World Academy of Science, Engineering and Technology
International Journal of Electrical and Computer Engineering
Vol:8, No:09, 2014

Analyzing Current Transformer's Transient and Steady State Behavior for Different Burden's Using LabVIEW Data Acquisition Tool

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Abstract : Current transformers (CTs) are used to transform large primary currents to a small secondary current. Since most standard equipment's are not designed to handle large primary currents the CTs have an important part in any electrical system for the purpose of Metering and Protection both of which are integral in Power system. Now a days due to advancement in solid state technology, the operation times of the protective relays have come to a few cycles from few seconds. Thus, in such a scenario it becomes important to study the transient response of the current transformers as it will play a vital role in the operating of the protective devices. This paper shows the steady state and transient behavior of current transformers and how it changes with change in connected burden. The transient and steady state response will be captured using the data acquisition software LabVIEW. Analysis is done on the real time data gathered using LabVIEW. Variation of current transformer characteristics with changes in burden will be discussed.

Keywords : accuracy, accuracy limiting factor, burden, current transformer, instrument security factor
Conference Title : ICEE 2014 : International Conference on Electrical Engineering
Conference Location : Singapore, Singapore
Conference Dates : September 11-12, 2014