Stress-strain tests for medium and high voltage cables

Goal of the project:
The determination of stress-strain characteristics for type TA2X (FL)2Y-OL aluminum and steel electrical conductors, designed for high-voltage aerial transportation lines.

Short description of the project:
The project consists of experimental determinations of stress-strain characteristics of aluminum and steel components of the conductors. The conductors are subjected to uniaxial traction. The test specimen's length is 11 m.

Project implemented by:
„Politehnica" University of Timişoara and S.C. PRYSMIAN Cabluri şi Sisteme S.A. Slatina.

Implementation period:
July 2012– July 2013

Main activities:
First, the test specimens must be prepared. They must be cut to size and installed. The UTS and the elongation to break are then determined and validated. The tests were performed both on the aluminum conductors and the steel support wire.
The results were combined and used for the global evaluation of the whole composite cable (consisting of 3 aluminum conductors and 1 steel support wire).

Results:
The tests produced excellent results for both the aluminum and the steel cables, which certificate the good quality of the cable and conformity with the normatives.

Fields of interest:
Electrical conductor manufacturing and testing, high-voltage transportation lines.

Financed through/by:
S.C. PRYSMIAN Cabluri şi Sisteme S.A. Slatina

Research team:
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Research centre:
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Applicability and transferability of the results:
The tests were performed in order to certify a new product of S.C. PRYSMIAN Cables and Systems S.A. Slatina.

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