



VISION

BECOMES

REALITY

PIONEERS IN
ELECTRIC POWER

VISION[®] ELECTRIC
Super Conductors

OUR COMPANY

We are pioneers in the development and implementation of superconductor technology for industrial applications. Our mission is the zero loss and safe transportation of high currents through the innovative use of superconducting high-current systems. The tremendous energy efficiency of these systems reduce power transmission losses.

Regarding high currents we implement turnkey systems, provide system components or carry out the whole engineering for your project.

In this way we contribute to an intact and worth living environment for our children.

CURIOUS

We know our technology, we understand your application, and we are able to deliver the best solution for your project in a creative way.

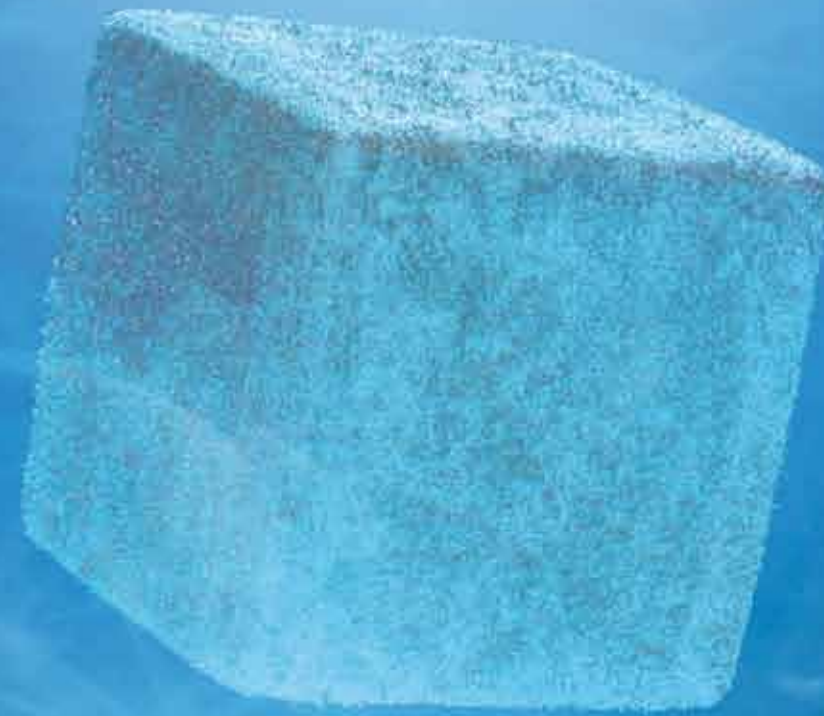
BRAVE

Pioneering requires courage. We transfer cutting-edge technology to innovative applications, we take up challenges and overcome obstacles.

SUSTAINABLE

Our work contributes to the environment and for generations to come. This includes our pragmatic and responsible handling of resources and our down-to-earth approach to thinking.

'Superconductivity brings the **electrification of the world** to a higher and significantly more efficient level. Superconductors contribute to a sustainable environment and to a **better future for further generations** by eliminating energy waste in the distribution of electricity.'



THE HISTORY OF SUPERCONDUCTORS

Superconductors transport electrical energy without any electrical resistance and thus without losses. In addition, superconductors are able to transport much more energy than conventional copper or aluminium conductors of the same cross-section.

The discovery of superconductors dates back over 100 years. The effect of superconductivity was first discovered in 1911 by Heike Kamerlingh-Onnes during experiments with liquid helium. 1913 he was awarded the Nobel Prize in Physics.

In 1986 Johannes Georg Bednorz and Karl Alexander Müller discovered the high-temperature superconductors during their research at IBM Zürich Research Laboratory. These materials become superconducting at higher temperatures. For their work they were awarded the Nobel Prize in Physics in 1987.

Vision Electric Super Conductors continues this development by converting this great technology into innovative industrial solutions.

Be a part of this history - let us talk about your applications.

WE OFFER SUPERCONDUCTING, TURNKEY SOLUTIONS FOR THE TRANSPORT OF HIGH ELECTRIC CURRENTS

With ICE[®]BAR - the superconducting conductor busbar and ICE[®]Link - a high efficient current lead, we realize turnkey systems that can carry high currents on low and medium voltage level loss-free. The systems can be used for the efficient transmission of direct or alternating currents between 10 kA and more than 200 kA.

