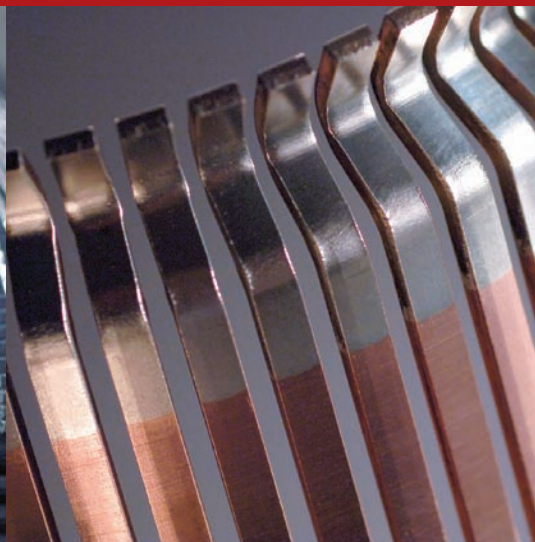
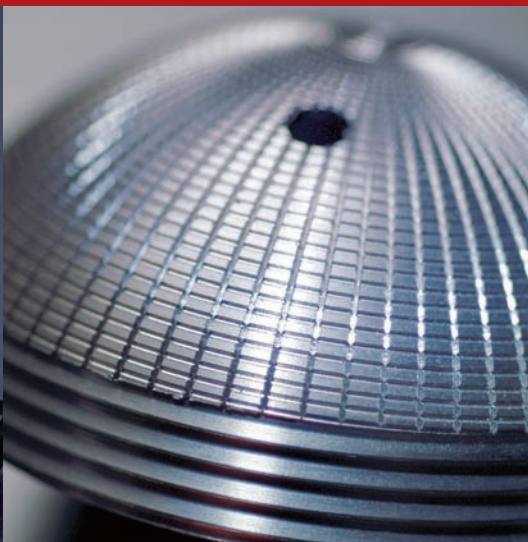
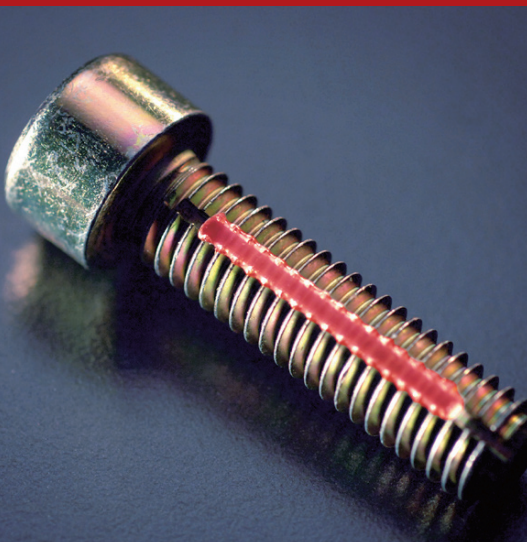


A stylized world map in shades of blue and white, showing the continents and major oceans, serving as a background for the top section of the page.

Your link to the global component market



ESMA

Specialists in component solutions

"Our motivation is to provide an offer that surpasses the competition.

We therefore start with a process to find a better solution and the result is often an unconventional application of manufacturing techniques and materials."

Esma has gained the confidence of the Swedish industry to deliver component and logistic solutions. The company started operations in 1951 and as a result of solid technical expertise that has grown over the years and a wide production network – in Europe and Asia – we have become the corporate link to the component market.

We work closely with our client companies and take full responsibility for the component

solutions we propose – from concept and production to logistics and delivery. With a focus on product quality and reliable delivery.

Our employees are responsive to customer needs and handle each order with great personal commitment. Availability and service are our leadwords. We see each inquiry as a challenge and we ask ourselves every time: "What is the optimal solution?"

Esma delivery programme

- Machining, turning, milling, grinding
- Hardening and surface treatment
- Fasteners, screws, nuts and washers
- Technical system solutions and logistics
- Gears: Cylindrical and Gleason
- Punched, fine punched, bent and drawn parts
- Castings: Chill mould castings, low pressure casting, die casting, precision castings. Rotational castings: Both as blanks and finished products as per drawing
- Sinter components and MIM
- Injection moulded plastic and PU components
- Forgings, both hot or cold forged
- Components and modules for the automotive industry and railway traffic
- Connectors, electrical, fibre optic, hybrid and flex-connectors
- Contact material, wholly or partly of precious metal
- Acoustic products for voice communication
- Partially and fully assembled mechanical, electromechanical and electrical devices
- Spark and laser processing
- Springs
- Waste incinerators

Multi-specialists

No one can be the best at everything. But many people working together can be. Our staff have specialist expertise in many different areas. This adds up to a total knowledge of the component market that makes us unique. It allows us to offer solutions for all types of manufacturing techniques and provide a deep knowledge of materials and finishing. Together with our wide production network this gives us an overview of component markets worldwide.

Esma delivers everything from fine mechanical micro components to high strength fasteners in dimensions up to M180. We cover a wide range and focus on quality, prompt delivery and price. Send us a request next time you need help.

