



AIR POLLUTION CONTROL SOLUTIONS

AAF International
Cement & Rock Processing



Better Air is Our Business[®] **AAF**
INTERNATIONAL

AAF International Air Pollution Control Solutions

Cement And Rock Processing

Cement and rock processing is synonymous with dust, and lots of it. Dust is generated at every stage of production, from quarrying to bagging the finished product. Compounding the challenge, operators are often faced with extreme process temperatures, dry and wet processes, and any number of variables based on local conditions and the specific product being produced.

AAF has applied many of its fundamental air pollution control technologies to these problems, in addition to creating specialized equipment and systems that meet the unique needs of this industry. We have a full line of products available, plus the expertise to help find the best solutions for each pollution problem.



AAF Fabri-Pulse XLC bagfilter controlling emission for Preheater kiln and raw mill in a cement plant at Algeria.



AAF Fabri-Pulse XLC and Forced Air Cooler installed in Holcim, France for Combined Clinker Cooler & Lepol Kiln dedusting.

The Right Equipment, The Right Applications

The backbone of dust control for cement and rock processing is the fabric collector. AAF offers a wide range of sizes and types from the compact OptiFlo Cartridge Collector and the Modular Millennium baghouse to custom built pulse-jet Fabri-Pulse XLC Filters and Reverse Air Amer-Therm systems. All these products are designed to meet the high volumetric and temperature requirements in the processes encountered in production of cement.

Other AAF products applicable to the industry include gas cooling devices such as Forced Air Cooler (FAC) which is used to cool kiln or preheater gas and clinker cooler gas.

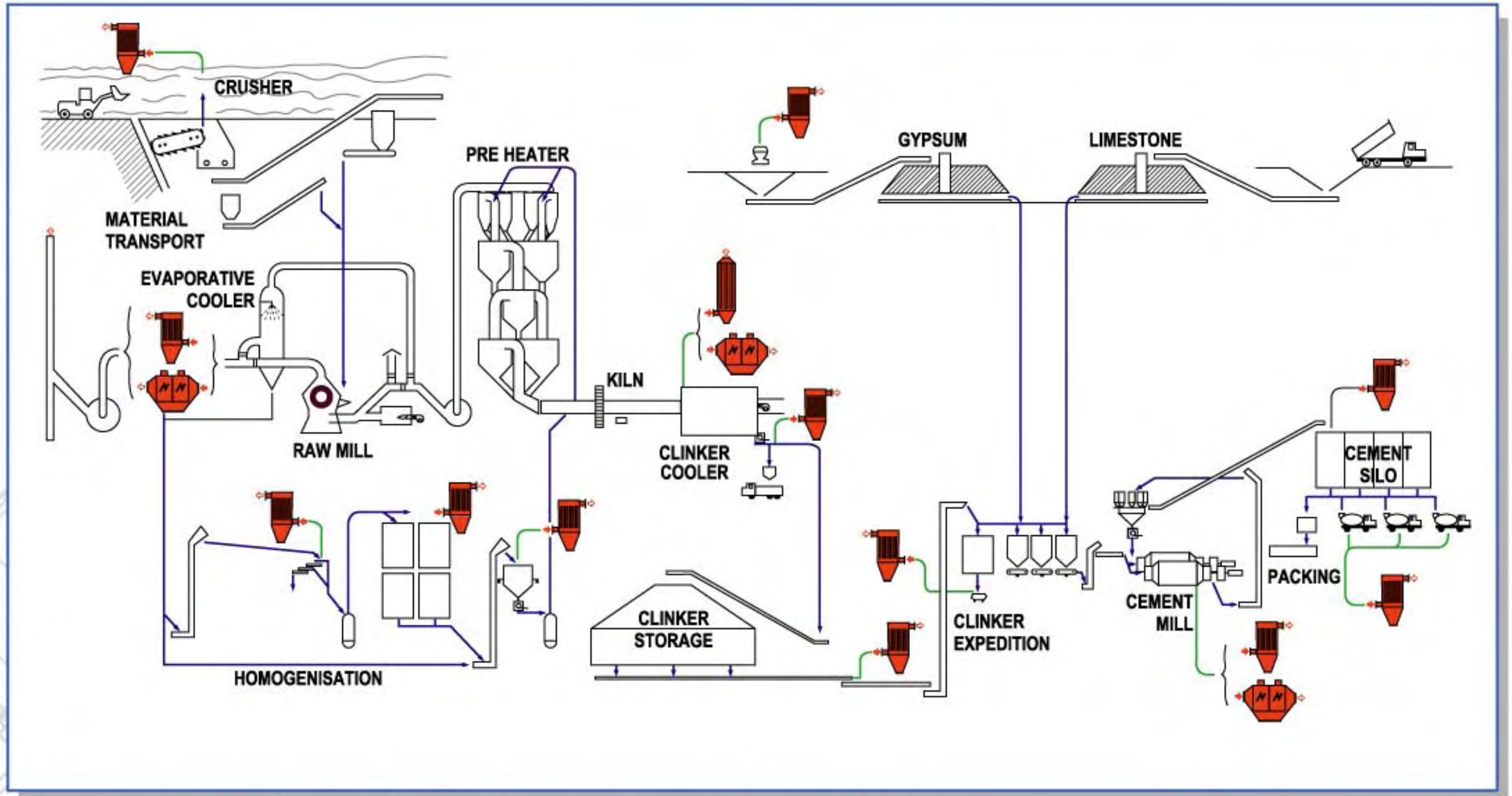
Whatever the application, and whatever products are appropriate to meet the specific problems, all AAF systems are designed with an eye towards energy efficiency and compatibility with the process. We understand that air pollution control equipment must enhance work flow and contribute to the overall productivity of the operation.

