

Filtration Performance of the Corrugated Plates as Collecting Electrodes Installed Inside the Combined Filter System with ESP and Fabric Filter

나임 하솔리*, 박영옥, 최호경
한국에너지기술연구원 제로에미션연구센터
(nhasolli@kier.re.kr*)

Combination of the two traditional industrial systems currently in wide use, Electrostatic Precipitator (ESP) and Fabric Filter (FF), to collect the particulate matter from the discharge sources, has been studied in various arrangement layouts. The hybrid collection system, branded as Hi-Filter, was developed for efficient capture of particulate matter by engaging these two core systems in one casing. By installing the ESP parts inside the casing the efficiency of the combined particulate control system is to be enhanced while ESP elements collect the bulk of the particulate load and remaining particles are then collected by means of FF. The collecting electrode is chosen for this study to be a corrugated plate which can contribute to the reduction of particle reentrainment, provide large collection area and low pressure drop, since the precipitating channels are open ended. FF bags are of pleated type with large collection area and installed directly inside the precipitation channel. To evaluate the collection performance of the system tests have been made at various test conditions.