ESP Converted to Bag House

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Votorantim Cement operates a 750,000 Mtyp plant in St. Mary's Ontario. The plant at times has had short bag life and high maintenance cost to remain in compliance. This paper will show how through the use of a new filter media, not only have those goals being addressed, more importantly the plant has been able to improve profitability. Originally designed with an ESP to provide environmental compliance for the kiln, the logistics placed the ESP on 4 stories high on the top of the raw mill building. In the late 1990’s, the ESP was modified to a baghouse retaining the original hoppers and evacuation system. The single kiln with a preheater tower and in line raw mill faces significant challenges most plants do not have. Designed with no cyclones after the raw mill and the before the kiln baghouse, the plant deals with 10 times the normal dust load to the kiln baghouse. Over the past 20 years, the plant has had experience with filter bags from 6 or more suppliers with filters lasting as long as two years and as short as 3 months. Most recently, in October 2018, the plant installed a full set of new membrane PTFE technology and to date the plant has seen significantly reduced pulse pressure, differential pressure stability and (the story white boarded during the training class relating to clinker production and pulses per bag).