We've Got Answers For Every Step Of The Process

From the extraction of the raw materials to the loading of the trucks, we've developed proven methods for the effective control of dust. We have expertise in the following primary areas of production:

- **Drilling**
- **Primary crushing, screens and secondary crushing**
- **Storage**
- **Raw mill and air separators**
- **Wet kilns**
- **Dry kilns**
- **Grate kilns**
- **Preheater kilns**
- **Raw mill and preheater circuit**
- **Alkali bypass**
- **Clinker cooler**
- **Finish mills and air separators**
- **Bulk storage**
- **Baggers, car, and truck loading**
- **Clay dryer**
- **Coal / Petcoke mills**

Air Contaminant Sources In Cement Plant

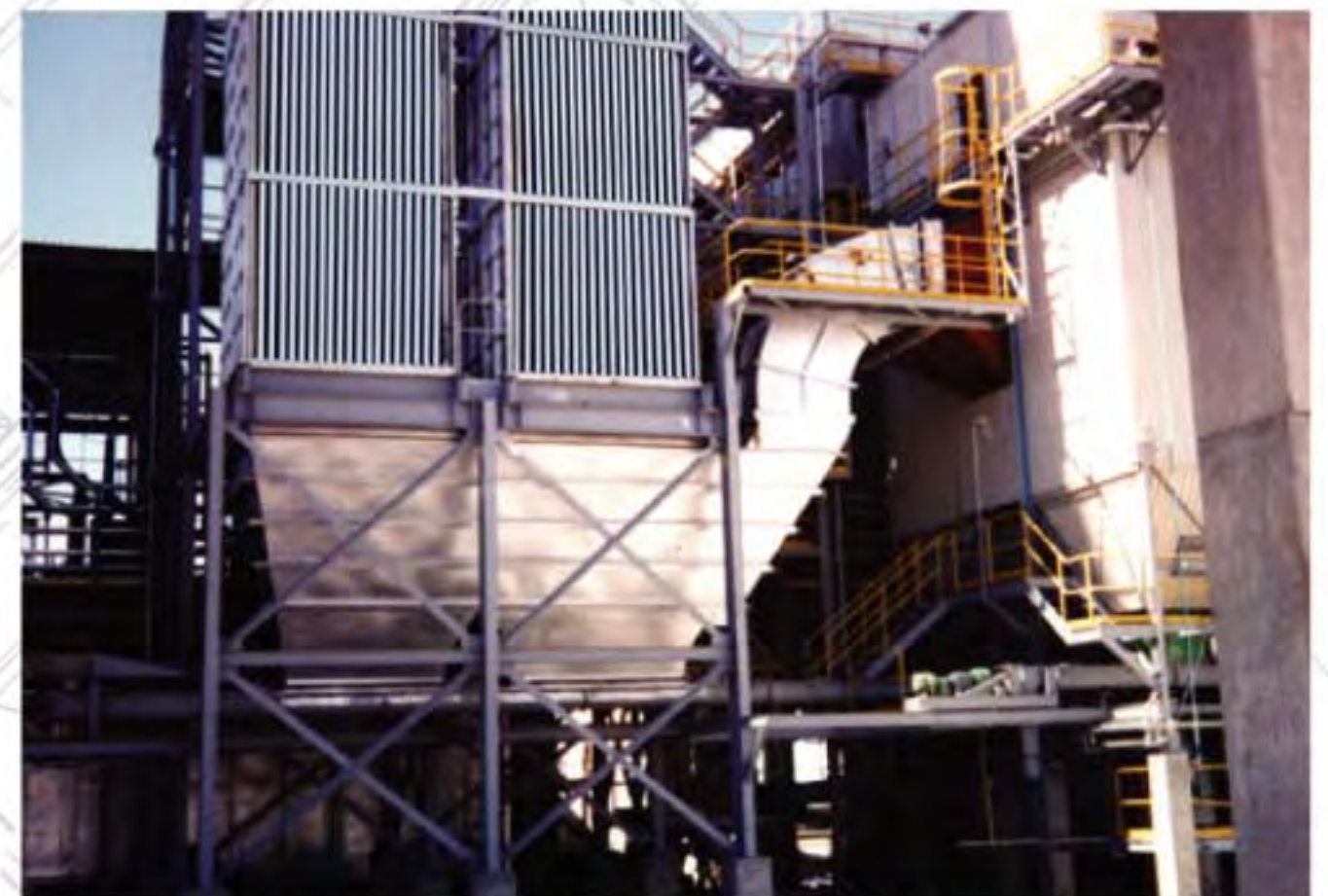


Fabric Collectors

Gas Cooling & Conditioning



AAF fabric filter installed in Cimpor, Portugal for Kiln & Raw Mill dedusting.



AAF gas cooling equipment installed at Cementos Chihuahua, Mexico to cool down flue gas from clinker cooler before entering fabric filter.

Fabric filters are supplied in a range of sizes from small floor-standing units to large baghouses handling several million m³/h. With more than 60-year experience solving air pollution problems, AAF can work with customers to select the ideal size and the correct fabric media to meet the appropriate standards.

AAF has applied considerable resources in the development of more efficient gas cooling equipment. This advanced technology, used primarily for cooling process gases in the cement & rock processing industries, is being installed and used successfully throughout the world.

Fabric Collectors

