

EZ³ FINE 80 SiC XR

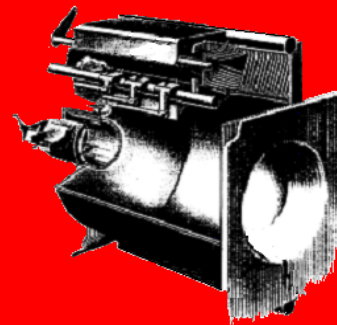
EZ³ FINE 80 SiC XR

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SHOTCRETING CYCLONES

AN
AMERICAN-OWNED
REFRACTORY
COMPANY



EZ³ FINE 80 SiC XR

EZ³ FINE 80 SiC XR was developed to compete in the power industry as an alternative to:

- Gunnable SiC products, including gunnable plastics
- Rammed SiC plastics
- High alumina phos-bonded plastics

EZ³ FINE 80 SiC is an 80% SiC monolithic that can be shotcreted onto the walls of heavily studded Coal Fired Cyclone Boilers.

The following points distinguish EZ³ FINE 80 SiC XR from the competition:

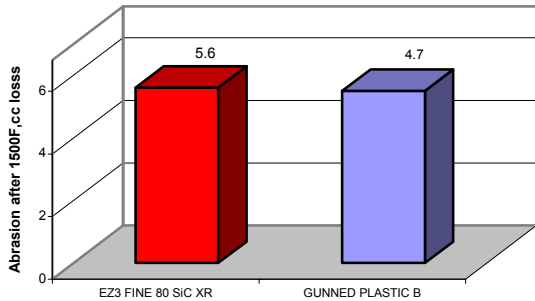
1. Installation speed. Shotcreting a standard cyclone can take 75% less time than installing a rammed plastic lining.
2. No dust, either in the cyclone or outside the cyclone, because all of the equipment is outside away from the turbines. You don't have to haul boxes of plastic up to the cyclone.

Advantages

1. Thermal shock resistant.
2. Resistant to mechanical abuse.
3. Resistant to abrasive charging.
4. Resistant to aggressive slags generated by the high, or low sulfur coals.



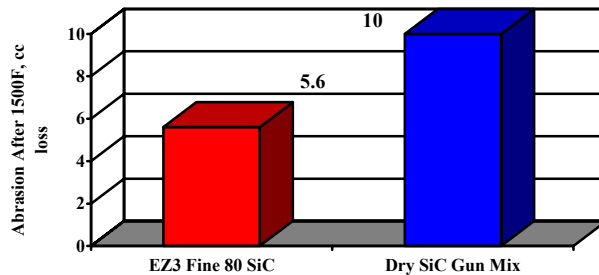
Comparing EZ³ FINE 80 SiC XR To Competitors' SiC Plastics



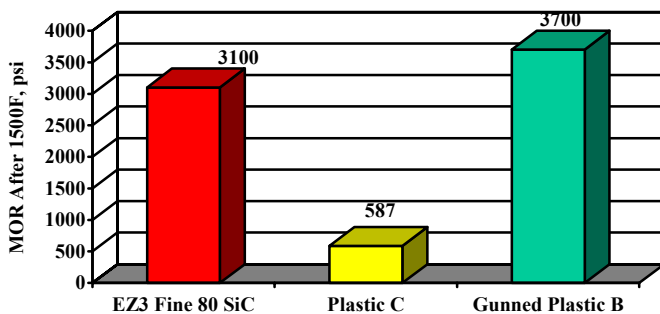
EZ³ FINE 80 SiC XR has only slightly higher abrasion loss as compared to the SiC plastics. Statistically there is no difference between Gunned Plastic B and EZ³ FINE 80 SiC XR.

Comparing EZ³ FINE 80 SiC XR To Competitors' Abrasion Resistance

EZ³ FINE 80 SiC XR abrasion loss is significantly lower than the competitor's dry SiC gun mix.



