

Static Compensation for the Iron and Steel Company of Trinidad and Tobago

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Abstract: *The Iron and Steel Company of Trinidad and Tobago (ISCOTT) has embarked on a large project to construct and operate and integrated steel mill in Trinidad. It is anticipated that the plant will be able to transform raw ore through all the various stages to the finished product, utilising direct reduction module, a melt-shop and rolling mill facilities. In this paper, some of the problems associated with operation of a large arc furnace installation on a relatively weak supply system are discussed. The solutions adopted by ISCOTT are presented. In particular, a novel real power compensator based on constraining the energy flow to a compensating resistance is developed to minimise frequency excursions and maintain system stability.*

Keywords: *Steel mill, power compensator, energy flow, system stability, Trinidad and Tobago*