As air pollution standards become increasingly strict, fabric collectors are becoming the preferred type of gas cleaning equipment. They provide superior particulate control over the widest ranges of conditions and dust concentrations.

AAF offers a complete line of fabric collectors, ranging in size from small floor standing units to giant custom-built baghouses handling 5,000,000 m³/h and more. We provide not only the proper equipment, but also expertise to determine the best method of dust entrapment, provide gas cooling when necessary, remove contaminants from the airstream, and salvage or dispose of the collected material.

Cost Effectiveness Comes In Many Sizes

AAF's range of fabric dust collectors include highly efficient units that use pulses of compressed air for cleaning. Several standard arrangements, solid state & PLC controls, external bag removal and low maintenance costs make these very attractive units for small to medium volumes and dust loads.

The AAF Fabri-Pulse XLC is a pulse-cleaned fabric filter designed to handle large gas throughputs and difficult dusts such as fumes at elevated temperatures. It is designed from proven principles and built from standardized components. This makes the XLC both flexible and economical. The result is a savings of up to 50% of the bag cleaning energy required for conventional 12-bag-per-valve designed. The key is an AAF innovation called "off-line" cleaning. This technique isolates the section of the unit being cleaned so the pulsing air will not work against the normal filtering pressure. Off-line cleaning reduces compressed air usage as much as 50% to 70% over conventional pulsed systems.