ICE Link connect the superconducting systems with the normal conducting equipment. We deliver the whole system including the cryogenic system and the complete measurement and control technology for monitoring and operating the solution.

An optimal solution needs a good understanding of the problem

We use decades of experience in the design of high-current busbars to build best-of-breed superconducting systems. Talk to us about the challenges of your project and we will find the best solution.



OUR OFFER

'Vision Electric Super Conductors has realized a new modular busbar system based on an ingenious concept.'

Dr. J. Georg Bednorz, Nobelpreisträger in Physik

APPLICATIONS

We know the requirements for industrial applications. On this basis we provide you with comprehensive knowledge in the planning and implementation of your projects.



INDUSTRY

With ICE[®]BAR we offer a turn-key solution to transmit high currents loss-free and over any distance. This solution is particularly suitable for companies with high power consumption. ICE[®]BAR comprises the superconductors, the cryogenics, normal conductive copper and aluminium connections as well as the complete measuring and control technology: The whole turnkey solution from a single source.

ICE[®]BAR provides a loss-free transmission of high currents and has significantly lower space requirements. The system is designed with IP 68 protection, protected against water and dust and therefore meets the highest safety requirements. In addition, only small material quantities are needed compared to conventional systems. The logistical effort and the associated costs are reduced.

DATA CENTERS AND TELECOMMUNICATION

ICE[®]BAR and ICE[®]Link enables you to think big in the design of data centers. You will be able to develop new, more efficient concepts. The turnkey system does not produce any waste heat, does not cause any fire load and needs no electromagnetic protection of the IT hardware.

Our technology enables you to transmit high currents loss-free with better use of space, and increase the efficiency of your data center dramatically.

RAILWAYS

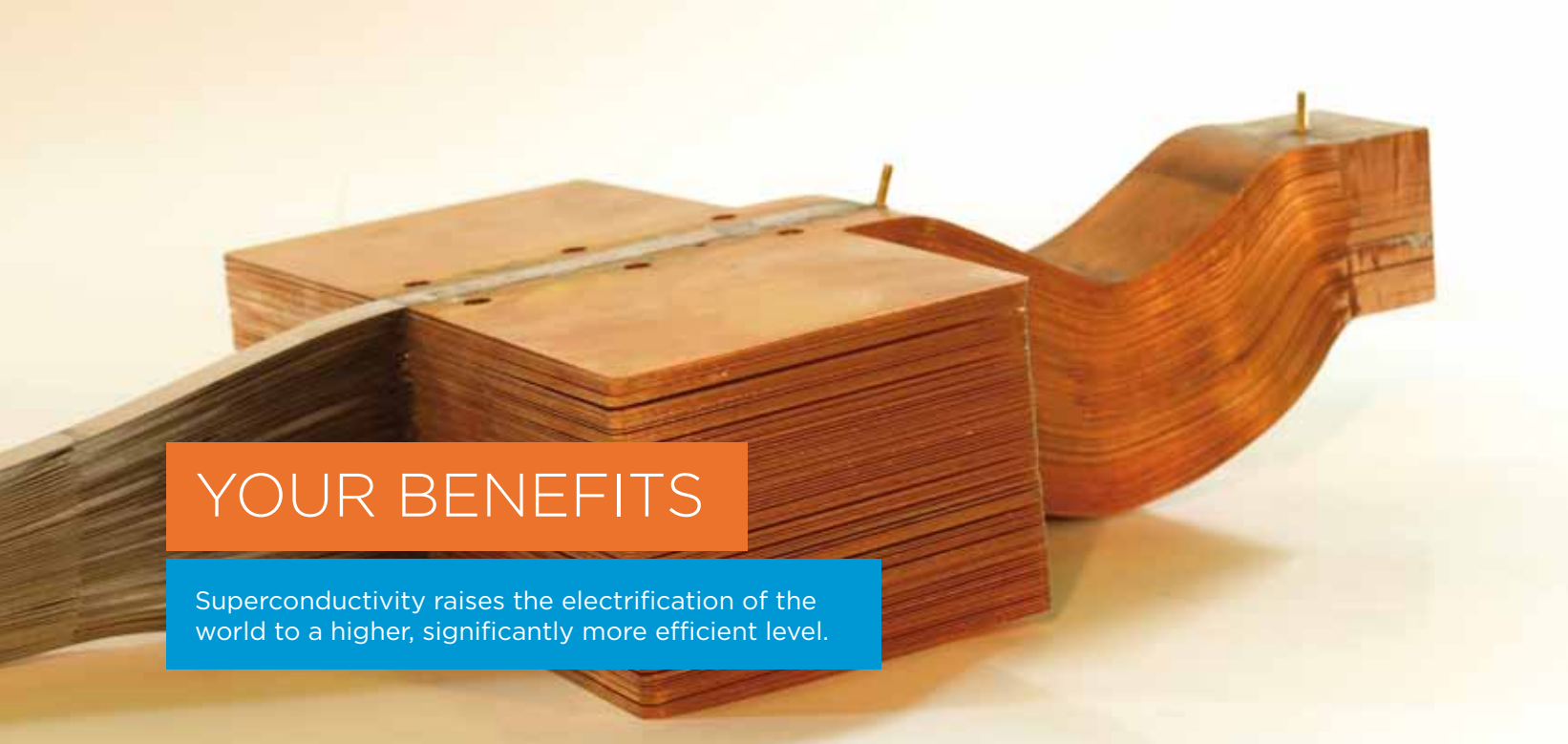
The electrification of railway lines requires today substations to supply the overhead lines. In Germany, the substations are supplied via 110 kV overhead lines. A superconducting high current system parallel to the railway line can substitute the overhead line. As a result, less floor space and less planning effort is required for new routes and extensions.

