



Gestionnaire
du Réseau de Transport d'Electricité

French underground lines maintenance policy

Context

❖ Reports

- very good reliability of underground lines on French grid
- Very few failures due to internal defaults
- Lighter maintenance necessary on synthetic cables

❖ Reasons

- Stringent qualification procedures according to French Standards
- Quality of installation

Maintenance actions and policy

The maintenance policy is based on:

- periodical interventions on sites, and supervision
- the "In Service Experience".

Periodical interventions and supervision

- **Cable route inspection**
 - To check any activity in the area and soil modifications to reduce the third-party damages and to detect the thermal impacts

- **Termination, tunnels, shared structures inspections...**
 - To be sure of the equipment condition

- **Corrosion protections checking, grounding network checking, sheath voltage limiters checking...**

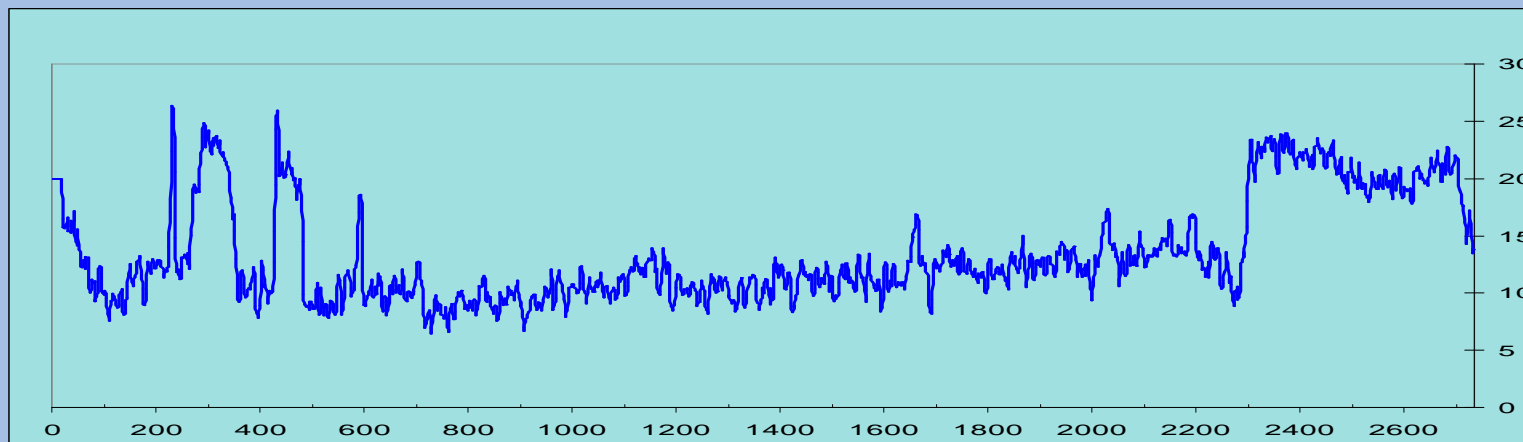
Periodical interventions and supervision

- **Performance controls (only for pressure oil cable)**
- **Infrared thermography**
- **Material checking (installations watertightness, grounding network, electric checking of the oversheath surge-arrester...)**
- **Mandatory controls (for oil cables)**

Complementary actions

- **Environmental modifications and new thermal proximities**
 - Impacts on the Underground Lines operation (modification of continuous current rating)
 - Accelerated ageing

- **Thermal environment measures using optical fibres near cable**



The "In Service Experience"

- In order to feed back experience, RTE has to developed an asset management tool.

- This tool analyses:
 - Daily malfunctions of the operated network
 - Expertises performed in its laboratories
 - Anomalies pointed out during cable inspections

- This tool leads to:
 - Identification of specific issues
 - Proposal of corrective actions
 - Improvement of our maintenance policy