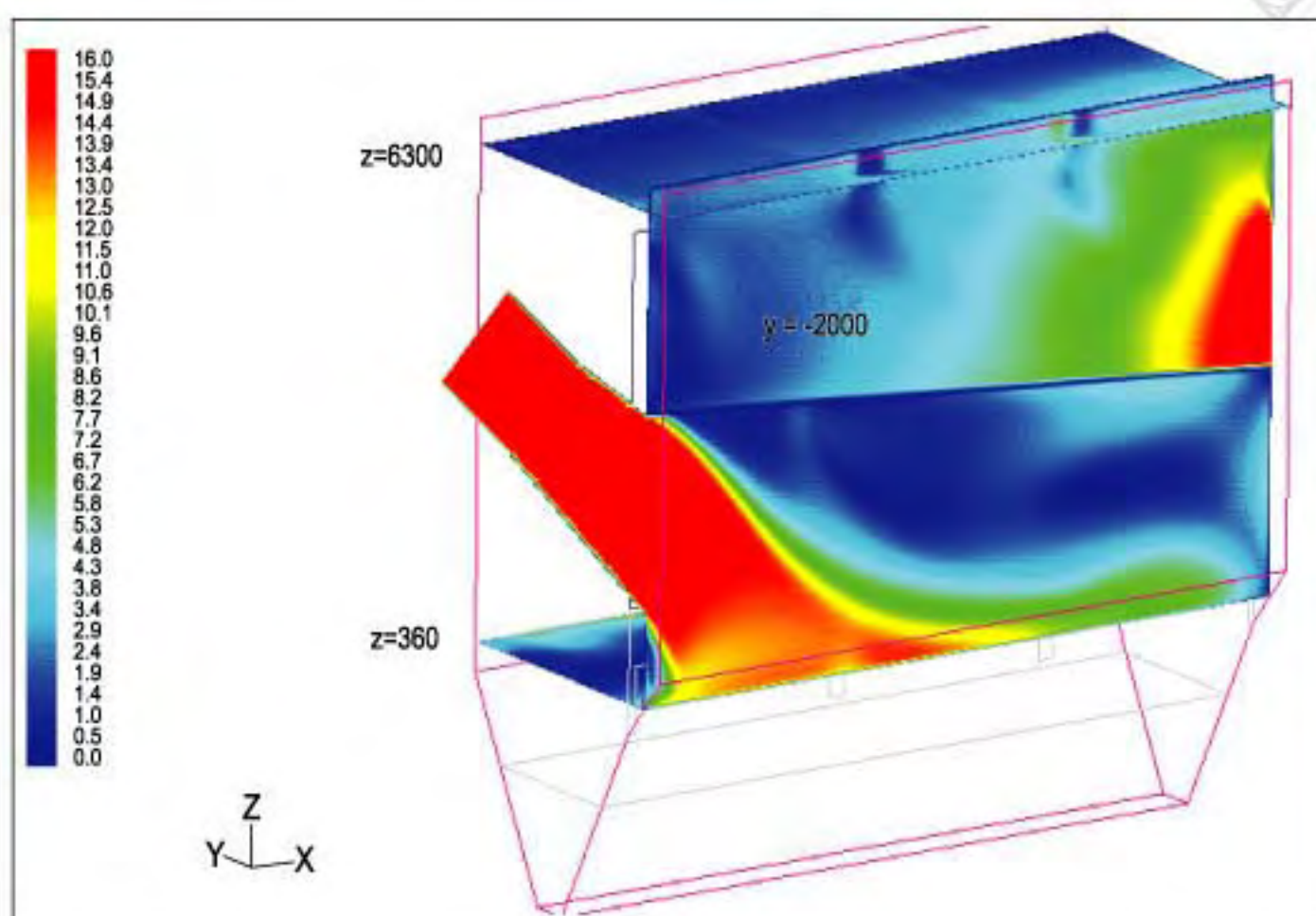
It also satisfies the most stringent performance requirements, economically and consistently. Our comprehensive application allows optimum rating of the AAF Fabri-Pulse XLC.



A Conversion of Electrostatic Precipitator to Fabri-Pulse Filter Job done for Lafarge, Malaysia.



AAF Fabri-Pulse XLC bagfilter during site erection stage.

