Cetek
an IGS Solution

# Eliminate Convection Section Fouling by Encapsulating Refractory

## PROBLEM

Over time refractory ceramic fiber becomes friable. This friable dust is entrained in the post combustion flue gases and gets carried downstream, fouling convection section tubes and catalyst banks.

Fig 1 shows new ceramic fiber under SEM. Fibers are continuous and intact. After heat exposure, long strands break down into smaller pieces, which are carried downstream and comprise the majority of convection section fouling (Fig 2).

## SOLUTION

Cetek Ceramic coatings effectively encapsulate the surface fibers, forming a composite structure (Fig 3). The ceramic fibers are contained within the matrix and are prevented from escaping to flue gases.

The ceramic coating is designed for use up to 1426°C (2600°F) and has a long life, approximately 6-8 years; totally preventing fouling from ceramic fiber linings, on both new and existing/old applications.

Watch Cetek in Action

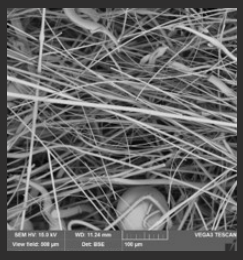

*Fig 1*
*New Ceramic Fiber*

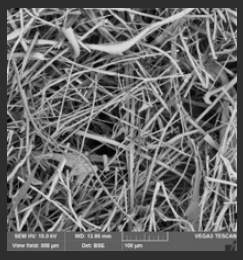

*Fig 2*
*Ceramic Fiber after Heating*

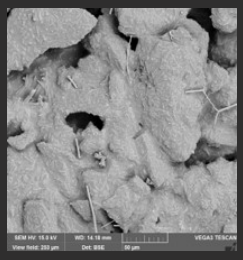

*Fig 3*
*Cetek Coated Ceramic Fiber*

## Benefits

### LOWERED MAINTENANCE COSTS

Preventing convection section fouling eliminates the costs associated with its cleaning

### IMPROVED EFFICIENCY

No fouling means the furnace can reliably operate at its expected design efficiency.

### LONG-TERM SOLUTION

Cetek refractory encapsulation lasts for 6-8 years/2-3 turnarounds.