

Metallurgical applications Bus bar systems and tankhouse accessories



Turn-key solutions to illuminate the most complex projects

Luvata is a world leader in metal fabrication, engineering and design. With operations on three continents, you will find our components and our expertise in some of the world's most successful technologies, including photovoltaic energy, MRI scanners, and even the Large Hadron Collider. In fact, anything that contains copper is likely to have felt Luvata's influence.

We have been working in Metallurgical Applications for nearly four decades. We use our expertise and know-how to provide tailor-made solutions for foundries, smelters, furnace mills and for the electrolysis industry. Every customer is different and we pride ourselves on our innovative approach and versatility in coming up with the right solution, time after time.

We work closely with our customers to determine the right approach. From end-to-end solutions where we design, manufacture, deliver and install everything; to simply supplying an off-the-shelf product; we are happy to help. Nobody understands copper like Luvata, and when you buy into our expertise you can rest assured that our first class project management, after sales service and attention to detail come as standard.

⁴⁴ When we say that we provide metallurgical applications, we are not just talking about products. We manage the entire process for our customers, from the initial design to the manufacturing and installation of the application. In short, we supply a complete, turn-key solution, which means that our customers have one point of contact and one, very safe, pair of hands for the whole project. We believe that no-one knows metallurgical solutions like Luvata and, however big or small the project, our delivery will be seamless.¹¹

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Jussi Helavirta President & CEO Luvata

Bus bar systems and tankhouse accessories

Luvata has worked closely with electrolysis facilities worldwide in order to develop a comprehensive range of products which are optimised for equipping new installations and modernizing old ones.

The resultant product range includes:

- Main bus bars
- Intermediate bus bars
- Cell bus bars
- Droppers
- Flexible joints
- Hanger bars
- Short-circuit frames

A total solution

We can supply these products off-theshelf, ready for immediate installation. Alternatively we can provide an end-toend service where we manage the whole project, from the design, manufacture and production of the entire bus bar system, to the actual installation. This custom-made approach is increasingly popular as we have found that working together, we can find solutions to even the most difficult problems and achieve the desired outcome both economically and technically.



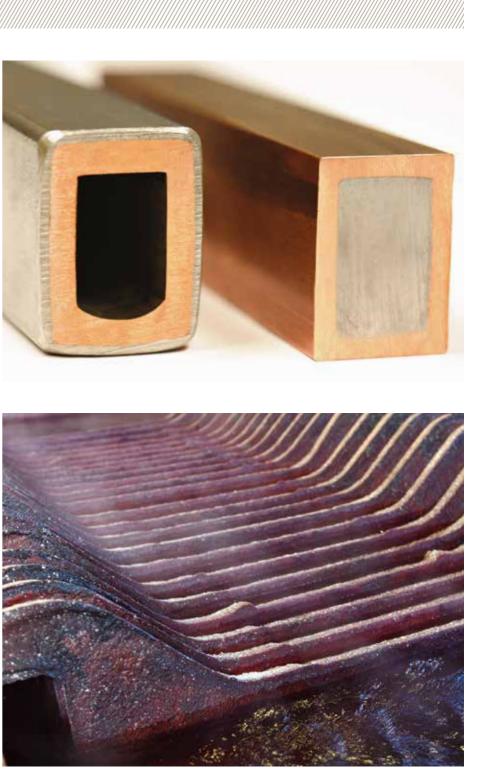


Only the best materials

We use Luvata's proprietary oxygen-free copper OF-OK® as it is immune to hydrogen embrittlement and avoids any problems with welding. It is also known for its high malleability and electrical conductivity and it is an excellent material for installations demanding control of high voltages and currents.

Sometimes an alternative to an all-copper solution is required. We produce hanger bars in different shapes and dimensions, and our steel-cored hanger bars offer a combination of high strength and high conductivity with corrosion resistance. Other variations we offer include watercooled intermediate bus bars which enable transfer of high currents efficiently; and lead coatings which provide corrosion resistance in demanding tank house environments.







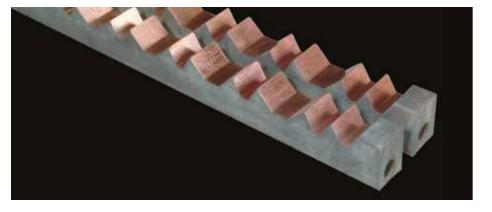
Metallurgical applications at work

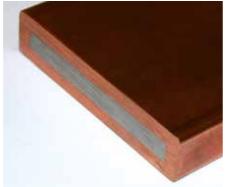












About Luvata

What does Luvata see for the future?

We will use our unique technology know-how to influence the development of a sustainable modern world. We have always aimed to improve our customers' products and processes, and to help them increase the efficiency of their businesses. But our vision is bigger than that. If human society is going to maintain the lifestyle that we all enjoy today AND offer it to emerging societies, we will all need to become much more efficient and to take much less from the planet. We are helping companies to make their products, processes and production more sustainable: do more, waste less, and pollute less.

What's Luvata's plan for getting there?

Luvata looks to build on its distinct strengths, bringing expertise and dedication to high growth regions and adjacent markets around the world. We are stepping into niche and specialist markets with our



Americas

Luvata Ohio, Inc.

Formed Products

Delaware, OH USA

Phone: +1 740 363 1981

Luvata Appleton LLC Special Products Appleton Kimberly, WI USA Phone: +1 920 749 3820 or +800 749 5510

Luvata Waterbury, Inc. Superconductors Waterbury, CT USA Phone: +1 203 753 5215

Accurate Wire, Inc. Superconductors Branford, CT USA Phone: +1 203 488 5956

Luvata São Paulo Formed Products São Paulo, Brazil Phone: +55 11 4624 7661 Luvata Pori Oy Special Products Pori Pori, Finland Phone: +358 2 626 6111 Luvata Welwyn Garden Ltd.

Europe

Formed Products Welwyn Garden City, UK Phone: +44 1707 379 789



high-value, engineered solutions, and we are developing new solutions in partnership with our customers to conquer challenges at the front end of market demand.

How does Luvata behave?

In doing all this, we resolve to be the partner of choice for our customers, the employer of choice for our staff, and to be a positive and responsible friend to everyone else. We strive to be open-minded and focused on getting results; and when we promise, we deliver.

Where in the world are we?

Our global footprint stretches across the Americas, Europe and Asia. Our diversity of locations, cultures and markets gives us access to a wealth of knowledge and expertise that simply keeps growing. It means that we are local to our customers, wherever in the world they are and can be responsive to their needs, including fast local delivery straight to the door.

Luvata Wolverhampton Ltd. Special Products Pori Wolverhampton, UK Phone: +44 1902 324 747

ZAO Luvata St. Petersburg

Sales office St. Petersburg, Russia Phone +7 812 449 27 97

Asia

Luvata Malaysia Sdn Bhd Electrical Power Asia Pasir Gudang, Malaysia Phone: +607 252 6688

Luvata Superconductors Ltd. Superconductors Zhongshan City, China Phone: +86 760 2321 0793

MM Metal Products Suzhou Formed Products Suzhou, China

Phone: +86 512 6285 1018

About Luvata

Luvata is a world leader in metal solutions manufacturing and related engineering services to industries such as renewable energy, automotive, healthcare, and power generation and distribution. The company's continued success is attributed to its longevity, technological excellence and strategy of building partnerships beyond metals. Employing over 1,400 staff in 7 countries, Luvata works in partnership with customers such as ABB, CERN, Siemens and Toyota. Luvata is a group company of Mitsubishi Materials Corporation.



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