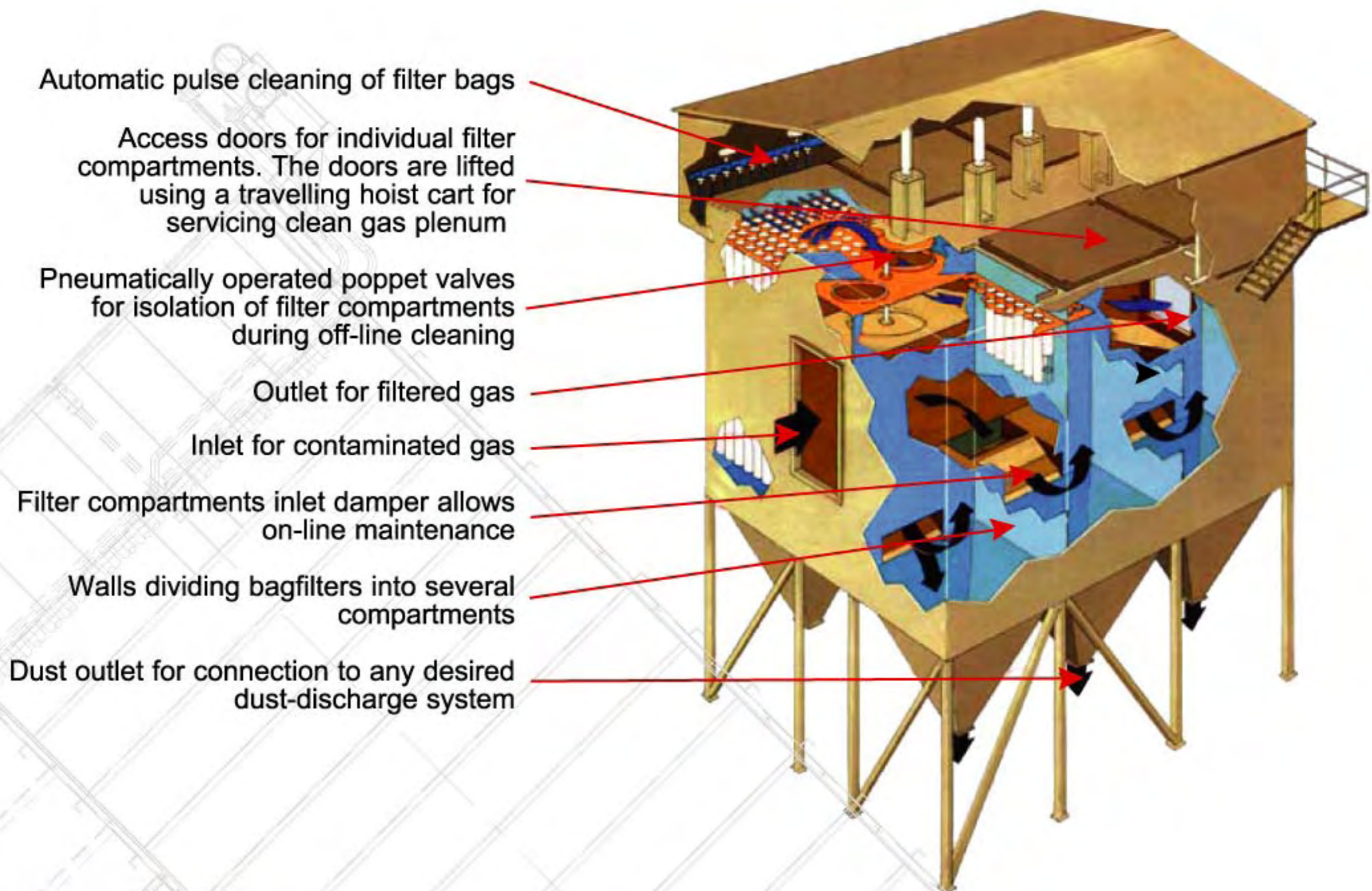


Computational Fluid Dynamics program is used to simulate air flow velocity inside bagfilter

You'll Find AAF Quality Every Step Of The Way

Every AAF fabric collector, from the smallest to the largest, is built with the consistent quality standards that have made AAF a leader in air pollution control equipment. Every fabric bag, whether original or replacement, meets the toughest standards for thread count, permeability, strength, and much more. Our plenums and manifolds are designed for uniform gas distribution, elimination of turbulence, and minimal dust re-entrainment. When you choose AAF, you'll realize long-term benefits in lower maintenance and increased efficiency.

