

ELTMAN has a large ability team of engineers and technicians to execute acceptance tests in plant and field of digital protection and control systems to hydroelectrical power plants and substations until 500 kV, and they are able to answer for all system including energizing and final start-ups.

That team is used to working with the following equipments:

- Boxes of protection relay tests, such as FREJA, SVERKER, ODEN and CSU6000 of PROGRAMMA, F6150 and F2253 of DOBLE. CMC-256 of OMICRON and DRTS-6 of ISA.

- Digital measurement systems. Control, Protection and Oscillographic of GE, SIEMENS and AREVA.

- Man-Machine interfaces GE Power Link Advantage, Cimplicity Machine Edition, Cimplicity Plant Edition, WinCC, In-Touch, Realflex, Eclipse, FixDmacs.

- * PLCs of GE-Fanuc, SIEMENS and TOSHIBA.

Tests that were executed by ELTMAN are complete, as below:

TAF – (Acceptance Tests in Plants):

- Internal spinning for panels;

- Protection Parametrizations;

- Digital System Integration, including:

 - o Communication protocol;

 - o Logicals and interlockings of control units; and

 - o Data Base and HMI S screens of 1 and 2 Level.

- Stress tests of entire system

Commissioning and TAC (Acceptance Tests in Field):

- cable connections verification;

- Curves verification and protection adjustments;

- Digital system integration with plant equipments, including:

 - Communication Protocols

 - Logicals and interlockings of control units; and

 - Data Base and HMI screens of Levels 1, 2 and 3 .

- Plant energizing.

Assisted Operation.