

## Particulate Collection Performance of the Advanced Particulate Control System for Recovery of Cement Dusts

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In this study the advanced particulate control system which combines Electrostatic Precipitator (ESP) and Fabric Filter was tested to evaluate the performance of the system for material recovery applications, in this case, the recovery of the cement. Due to different operating conditions the system had to be slightly modified in terms of test dust feeding and collected material discharge unit. The inner structure of the system has the layout of ESP elements with thin plate strips arranged in 45 degree towards stream flow direction inside the precipitation channel. The system was tested by varying the operating conditions, operating temperature and fabric filter bag type by keeping the inlet particle concentration constant. In general the system was able to process the heavy duty operation with moderate collection efficiency taking in account some of the problems occurred during the test and the operation of the ESP high voltage which was unstable. This is assumed to be as result of the large amount of particles accumulated inside the casing.