Advanced Technical Vision

in reheat furnace
Seven can offer a complete state of the art environmentally friendly solution to meet the demands for saving energy along with environmental protection.
All the products have been developed to guarantee high quality performance and a high degree of innovation.

Seven Refractories provides a wide range of monolithic products maximizing furnace performance.
Refractory solutions and engineering design for: pusher, walking beam, walking hearth, rotary hearth, boogie, tunnel and annealing furnaces have been achieved and exceed customer expectations.
Our products are tailored to any cost effective thermal process with the target to enhance the steel surface quality from the simplest stand-alone heat treatment furnace to complete heat treating lines:

- plastic and gunning mixes
- regular and low cement castable
- shotcrete
- precasted pieces

[Diagram of working lining layers]

1. Working Lining
   - Medium and high alumina gunning
   - Medium alumina plastic materials

2. Insulation Layer
   - Insulating fire brick 0,6 or insulating light weight castable

3. Insulation Layer
   - Insulating fire brick 0,8 or insulating middle weight castable

4. Insulation Layer
   - Insulating board or insulating low alumina castable

5. Insulation Layer
   - Insulating fire brick 0,6 or insulating light weight castable

[Diagram of insulation layers]

1. Precast block
   - Low cement medium alumina castable
   - Up to low cement alumina-spinel castable

2. Working Lining
   - Low cement medium alumina castable
   - Up to low cement alumina – spinel castable

3. Insulation Layer
   - Insulating fire brick 0,6 or insulating medium alumina castable

4. Insulation Layer
   - Insulating fire brick 0,8 or insulating low alumina castable

5. Insulation Layer
   - Insulating board or insulating low alumina castable
The construction of any reheating furnace has several solutions, by either adopting the classical brick lining, or combination with monolithic materials. The installation techniques are various depending on materials used, i.e. castable, ramming, gunning or shotcreting, in some furnaces precast pieces may even be considered.

The target in terms of technology, time frame, type of installation and budget available may address and/or influence the engineering solution.
Seven Company has incorporated environmental concerns about climate change in its innovative approach to the market; not only in making our factory fully electrically independent by using renewable energy sources, but in the entire manufacturing process cycle and quality control.

The respect of the environment is a core value of Seven Refractories.

Selection of the raw materials, dedicated and oriented research, composition architecture and on the field technical experts are the key-points for outstanding efficiency and reliability of the refractory linings, excellent control of the thermal load distribution and low product variability in time.
• Preliminary study and investigation for the project edition
• Design and architecture, bill of materials, thermal calculation
• Full range of products for lining and maintenance
  • Regular, low, ultra-low and no-cement castable
  • Regular and dense low-cement gunning mix
• Ramming
• Shotcreting
• Grouting, patching and dry vibrating products

• Supply of mixer, gunning machines, pump, etc.
• Training on mixing, gunning and maintenance techniques
• Training on equipment usage
• Supervision and monitoring by experienced technicians
• Global Research & Development
• Monitoring and targeting of results
• Technical advice from experts

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