



Intervening Technology/ Technique	Re-use of ETP Sludge & Dry Finish Dust in Manufacturing Process of Electrical Insulators, Water Conservation Measures, Reuse of water from Sewage Treatment Plant, Installation of VFD for Blower Motors and Power Compressors.
About the industry	M/s. Aditya Birla Insulators is the country's largest, and the world's fourth largest manufacturer of electrical insulators. It is located at West Bengal and Halol in Gujarat. The company specialises in the production of High-strength equipment porcelains for use in SF6 circuit breakers, instrument transformers, condenser bushings, disconnections and insulators for the traction system of the Indian Railways, and high-end transmission products up to 765 kV system voltages.
Implemented Techniques / Technology	<p>Before</p> <ol style="list-style-type: none"> 1. In routine ETP operation 4-5 MT/day sludge was generated and this sludge required to be disposed. Aditya Birla Insulators initiated a project to recycle the ETP sludge in the existing process. The samples were analyzed in-house as well as third party analysis was also carried out. After complete analysis, it was found that there is huge potential for in-house use after purification and chemical correction. 2. The dewatering process in filter presses generates wastewater which was flowing to ETP. The fresh water was used for willet pumps' gland cooling, Ferro filter backing, vibrator cleaning and floor cleaning which goes to ETP. <p>After</p> <ol style="list-style-type: none"> 1. The laboratory conducted series of lab trials and plant trials. All results were encouraged and successfully transferred in to product without any abnormality. Recycling solid waste to reuse it in final product manufacturing process. As a result of this, whole ETP has become one of the best and clean areas of the industry. 2. The dewatering process in filter presses generates water which was flowing to ETP, this water was collected in the tank where sedimentation takes places hence resulting in the separation of mud from water and as a result of this, the waste water from filter press get recycled which in turn gets utilized for willet pumps' gland cooling, Ferro filter backing, vibrators cleaning and floor cleaning. The treated water from Plant is now being used for gardening in plant premises. <div style="display: flex; justify-content: space-around; margin-top: 20px;">   </div>



	<ul style="list-style-type: none"> VFD (Variable Frequency Drive) for blower motors is installed to control the air by reducing the speed of blower motor. As per requirement, changing the frequency of VFD resulted in reduction of power consumption. Also, Installation of VFD at compressor in close loop, in order to maintain the desirable pressure at the output resulted in power saving. Installation of VFD at willet pump in close loop to maintain the pressure by reducing the motor speed through pressure transducer resulted in achieving constant pressure at the output of pump with power saving. 	
Benefits	Before CP	After CP
<i>Environmental</i>	In routine ETP operation 4-5 MT sludge was generated and thereby disposed. Major water and energy losses occurred during manufacturing processes.	<ol style="list-style-type: none"> Resue of waste water: 140 KL/day Reuse of water from STP: 50 KL / day Saving after installation of VFD for blower motors :- 183600 KWH / Year Saving after installation of VFD at willet pump :- 350400 KWH/Year