Fabri-Pulse XLC



Nuisance Filters

AAF offers full range of fabric collectors from small size Fabri-Pulse filters, Model Optiflo compact cylindrical filter to medium size modular construction model Millennium.

These collectors are widely used in silo storage, transfer point, loading and bagging in cement plant.



AAF Fabri-Pulse M Cartridge Filter

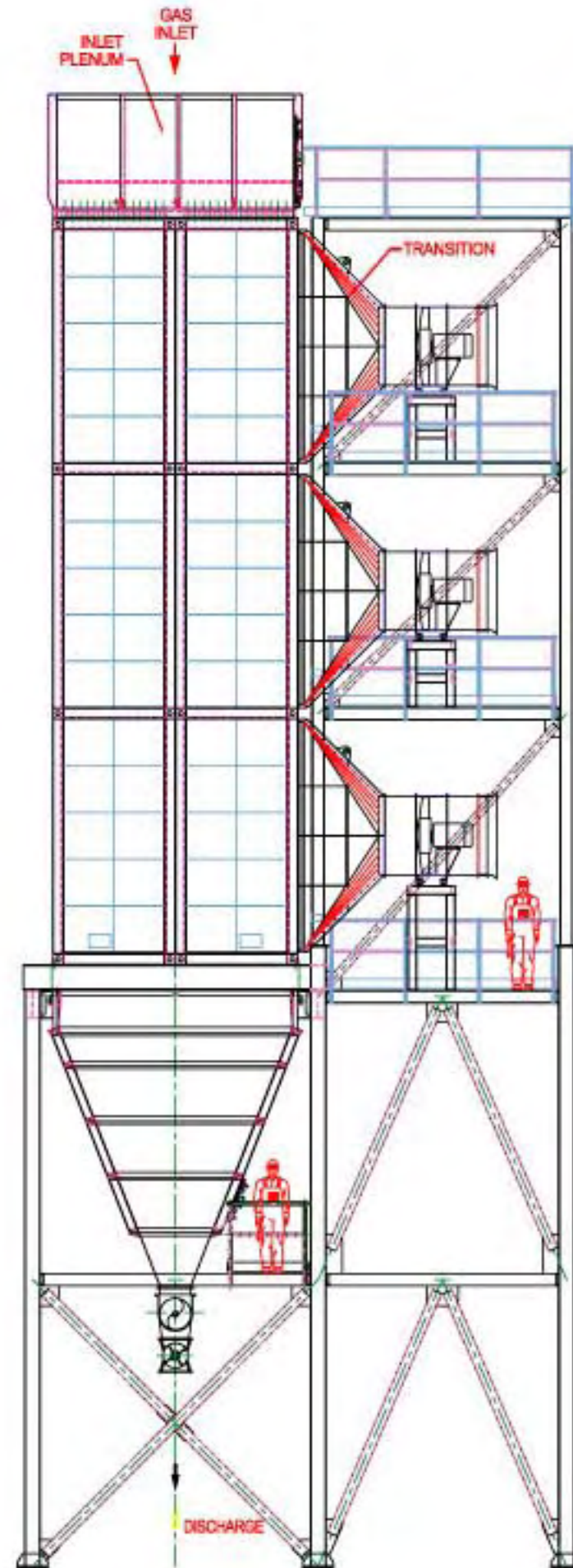


AAF Fabri-Pulse Millennium Modular Filter

Forced Air Cooler



A top entry AAF Forced Air Cooler.



Forced air cooler (FAC) typical application is on clinker cooler grates. AAF-International has also successfully installed forced air coolers on some other applications, both inside and outside cement plants. Forced air cooler has some specific advantages over conventional methods of cooling such as U-tube coolers, water spray towers, and cooling by dilution air.

