

# Project: dielectric testing of cables

**Project name:** Dielectric testing of cables

**Subject:** tests under pulsed high voltage and sinusoidal voltage

**Start date:** October 1, 2017

**End date:** June 30, 2018

**Coordinator:** TOTAL

**Scientific manager at the SIAME:** Thierry REESS

**Permanent members of the SIAME involved:** Antoine SILVESTRE de FERRON

**Type of contract:** service contract

**Partner(s):** TOTAL

## Project description

The aim of this partnership is to characterize the dielectric strength of high-voltage cables used for powering pumps on the drilling sites of TOTAL.

The study will consist in comparing different materials and techniques.

The comparison is based on tests carried out under a sinusoidal voltage of 50 Hz in a specific experimental array to avoid field reinforcement at a given point of the specimen.

Tests under sinusoidal voltage are performed using a 100 kV rms transformer (see photo below) controlled by an autotransformer and secured by a short-circuit detector.