Stave Coolers
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Throat staves with SiC-inserts

Cast iron staves for middle and upper stack

Steel staves for transition zone

Copper staves for high heat zone

Cast iron tuyere staves

Copper tuyere staves

Copper taphole staves

Copper staves for hearth
**Copper Staves**

Paul Wurth supplies continuous cast hot-rolled and drilled copper staves for the high heat load zone of the blast furnace and for the hearth area.

- Min. 99.9% pure copper
- Low surface working temperature allows:
  - Formation of self-protecting skull
  - Low wear / multiple campaign life
  - Low thermal losses in high heat zones
- Increased furnace working volume
- Simple shell design
- Electrical conductivity > 95% IACS
- Round or oblong channel shape

**Steel Staves**

Paul Wurth supplies steel staves for the transition zone between copper staves and cast iron staves in the middle stack.

Steel staves have a behaviour which can be classified between the copper staves and the cast iron staves. The heat removal capacity is better than with cast iron staves, but less than with copper staves. Their mechanical properties (resistance against abrasion wear) suit best for the efficient protection of the specific blast furnace shell area.

**Cast Iron Staves**

Paul Wurth supplies cast iron staves for the upper stack and for the hearth area.

- Spheroidal graphite cast iron for the stack area.
- Lamellar graphite cast iron for the hearth and tuyere belt.

Special design for the throat staves using SiC insert bricks for wear resistance.
The Paul Wurth Group is today one of the world leaders in the design and supply of complete plants, systems and processes as well as specialised mechanical equipment for

**the iron & steel industry:**
- Blast Furnaces & Auxiliary Plants
- Coke Making Plants
- Agglomeration Plants
- Direct Reduction Plants
- Environmental Protection, Recycling & Energy-Saving Technologies

**other industries:**
- Systems & Equipment for Non-Ferrous Pyrometallurgy, Electrometallurgy & Residue Treatment
- Intralogistics Solutions for Heavy Loads
- Engineering & Project Management for Civil Construction and Infrastructure Projects


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