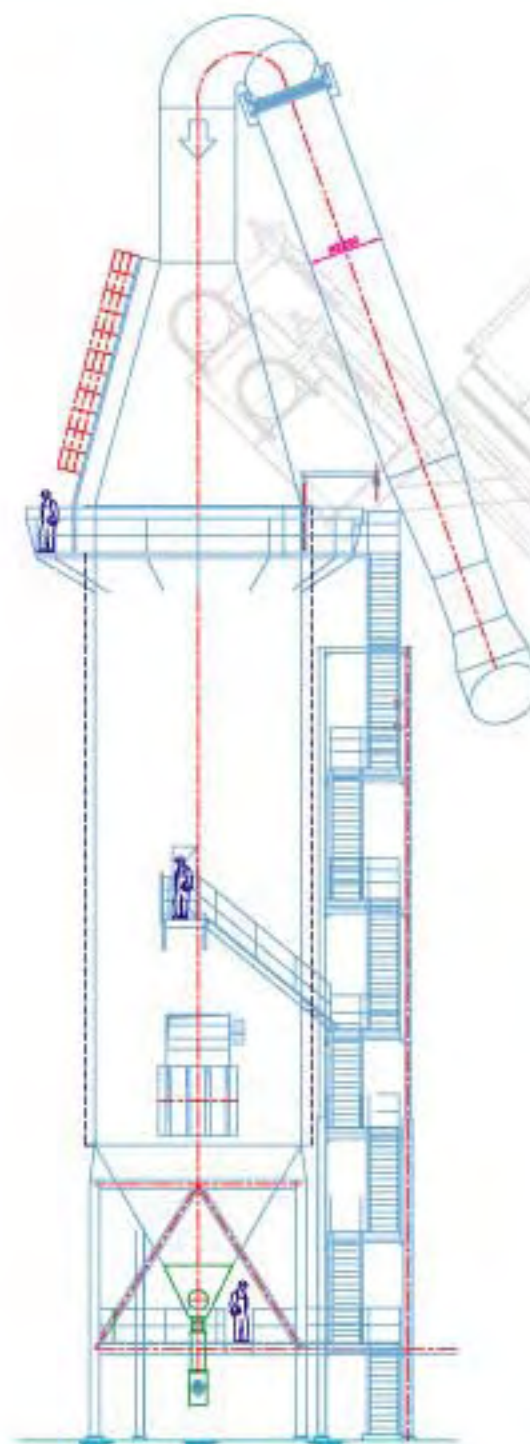
Forced air cooler (FAC) is compact and can be fitted into spaces where a U-tube cooler will not. It can be designed to maintain a constant outlet temperature, independent of the ambient air temperature. It cools the gas without adding to the volume, unlike dilution cooling and water spray cooling.

Temperature detectors are installed in the FAC outlet duct to control the axial fans in order to maintain a constant outlet temperature. Several different duct arrangements are available, including top entry, bottom entry and side entry.

Gas Conditioning Tower



A Gas Conditioning Tower install in a cement plant at Belgium.



Gas conditioning towers are found above all in the cement industry, where they are used to cool hot process gases from the preheating tower to a filter acceptable temperature.

Flue gas is cooled by injection of extremely fine droplets distributed as evenly as possible within the gas flow. Water injection is carried out by specifically designed nozzle lances, which spray water using one of the following principles: High pressure water pulverised by its own pressure, or medium pressure water pulverised by compressed air.

Gas conditioning tower outlet temperature can be controlled by just controlling the injected flow water. AAF-International may supply a complete turn-key installation, including complete mechanical and electrical installation, water injection and control system.