In subways, superconducting connections enable the energy exchange of the trains during braking and acceleration. Energy will no longer be wasted during these processes, but is used to accelerate a parallel train.

POWER GRIDS

Modernization of electricity distribution grids is a challenging task for the operating companies. In addition to the expansion of high- and medium-voltage grids especially in agglomerations the capacity of the distribution grids has to be continuously increased. Superconducting cables are the right solution for this challenge.

In addition, the superconductor technology integrates all power generation and storage facilities into a highly efficient energy grid, which is operated with direct current at low voltage level. Cost-intensive power converters in each plant are thus dispensable.



YOUR BENEFITS

Superconductivity raises the electrification of the world to a higher, significantly more efficient level.

ECONOMY OF SPACE

ICE®BAR is the most compact solution and allows sharp bendings. As a result, you use the available space more effectively and gain a cost advantage.

ENVIRONMENTAL PROTECTION

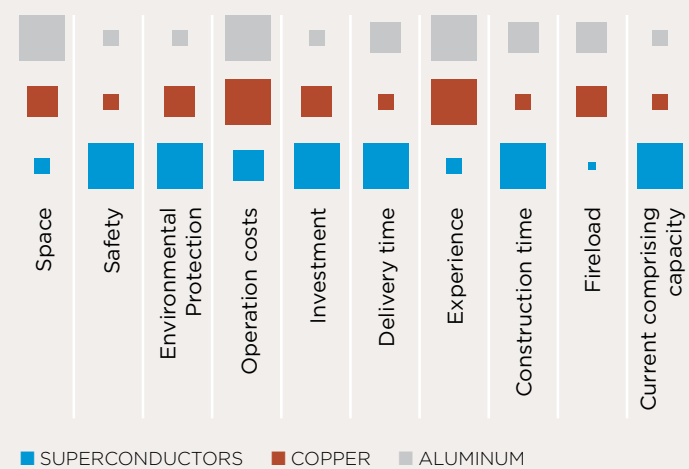
The power transmission is loss-free. The total available power can be used for the production process. In addition, ICE®BAR needs less than 10% of the material weight compared to conventional systems.

SAFETY

ICE®BAR saves space and is maintenance-free. Special personal protection is not necessary. This way an easier access to the facilities, e.g. for maintenance purposes is possible. Due to the IP68 protection standard, the system is weatherproof.

- Modular**
Adaptable and scalable in every environment
- Efficient**
Loss-free energy transmission without heat waste
- Space-saving**
Up to 20 times less space required
- Environmental protection**
Up to 20 times less material needed
- Save**
IP68 protection, zero fireload and highest personal safety

SUPRALEITER VS. KUPFER UND ALUMINIUM



PIONEERS IN ELECTRIC POWER

At www.vesc-superbar.de you can find further information.

Or just give us a call: Telephone +49 631 627983-0
We look forward to you.



Morlauterer Strasse 21
67657 Kaiserslautern · Germany
Telephon: +49 631 627983-0
Fax: +49 631 627983-19
E-Mail: info@vesc-superbar.de

www.vesc-superbar.de

