

3 THINGS YOU MUST DO TO GET BETTER PERFORMANCE OF REFRACTORIES

Nothing counts like the 'performance'. Getting or giving a better performance is one thing which everyone tries to do. Reasons obvious! For getting better performance of refractories from an installation one must take care of the following three simple but very important things:

1. Proper Selection of Refractories.
2. Proper Installation-Application.
3. Proper Operation Practice.

Selection of Refractories

Though there are specific refractories for different applications, operation practices lead to certain criteria on which, depends the life of refractories. As such these need to be properly considered. Customers should disclose the actual operating practices and conditions so that some important properties, required to such conditions can be taken care during the selection and manufacturing stage of refractories. Among various physical, chemical, thermo-chemical and thermo-mechanical properties of Refractories, there are a few properties which contribute

markedly to its performance. These are called '*Key Properties*'. For ensuring better performance and quality these key properties should be tested.

Application - Installation of Refractories

Depending on the method of application or installation there has to be a set of guidelines in respect to laying of refractory bricks, their dimensions, selection of mortars, expansion joints and many other minute but very important things. So from case to case basis the supplier of refractories should specify this properly and also ensure that the methods are actually being followed. Transportation, handling, timely arrival of refractory bricks, mortars, skill of masonry work, proper equipment for application e.g. mixer machine for castable, vibrator for installation, forma etc. are very important. Maintaining proper expansion gaps, correct dimension of bricks and monolithics, fixing anchors etc. all are very important to achieve better life of refractories. Once the installation of refractories is over, the initial heating of the lining before starting the actual operation is of prime importance. Customers should demand the initial heating schedule from the refractory supplier.

Operational Practices

Proper operation is not only important for getting right quality output but also, help in getting the optimum life of refractory lining, less downtime, maximum availability of the furnace and thus, the benefit of lower cost of refractories per

tone of finished product. Customers must be aware of the reasons which can damage the refractories arising because of improper operations. During the training of the furnace operators, apart from the method of the furnace operation etc. they must be given some knowledge regarding the proper usage and importance of refractories also.

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