CONTRIBUTIONS

- Energy performance and economic planning is recommended by Harmonic audit by proper design of filters to avoid resonance
- Statistical Analysis for regulation behavior of electrodes is analyzed for optimum performance of electrode control
- Digital control strategy with modifications in gain control suggested for optimizing furnace performance
- A new EAF model is developed to evaluate the performance of arc furnace which is major cause of disturbance for better results, considering furnace capacitance
- Novel method of Statistical tool developed for evaluating energy savings and economic performance on the basis of modeling of sections in Steel plant
- The options of filter and SVC are compared for technical and commercial factors chosen at sites for studies.
- Remedies to avoid failure of Arc furnace transformers suggested include exposing maximum contact surface for current connections, ensure adequate clamping pressures of windings, and design provisions against abnormal conditions created in erratic furnace operation.