AAF Global Installation



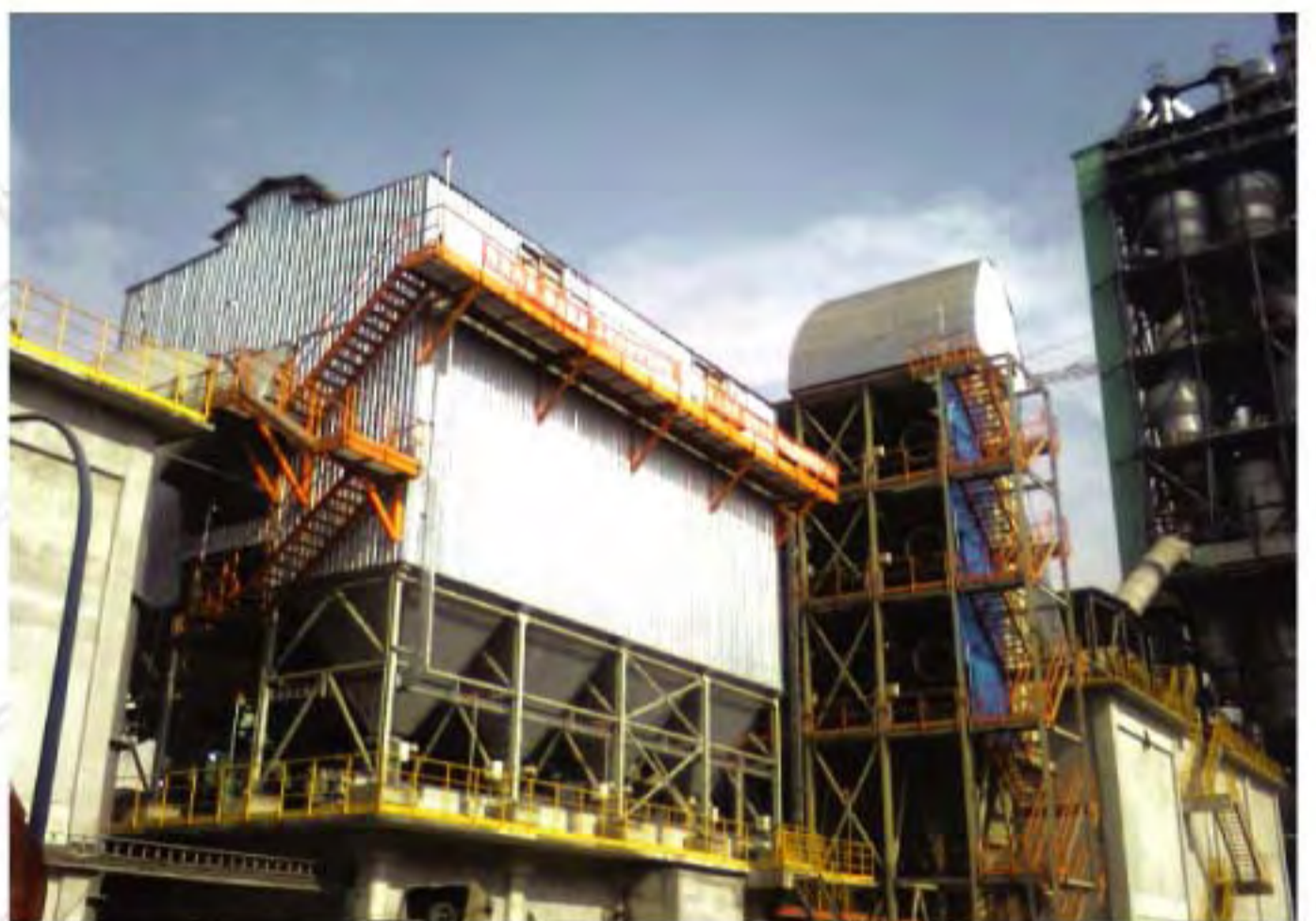
LAFARGE, Spain. Fabri-Pulse XLC Filter for Clinker Cooler.



HOLCIM, Mexico. Fabri-Pulse Filter for Coal / Pekcoke Mill.



CEMEX, Mexico. Amer-Therm Reverse Air Filter for Kiln & Raw Mill



LAFARGE, China. Fabri-Pulse XLC Filter & Forced Air Cooler for Clinker Cooler.



CIMPOR, Portugal. Fabri-Pulse XLC Filter for Kiln & Raw Mill



HOLCIM, Morocco. Fabri-Pulse XLC Filter for Cement Mill.

AAF International

Air Pollution Control Solutions

AAF Global Installation



LAFARGE, France. Fabri-Pulse XLC Filter for Kiln & Raw Mill



Fabri-Pulse XLC Filter for Kiln & Raw Mill in Tunisia.



Amer-Therm Reverse Air Filter for Kiln & Raw Mill in Argentina.



HOLCIM, United States. Fabri-Pulse for Alkali Bypass.

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