USING DATABASES IN MONITORISING AND DIAGNOSE OF ELECTRICAL TRANSFORMERS

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EXTENDED ABSTRACT

This paper presents an application that allows the supervision of the state and lifetime of the transformers. The mathematical model used is the sire model for the transformers exploited in similar environments. The purpose of building up this database and then of implementing the application, was to obtain the necessary data regarding the development of a model that should allow the analyze and diagnose of the transformers' state and lifetime according to the environment factors.

The database was designed to stock the information that might allow the calculation of the main extensions that can characterize the state and lifetime of a transformer: its resistance to isolation, the tangency of the loss angles, the relative thermical ageing factor, the thermical degradation, the lifetime.

The Electrica database concerning the administration of the conduct of the power transformers within SEEA, contains both data about transformers, and data regarding the measurements of the parameters that characterize the state of these transformers.

For each transformer you can trace the variation of the main parameters that characterize the ageing of the transformers: the resistance to isolations and the tangency of the loss angles. For each parameter you can chose the data of every inspection certificate and the results obtained through that inspection certificate.
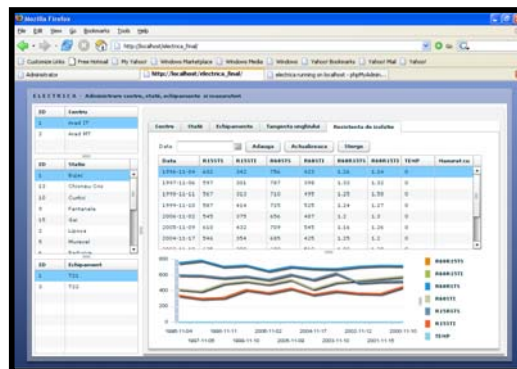
Figure 1: The interface for monitoring insulation resistance

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