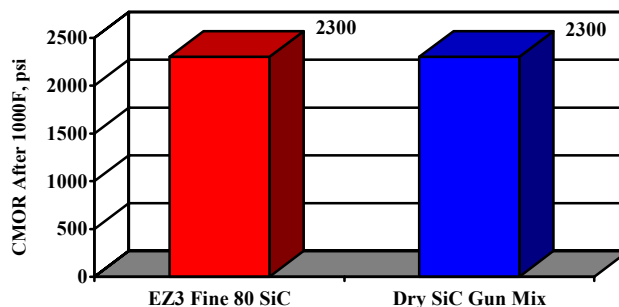
Comparing EZ³ FINE 80 SiC XR's MOR Strength To The Competition



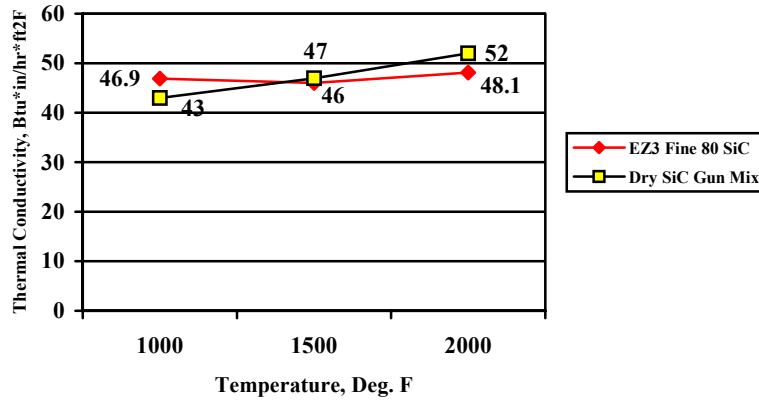
EZ³ FINE 80 SiC XR's strength is superior to Plastic C. EZ³ FINE 80 SiC XR's strength is comparable to the Gunned SiC Plastic. Note that the Gunned SiC Plastic data is from rammed samples, not gunned samples.

Comparing EZ³ FINE 80 SiC XR's MOR Strength To The Competition

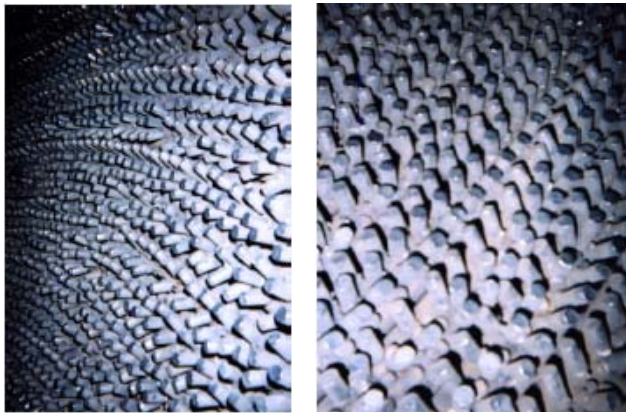
EZ³ FINE 80 SiC XR's strength is exactly the same as the competitor's Dry SiC Gun Mix.



EZ³ FINE 80 SiC XR and the Dry SiC Gun Mix have very similar thermal conductivity.

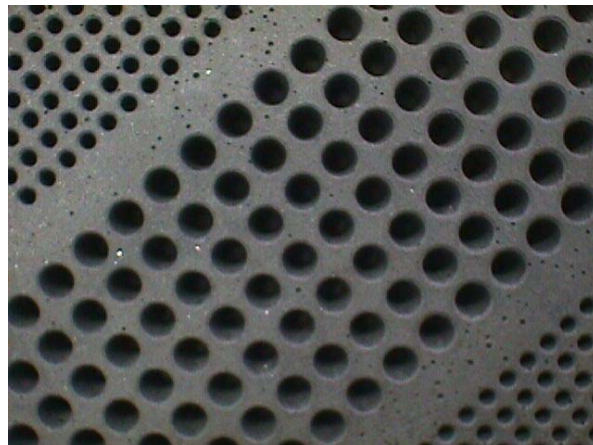


A key property of an ideal refractory for cyclone boilers is its ability to be installed around a tight packing of metallic studs. The photo in the upper left is a “normal” packing density of 300 studs/ft². The EZ³ FINE 80 SiC XR is filling in appropriately around the studs!



The other two photos on the left show super stud patterns of 400 studs per square foot. EZ³ Fine SiC XR was able to be shotcreted to fill this super stud pattern.

The photo on the right was taken to illustrate just how tight EZ³ FINE 80 SiC XR can be applied around studs. There is no cracking between studs.





Currently, numerous power plant customers are having their cyclones gunned with a dry SiC gun mix. One of the major disadvantages to dry gunning is the dust! One of the components of the dust is SiC fines which are used in the abrasive industry due to their hardness. The dust from the gun mixes will abrade the turbines in the power plant. Dust is also a hazard to the workers trying to see through it in order to install a quality lining. In low visibility you might trap rebound or make an area too thick or too thin.



