



Systems for Kiln Construction 窑炉耐火材料系统

Trend was the first company in Asia to develop cordierite-mullite material for kiln construction. By practicing and perfecting for many years, our refractory construction systems for kiln and kiln car are fully developed. The systems include roof systems and wall systems for shuttle, tunnel and roller kilns, extruded block kiln car systems as well as dry-lock brick kiln car systems. These systems are all low-mass, have excellent reliability and are easy to construct. We also offer customers the total solutions for modifying existing systems.

创导公司是亚洲最早开发设计堇青石-莫来石材料用于窑体结构的公司。通过多年的实践与完善，目前已经形成成熟的窑体、窑车耐火材料结构系统，包括梭式窑、隧道窑、辊道窑的窑炉吊顶结构系统、窑墙系统、中空边围砖窑车系统、干码边围砖窑车系统等。这些耐火材料搭配合理、轻质隔热、结构紧凑、安全可靠、施工方便。创导公司还可以为客户的旧窑窑体、窑车改造提供全面解决方案。

Cordierite-mullite material has excellent thermal shock resistance, good strength and can be formed by pressing, extruding, casting and vibrating into complex shapes. Besides its use as kiln furniture, it is also extensively used in kiln structures and kiln car systems, where it is combined with ceramic fibre to achieve the aims of improving fuel efficiency and avoiding contamination.

During the firing operation conditions can occur that will have a detrimental effect on the actual lining. These can be volatile or glaze attack, or general contamination. The moisture and organisms inside the ceramic body react and create the volatiles during firing, which are then discharged into the kilns. In other cases glaze will be vaporized during firing which will then attack the linings. Contamination will be the result of the products of combustion. Normally these will cling to, and erode, the kiln roof. When this erosion to the insulating bricks and fibre becomes serious, a consequence can be a loosening of the kiln lining surface and the creation of dust particles which will then settle on the actual product. Because the formulation of insulating bricks and fibre does not create a strong enough body, especially after being washed out by air flow with the passing of time, this dust can be a very serious problem and cause of poor yields in the firing operation. The fibres will also be attacked as time progresses which also creates dust in the atmosphere.

Trend has provided a solution to this problem through the development of a new lining system in which we use cordierite-mullite batts to cover these fibres. This system has proved very successful in solving many of the above mentioned problems.

堇青石-莫来石材料热震稳定性好、强度高，可以采用压制、挤出、浇注、捣打等多种成型方式，制做成各种形状的产品。除窑具外，还可以用作窑车、窑顶和窑墙。与耐火纤维制品相配合形成全新的轻质窑车、窑炉结构，达到大幅度降低陶瓷产品燃料消耗，避免落脏缺陷的目的。

陶瓷坯体中含有水份和有机质，在烧成过程中形成挥发份排出；陶瓷釉料在高温下也会被蒸发；燃料燃烧后也会残留某些杂质，这些物质附着并侵蚀窑顶，轻质砖和耐火纤维制窑顶表面疏松，受侵蚀后易于产生落脏；同时轻质砖和耐火纤维制品强度较低，长期受气流冲刷也容易落脏；纤维制品长期使用会产生粉化。这些因素都会使陶瓷产品产生落脏缺陷。以堇青石-莫来石薄盖板覆盖耐火纤维制品，使之不与室内气流接触，落脏缺陷可以大大减轻。



