

MAINTENANCE OF UNDERGROUND CABLES AT RTE

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ABSTRACT

RTE has standardised maintenance operations for its installed underground cables. These operations are tracked in a dedicated computer system (based on SAP). Their content has description sheets as the workers do not know all the specifics of the underground cables. RTE has also built an internal organisation to perform repairs on 63 to 225 kV cables.

KEYWORDS

Maintenance, data, repairs

ROUTINE MAINTENANCE OF UNDERGROUND CABLES:

INTRODUCTION

In 2010, RTE performed a re-examination of all preventative maintenance operations on underground HV cables. RTE then prepared an RCM-UC ,reliability-centred maintenance policy, with an application memo and an estimate of the associated resources.

This description has allowed standardisation of practices and translation of maintenance operations into the Information Tool (IT).

Statement of needs

RTE has entrusted the routine maintenance of underground cables to its operators.

Except for three teams in the Paris area, the operators generally do not specialise in this field. A need for initial technical knowledge and the taking over of the maintenance of underground cables has thus emerged.

The overall approach therefore focussed on technical training and a suitable description of maintenance operations.

Support (training)

A training course, created in 2010, gives the technical basics necessary for the proper implementation of the maintenance of underground cables. Two levels of training have been identified (cables with and without oil). The training is limited to a few days of technical information and awareness of the policy.

Makeup of the policy

It is essentially based on visits to the installations, the inspection of specific equipment, checks and the performance of regulatory inspections.

The visits concern the routing, the infrastructure and the environment of the cable. The objective of these visits is to look for any modifications and/or anomalies (creation of a roundabout, broken manhole covers), or interactions with the environment (third-party work, tunnel lighting...).

The checks consist of verifying the operation of various devices (pressure gauge, pump). Specific earthing systems are also examined, particularly earthing pits.

The regulatory inspections essentially relate to pressure vessels.

The cable technology and the importance of the installation to the System* operation (* network operations manager) condition the frequency of maintenance operations.

Policy management tools

The installed cable database (called Infocable) is used to prepare theoretical maintenance plans. After a more detailed analysis of the schedule, the implementation details are recorded in the maintenance and planning management system, SAM, which is based on the SAP maintenance module.

The monitoring of human resources used and the maintenance performed is carried out by this software package and its associated extractor. Monitoring indicators are produced.

This policy was implemented in 2011.

The installed cable database is updated at the end of the maintenance operations.

Maintenance sheets

Each maintenance operation has a sheet that specifies the stakes, the objective, the actors, the frequency, the safety aspects...

A few examples of the sheets are shown below.