

I. **Project (phase) name**

Laboratory for tracking and erosion tests on composite insulators

Project class / Phase name

P-CONFORM / Project result dissemination and laboratory accreditation

Phase no.: IV

Planned objectives:

- Scientific paper
- Participation in Symposium
- Accreditation certificate

Description of activity (performed within the phase, using key words and DESCRIPTORS):

Activity IV.1

Information dissemination

Settling the non-conformities

During 26-28 November 2007, Research, Development and Testing National Institute for Electrical Engineering – ICMET Craiova organized two symposia with international participation. Within the Symposium “INTERNATIONAL SYMPOSIUM ON HIGH VOLTAGE AND HIGH POWER TESTS, MEASUREMENTS AND CERTIFICATION OF ELECTRICAL POWER EQUIPMENT”, *third edition*, the paper

“TRACKING AND EROSION TEST-WHEEL TEST “

authors: Adrian VINTILA, Bebe CARAIMAN, Ion BURCIU, Mircea TEODORESCU

was presented.

The representatives of CN TRANSELECTRICA, ELECTRICA, HIDROELECTRICA, TERMoeLECTRICA, NUCLEARoeLECTRICA, SC IPROEB SA - companies directly interested in modernizing and maintaining under normal operation conditions the power equipment and in increasing the composite insulator performances- attended the paper presented at the Symposium.

Stage of planned objective achievement/completion form (of the activity within the phase):

The planned objective was achieved and finalized by showing the achievements from the project field in the paper presented at the Symposium, paper recorded on the Symposium CD and also on the Laboratory Web page, <http://www.icmet.ro/f4.pdf>

Got results (the quantifiable results/technical, economic, social indicators etc. should be indicated - economic effects recorded at the RD institution):

1. Scientific paper -1 pc.
2. Web page – 1 pc.

Stage of planned objective achievement/completion form (of the activity within the phase):

The planned objective was achieved and finalized as „Information dissemination. Settling the non-conformities”.

Activity IV.2

Accreditation of the Laboratory for tracking and erosion tests on composite insulators

The Accreditation contract no.1515/23.01.2008, valid for a period of 4 years, was issued and signed. The fees corresponding to each stage of the accreditation process contract were paid.

Got results (the quantifiable results/technical, economic, social indicators etc. should be indicated - economic effects recorded at the RD institution):

Accreditation contract of the Conformity Assessment Body, no.1515/18.02.2008

Stage of planned objective achievement/completion form (of the activity within the phase):

The accreditation process is in progress, according to the terms provided in RENAR procedures.

NOVELTY ELEMENTS

Patent

Scientific paper

Scientific communication

(novelty elements should be described, specifying the patent, paper or scientific communication title, as the case may be)

METHOD FOR CAPITALIZING ON THE RESULT APPLICATION AND ECONOMIC EFFICIENCY

(field, customer and/or specific activity, economic effects got by the economic agent which benefits from the results should be described)

The main objective of the project is getting the accreditation certificate of the laboratory for tracking and erosion tests on composite insulators and completing the list of accredited tests with a view to assuring the composite insulator assessment according to the new European Norm EN 62217.

The results will be made available by accreditation of Laboratory for tracking and erosion tests LIUE. At present, the Laboratory performs tracking and erosion verifications on the composite insulators from MAIRA MONTAJ Bucharest, in non-accredited conditions.

The economic efficiency of project result application is determined by:

- possibility of performing in Romania the tracking and erosion tests on composite insulators;
- capability of ICMET Craiova laboratories to broaden the testing range, simultaneously with setting up the laboratory for the above mentioned test;
- alignment of the laboratories in Romania to the highest research, development and testing EU level

OUTLOOKS

(possibilities of broadening the result application to many customers and/or in other fields should be emphasized)

By finalizing the laboratory for tracking and erosion tests on composite insulators, the testing infrastructure necessary in Romania for carrying out in the country all the tests required by European Norms for composite insulators is assured. Composite insulators have the advantage of a weight lower than the classical insulators, the ceramic or glass ones; this fact made them easily mountable and cost-effective in achieving the circuits from the National Power Grid. Besides, they become not easily polluted and, consequently, the number of breakdowns is much decreased. They have the drawback of a more elaborated manufacturing technology, which should be verified by design tests including also the tracking and erosion test.

Throughout the world, there is a trend for replacing the ceramic and glass insulators by composite insulators. This trend is dictated by technical and economic reasons. In Romania, the replacement process began by using imported composite insulators, and since the last years, companies such as: SC IPROEB SA Bistrita, SC EXIMPROD GRUP SA Buzau, SC RECOMPLAST SA Buzau, MAIRA MONTAJ Bucharest have been active on the market. These companies need to be technically supported by the assurance of the testing infrastructure.

Requests for tracking and erosion tests were already received from SC IPROEB SA Bistrita and MAIRA MONTAJ Bucharest

At present, tracking and erosion tests are performed on insulators from MAIRA MONTAJ Bucharest.

I. Records

(documents to be annexed for supporting RD:, execution documentation, measurement/test/analysis reports, business plans, diagnoses, assessments, prognoses etc. should be specified)

The following documents are annexed:

- Technical and scientific report "LABORATORY FOR TRACKING AND EROSION TESTS ON COMPOSITE INSULATORS" Stage 04
- Scientific paper "TRACKING AND EROSION TEST-WHEEL TEST"