material conveyor hose made of fabric/rubber compound in different
- shore hardness (concerning the medium)
- hose joint towards the lance below the furnace
  - material conveyor hose
  - ceramic hose in range of arch
  - hose connections requested

Hoses should be covered with heat- and splatter guard sheath when used in hot regimens!



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