Introduction of the discipline

The industrial furnace business department of Beijing Shougang International Engineering Technology Co. Ltd. (BSIET) is a technical service provider engaged in energy saving and emission reduction, environmental protection technology and engineering design, product development and project general contract (EPC) in heat engineering field of iron and steel industry in China, having unique technical advantages and abundant experience in large walking beam (pushing) reheating furnace for slab/billet, reheating furnace for silicon steel, bell type reheating furnace, rotary hearth reheating furnace as well as various heat treatment furnaces, aluminium melting furnace and furnaces for direct reduction process, possessing many proprietary technologies and patents and having sufficient performance references. The industrial furnace business department of BSIET, taking leading technology as the bases, quality product as the guarantee and client's satisfaction as the target will render technical services throughout the entire process of project and finally realize win-win situation for both provider and client.

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优势技术

- 大型步进式加热炉技术
- 高热效率燃烧技术
- 方坯步进（推段）式加热炉
- 连续推豆式热处理炉、密闭式热处理炉、罩式热处理炉
- 环形加热炉、热处理炉
- 端部炉及其他提升炉窑
- 燃气低NOX调节燃烧（混合煤气、天然气）
- 高温硅钢加热炉及保温炉
- 铜钢电磁感应加热炉

优势产品

- 各式热式热处理炉（单热源、双热源；小煤气、大煤气）
- 三段绕线加热器、四道绕线加热器
- HD耐高温直接还原铁储料罐
- 电感应加热炉设备
- 高速罩式退火炉（用于酸洗退火）
- 保护气气氛罩式退火炉（用于冷轧、热轧卷退火处理）
- 合金式退火炉
- 轧热式换热器
- 淬火炉

- Various regenerative burner (single regeneration, double regeneration, granule and breather)
- Three way switching valve, four way switching valve
- Material bin for HDRF
- Equipments for electromagnetic induction heating furnace
- High temperature bell type annealing furnace (for heat treatment of silicon steel)
- Protective atmosphere bell type annealing furnace (for annealing of cold rolled and hot rolled coil)
- Pallet annealing furnace
- Regenerative heat exchanger
- Aluminum melting furnace
先进的设计手段
Sophisticated design means

利用软件对设备进行应力分析及炉内流场模拟
Stress analysis on equipment and simulation of flow field inside the furnace by using software

利用计算机仿真模拟进行加热曲线研究
Heating curve study by computer simulation

利用软件建模模拟产品加热过程
Simulation of product heating process by software modeling
典型业绩及产品举例
Typical performance references and demonstration of products

迁安1580热轧厂1#-3#加热炉
生产及炉型: 270t/h步进梁式加热炉（1#炉, 2#炉为低温炉；3#炉为硅钢高温炉）
供热系统: 燃烧器与燃烧器相结合 燃料: 混合煤气 投产时间: 2010.4

1# – 3# reheating furnaces of 1580 hot rolling mill Qiangang
Output and furnace type: 270t/h walking beam reheating furnace (1# furnace, 2# furnace are low temperature furnace; 3# furnace is silicon steel high temperature furnace)
Heating system: combination of regeneration and normal combustion fuel: mixed gas
Date of start-up: 2010.4

BSIET has been in leading position in China for control theory and engineering experience of industrial furnace and applied them in actual projects:
- Cascade parallel dual crossing amplitude limit controlled combustion technology
- Automatic correction of air-fuel ratio by zirconia residual oxygen analysis
- Multi target expert optimizing combustion model
- 2-level control and mathematic model technology
- Stock precision position technology to realize “club” distribution
- Full automatic charging, discharging, “one touch” heating
- Temperature tracking self-adaptation model
Examples of bar and wire rod reheating furnaces

**Reheating furnace of quality bar workshop, Shougang**
- **Output and furnace type**: 140t/h walking beam reheating furnace
- **Fuel**: BFG and COG mixed gas
- **Date of start-up**: 2005.10

**Reheating furnace of No. 2 workshop of No. 1 wire rod plant, Shougang**
- **Output and furnace type**: 120t/h walking beam reheating furnace
- **Fuel**: Mixed gas
- **Date of start-up**: 2005.12
### 高温环热处理炉
**用途**：双向旋转高温退火
**炉型**：转底式环形炉，保护气氛

*High temperature rotary hearth heat treatment furnace*
Usage: high temperature annealing of oriented silicon steel
Furnace type: rotary hearth circular furnace, protective atmosphere

### 电磁感应加热炉设备
- 液压自衡提升系统
- SHE坯料运输系统
- 特殊耐高温炉床

*Electromagnetic induction furnace equipment*
Hydraulic self-balance lifting system
SHE slab transfer system
Special high temperature resistant hearth

### 炉底加热炉
- 炉底加热功能可达1000t
- 全纤维炉型
- 自动移盖机

*Slab temperature soaking furnace*
Slab storage capacity can reach to thousand tons
Full fibre furnace
Automatic cover remover

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### 产品实例
**产品实例**

### 双重热熔器
特点：熔融能力强，熔炼温度均匀，结构耐用，寿命长

*Dual regenerative burner*
Characteristics: powerful regenerative capacity, uniform flame temperature, durable structure, long service life

### 平焰熔器
Flat flame burner

### 焦热式熔器
Regenerative burner

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### HDRI热料器
特点：耐高温，结构可靠，可盛装高温抗热颗粒

*Material bin of HDRI*
Features: high temperature, structura reliability,Can bloom high temperature granular objects such as baseball
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**PERFORMANCE REFERENCE OF REHEATING FURNACE FOR STEEL ROLLING**
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**PERFORMANCE REFERENCE OF HEATING FURNACE FOR STEEL ROLLING**

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**PERFORMANCE REFERENCE OF HEATING FURNACE FOR STEEL ROLLING**