

4.13 Prysmian Prycam system

During the type test a Prysmian Pry-Cam PD monitoring system was mounted on the test loop.



It included:

- 1 pc. Pry-Cam Grids PD acquisition unit
- 2 pcs. Pry-Cam Wings PD sensors (active metal foil)
- 1 pc. passive Pry-Cam Wings PD sensor (passive metal foil)

This system was used in parallel with the FGH PD monitoring system to perform PD measurements during the heating cycle test with the following goals:

- Evaluate the possibility to perform the calibration of the Pry-Cam Grids system as per IEC 62067:2011
- Evaluate the ability of the Pry-Cam Grids system to acquire the PD pattern
- Evaluate and compare the performance of the two versions of Pry-Cam Wings PD sensors (active and passive)

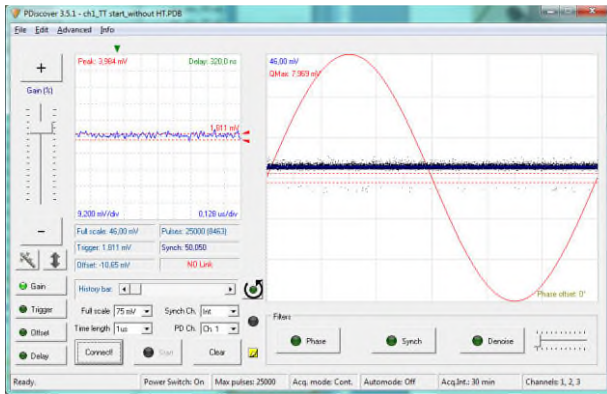
The sensors have been placed as follows:

- 1 passive Pry-Cam Wings PD sensor (Sensor 1) was placed on the cable close to the outdoor termination (joint side, passive sensor design)
- 1 Pry-Cam Wings PD sensor (Sensor 2) was placed on the cable close to the GIS
- 1 Pry-Cam Wings PD sensor (Sensor 3) was placed close to the joint

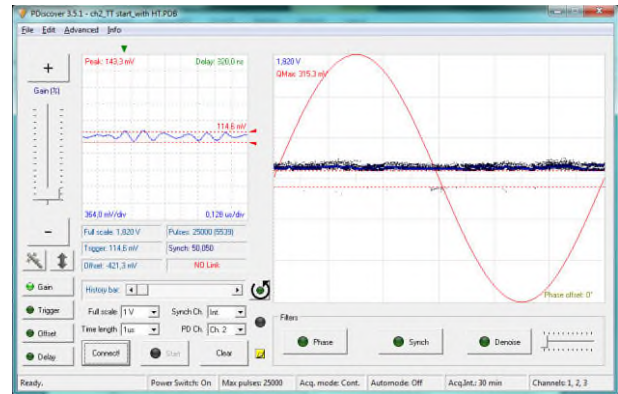
Prysmian's Pry-Cam PD monitoring systems has provided the following results:

- The calibration was done as per IEC 62067:2011 (in the same way of the FGH PD monitoring system)
- Acquisition of the complete PD pattern with waveforms and frequency spectrum of every single pulse
- 50MHz Bandwidth
- Possibility to separate different clusters for PDs by means of manual filters (up to 3) in order to facilitate the diagnosis.

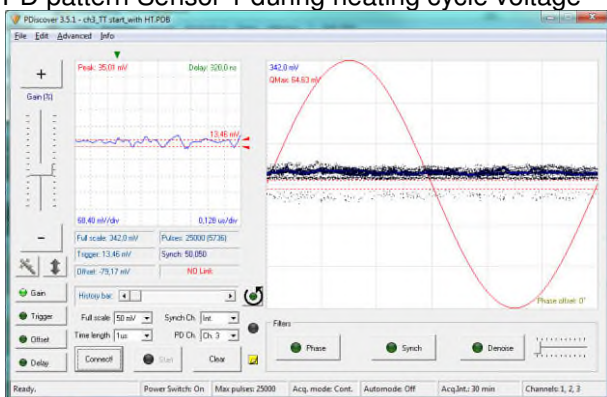
With reference to the comparison between active and passive Pry-Cam Wings PD sensors (metal foil), it has been verified that the active metal foil (standard Pry-Cam Wings sensor) compensate for some non-linearity typical for metal foil sensors, allowing a better reconstruction of each PD pulse and a more accurate PD measurement. The active metal foil version (i.e. standard Pry-Cam Wings PD sensor) is therefore recommended compared to the passive one.



PD pattern Sensor 1 during heating cycle voltage



PD pattern Sensor 2 during heating cycle voltage



PD pattern Sensor 3 during heating cycle voltage