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Dear Readers,

For the purpose of one project, I have recently analysed publicly available data about transformer failures and their impact on the society. This was more of a qualitative analysis since the data was analysed for a specific season, so it is not representative of the whole year. Also, the input data was not available in the same format, and was sometimes incomplete and inconsistent. For example, while comprehensive information about transformer outages, including even the minor outages of distribution transformers, is readily available in the US and a few other countries, in most other countries only the information about major failures with bigger damages and fatal consequences is made publicly available.

During the observed period, there were thousands of transformer outages due to faults, failures and fires, which left millions of people without power, affecting their quality of life - not only in terms of comfort, but financially as well. When services become unavailable, this causes damage to both service providers and service receivers. The goods stored in conditioned spaces may get stale and their quality may be compromised; the energy spot prices in some regions may rise by an order of magnitude, and many other consequences may ensue.

The analysis showed that the major causes of failure, among others, include: overheating, lightning strike, physical destruction (careless or intentional actions), and short circuit (caused by birds, rodents, monkeys, etc.).

So, even looking at this incomplete and inconsistent data, it was clear what a tremendous impact transformers, and hence our industry, have on the quality of life in the modern society, and this includes most people on the planet. When everything is going well, we tend not to notice this.

The question arising is how can we, on the basis of such and similar failures, identify the opportunities to improve transformers, their materials and components? What can we learn from the failures that we see in our daily jobs? What can we do better in order to minimize the risk of transformer failure, i.e. to maximize

the stability and safety of the power supply, and thus improve the quality of life and the values to our customers?

It is probably not possible to give a definite answer to these questions, particularly not in a short piece of writing such as this, because there are many small steps required to achieve such great level of functionality. Talking to and cooperating with many companies I see that some of them are already on this way - they have recognized the latest technology opportunities and already developed solutions for improved functionality, designed to keep up with the most recent specifications and requirements. These companies, which actually lead the market, communicate their experience through all types of writings that we publish in this magazine, whether they are interviews, advertorials or technical articles, using these formats to publish the materials that provide useful information to the community from different angles and with different focus.

I would like to invite and encourage those of you who are yet to use this opportunity to present in our magazine your views or solutions for better, i.e. smaller, lighter, smarter, cheaper, safer and more efficient transformers and their materials and components, with less influence on the environment. We would be glad to support you in this work. Our editorial staff, including the team of diligent editors, will be at your avail to support you through the process, as they have been supporting other authors, from issue to issue, in preparing valuable pieces of work.

This issue of Transformers Magazine brings an overview of the most important recent news, and features three interviews, two columns, and several technical articles and advertorials. All pieces provide a lot of technical and business-related content, which I hope you will enjoy.

Have a pleasant reading!

Mladen Banovic, Editor-in-Chief