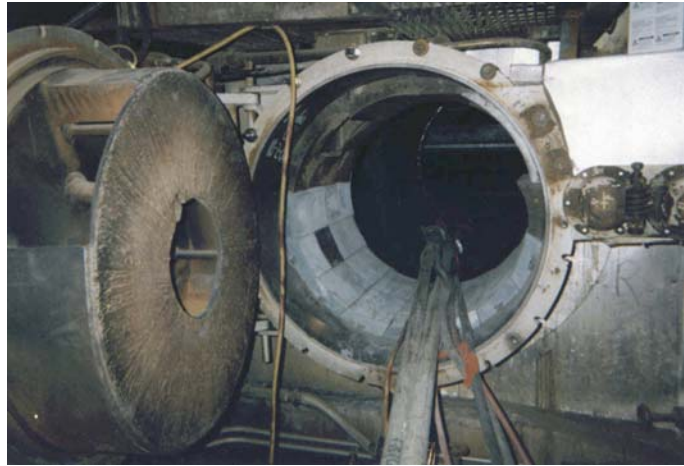
EZ³ FINE 80 SiC XR can be mixed outside the plant so that NO dust is around the turbines. The wet mix is pumped to the cyclone via pipes. It is very convenient to stage the job from outside the plant. You have easier access to your materials and more room to work.

The wet mixed material is pumped using equipment like what is shown in the photo to the right.



The pipe containing the wet mix of EZ³ FINE 80 SiC XR is brought to the cyclone, eliminating any dust in the power plant.

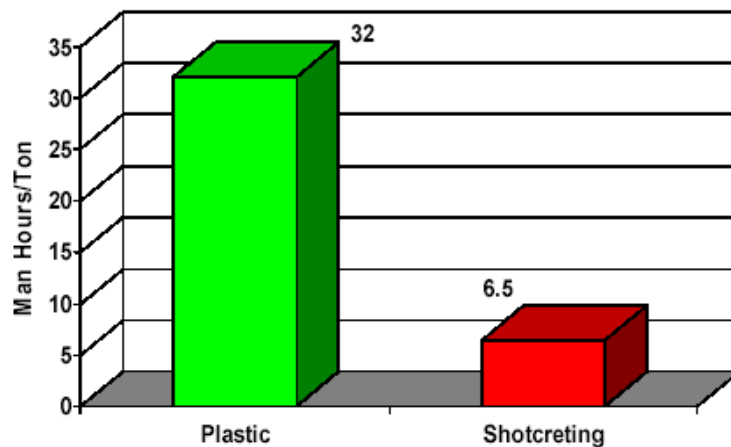
In a power plant it is often difficult to get access to a "lift" in order to feed plastic to an air hammer operator. You don't have to worry about hauling plastic to the cyclone with our product. As you can see in the photo on the right, all you have is a hose.



As you can see in the photo on the left, the EZ³ FINE 80 SiC XR is going on the wall of the cyclone without any dust. The operator doesn't have to breathe the dust and can see exactly what he needs to do in order to give the customer a quality lining in the shortest amount of time.

After everything is set up on the job a typical cyclone can be shotcreted in a little over two hours time.

Shotcreting a cyclone is significantly less labor intensive than ramming plastic as you can see in the bar chart to the right. The Shotcreting data to the right was determined from two recent projects.



User's List

EZ³ FINE 80 SiC XR has been installed in coal fired cyclones at the following power plant locations:

ILLINOIS

- 42 Cyclones at customer A.
- 9 Cyclones at customer B.

MISSOURI

- 32 Cyclones at customer C.

WEST VIRGINIA

- 10 Cyclones at Customer D

OHIO

- 4 Cyclones at Customer E.

If you are interested in cyclone life improvement and lining installation cost reduction, we believe EZ³ FINE 80 SiC XR, a dramatic improvement over current technology, should be considered for your next installation.

EZ³ FINE 80 SiC XR, formerly manufactured by National Refractories and Minerals, is a quality product manufactured by RESCO Product, Inc. For other quality National and Resco brand products, please contact your local sales representative or the Pittsburgh office.





Founded in 1946, Resco has served its markets with specialized products ever since, initially, with the refining industry and later in the steel industry. Innovations have been key to Resco's long success, including AA-22 and the original patent on semi-universal ladle brick.

Recent acquisitions have diversified Resco into many new refractory markets. The addition of National's product lines allows Resco to offer a comprehensive range of products.



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