

Master thesis supervisor's review

Title: **Technical and economic studies of application of cables with insulation from cross-linked polyethylene in the case of reconstruction of schemes and networks of power supply objects**

Name of student: Bc. **Irina Nikolaeva**

The main task of the diploma thesis was to design reconstruction internal supply power grid in engineering company (Sibelektromotor in Tomsk).

Firstly author described difference between oil-filled and XPLE cables. She continued technical design of transformers and cables in two variants:

- 1) replacing oil cables with new ones
- 2) replacement of oil cables with XPLE cables

The second variant was characterized by simpler scheme thanks to the higher reliability of XPLE cables.

Author paid great effort to the technical aspects of the firm power grid design and cost estimates for economic efficiency assessment of variants. The original power supply scheme was rather complex, so the author simplified the scheme. However, many elements remained to be designed and tested, for example, for short-circuit resistance (transformers, switches, busbar etc.). She made only minor mistakes in the solution.

The formal aspects of the thesis is good. The work is clear without spelling mistakes and includes many tables and charts with valuable data. The author has studied a large number of literature and other sources.

Irina was hardworking and initiative, the progress of her work was very often consulted with me.

The final assessment of the diploma work is

– C good –

21. 5. 2018

Ing. Miroslav Vitek, CSc.