

TRANSFORMERS MAGAZINE

ISSN 1849-3319 (Print) ISSN 1849-7268 (Digital)

EDITORIAL BOARD

Editor-in-Chief:

Mladen Banovic, PhD, Merit Services Int., Croatia
mladen.banovic@transformers-magazine.com

EXECUTIVE EDITORS

Michel Duval, PhD, Hydro Quebec, Canada
Jean Sanchez, PhD, EDF, France
Michael Krüger, PhD, OMICRON electronics, Austria
Jin Sim, Jin Sim & Associates, Inc., USA
Juliano Montanha, SIEMENS, Brazil
Craig Adams, TRAFIX, Australia
Arne Petersen, Consulting engineer, Australia
Zhao Yongzhi, Shandong Electrical Engineering & Equipment Group Co., Ltd, China
Barry M. Mirzaei, LargePowerTransformers Inc., Canada
Bhabha P. Das, PhD, Hitachi Energy, Singapore

EDITORS

Daosheng Liu, Jiangxi University of Science and Technology, China
Mislav Trbusic, University of Maribor, Slovenia
Dr. Mohammad Yazdani-Asrami, University of Strathclyde, United Kingdom
Dr. Shuhong Wang, Xi'an Jiaotong University, China

ASSISTANT EDITOR

Pedro Henrique Aquino Barra, MSc,
EESC/USP – University of São Paulo, Brazil

Art Director: Momir Blazek
Photo: Shutterstock.com
Front page image: Hitachi Energy
Language Editor: Lidija Kasik

ADVERTISING AND SUBSCRIPTION

Ante Prlic
+44 20 373 474 69
ante.prlic@merit-media.com

TRANSFORMERS MAGAZINE

Transformers Magazine is published quarterly by Merit Media Int. d.o.o., Setaliste 150, brigade 10, 10 090 Zagreb, Croatia. Published articles do not represent official position of Merit Media Int. d.o.o. Merit Media Int. d.o.o. is not responsible for the content. The responsibility for articles rests upon the authors, and the responsibility for ads rests upon advertisers. Manuscripts, photos and other submitted documents are not returned.

Subscription rates:

Print edition: \$115 (1 year, 4 issues)
Digital edition: \$60 (1 year, 4 issues)
Online edition - full access: \$20 (1 year, 4 issues)
Online edition - free access: free of charge for registered users

www.transformers-magazine.com

REPRINT

Libraries are permitted to photocopy for the private use of patrons. Abstracting is permitted with credit to the source. A per-copy fee must be paid to the Publisher, contact Subscription. For other copying or republication permissions, contact Subscription. All rights reserved.

Publisher: Merit Media Int. d.o.o.
Setaliste 150, brigade 10,
10 090 Zagreb, Croatia
Contact: +385 1 7899 507
Contact: +44 20 373 474 69 UK
VAT number: HR09122628912
www.transformers-magazine.com
Bank name: Zagrebacka banka
Bank identifier code: ZABAHR2X
Bank IBAN: HR8023600001102375121
Director: Mladen Banovic, PhD



Dear Readers,

First of all, I wish you a happy, healthy, and successful 2022 on behalf of our entire editorial team.

Based on the feedback we have received from our readers and partners, 2021 was a good year. We were also very busy with many projects, the outcomes of which I hope proved useful to you, whether it was something from the magazine editions, the book, or Transformers Academy courses and study programs, TM's Industry Navigator report or conference.

The transformer market outlook for 2022 is very promising, provided that major problems in the supply chain are resolved. Our plans for 2022 can be summarized into a sentence: continued improvement and growth of all editions, media and products. We have already announced the magazine's editorial calendar for 2022, focusing on the most current topics. Study programs and courses available in Transformers Academy offer learning and training for virtually any job in our industry. TM's Industry Navigator report and conference provide critical information to managers for making important decisions. Our books hold treasures from the lifetime experience of the world's leading experts, but they also provide an opportunity to gain an extraordinary visibility in the industry.

We are starting this year with the edition focused on sustainability. In this regard, I recommend reading the interview with **Giuseppe Petrelli**, the Global Head of Marketing and Sales for Transformers business at **Hitachi Energy**, article 'Sustainable digital distribution transformers' by **Dr. Bhabha Das**,

'Circularity of medium-power transformers' by **Bruno De Wachter** and **Tomas Jezdinsky**, as well as article 'EconIQ™: Transformers with a purpose.'

One of the drivers behind spin-offs of the industry giants Siemens Energy and Hitachi Energy, which have recently taken place, was to achieve a leaner organisation and release the potential for growth in a more entrepreneurial manner. We have been reporting on these spin-offs, and now we are bringing a story about building a company from the ground up, organically and through acquisitions. You can read this story in the interview with **Thibaut George**, the CEO of the **Axcess Group**. They have bought Israeli **Von Roll Transformers (VRT)**, and they are looking for other acquisition opportunities as well.

This edition abounds with other valuable content on topics such as: an increasing demand for new transformers, evolution of the transformer core production, field testing methods by **Vitaly Gurin**, gas extraction by **Marius Grisaru**, books on power transformers by **P. Ramachandran** and **Vitaly Gurin**, detection of internal electric arc by **Asghar Akbari** et al., surface-mounted radiators by **Viktor Ivankov** et al., and an article on the importance of sustainability, authored by **Anto Banovic** and me.

I hope that in this abundance of topics you will find plenty of useful information and enjoy your reading.

Dr. Mladen Banovic, Editor-in-Chief