A Multi-operation machined adjustment screw in brass for optical sight.

B High-strength bolted connections for the power industry.





Mass produced self-tapping screw for machine assembly.



Piston pump for medical application.



Rotor with machined turbine blades for air-powered hand tools.



Fully assembled gear unit.

Problem solvers

Esma is more than a component supplier. The strength of our employees is that they are also problem solvers.

Our goal is to always find the most cost-effective solution possible for our customers. Experience and comprehensive knowledge of the component market means we can often propose different and unconventional solutions, with the emphasis on quality and delivery reliability.

Esma's independent status and wide network of contacts allows us to offer solutions that best meet your needs.

A Chain tensioner for chainsaw composed of five different parts manufactured in Denmark, Japan and Sweden and assembled in Estonia. This includes cold shaped and post-processed tooth profile components.

Cold shaped tooth profiles require high skills, as demonstrated by Esma producers in Japan. Today Esma delivers fully assembled units to the end customer.



A



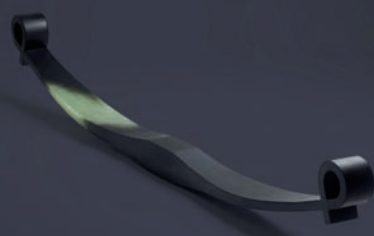
Cast blank, post-processed in a suitable processing machine, is transformed directly from a bar into a higher quality component at a lower total cost.



Previously machined version has been replaced with a drop forged component for strength and lower cost.



Complex component shapes can be produced directly from a sinter tool thanks to the ingenious design changes.



A leaf spring in composites instead of metal is easier to make and provides increased security against spring breakage.

Innovator

The industry's rapid technological development puts high demands on Esma as a supplier. Our customers expect us to stay ahead and offer the latest in production and manufacturing. An inherent feature of our employees is the fact that, by necessity and out of interest, they continually seek new knowledge and new technology. Frequent visits to customers and producers, participation in fairs and in-house experience provides constant new impulses.

New thinking means that sometimes we transfer knowledge from one industry to another and in other contexts that we use proven technology in new applications.

Network builders

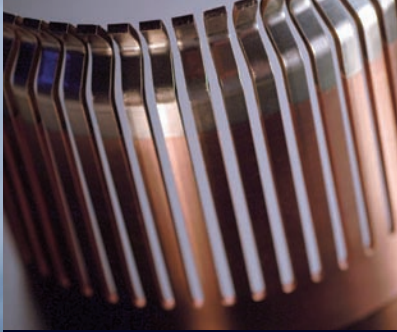
We have built Esma on close and trusting relationships with customers and manufacturers. In the beginning most of our producers were located in Germany and Switzerland. Today we collaborate with production companies worldwide and more recently with low-cost manufacturers in Eastern Europe and Asia.

Continuous visits to the manufacturing companies have given us valuable knowledge about the different existing business cultures. For Esma this contributes to the knowledge and understanding about people's differences and traditions, which has been the basis for trustworthy business relationships with our producers in different countries.



A

A Esma supplies a large number of important components for snow making systems. Both individual components and assembled system solutions. Examples are hot dip galvanised welded structures and aluminium moulded handles made in the Baltic region and drain valves in brass processed in Italy. The components are stocked for short lead times and flexible deliveries and are packaged for shipment to the customer.



Connectors for high voltage. Silver anode on copper base.



Multi-assembly of fine punched components to full functionality.



Resilient valve unit housing and oil pan screw for the automotive industry.



Die-cast aluminium bracket for the automotive industry.

Business partner

For us a good business partner is a safe and stable company with financial resources, capable of carrying out large transactions for our customers. In most cases our wide production network allows us to offer more cost-effective solutions than you can accomplish yourself through your own channels. Often we are involved in the project at an early stage and can therefore offer both technical and cost advantages.

As your business partner, we take care of your interests. We represent you throughout the whole deal and negotiate with producers, whilst keeping your best interests in mind. This means that we are sometimes called the 'buyer's extended arm'.



CNC component for accessory application.



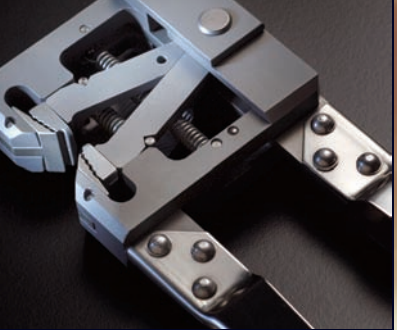
Fully assembled control valve in hot forged and machined brass.



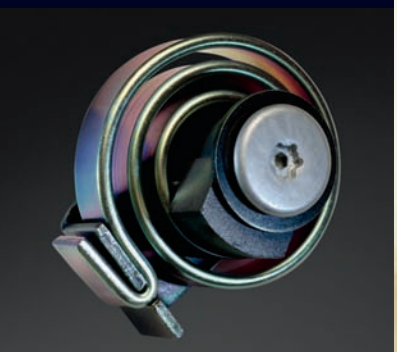
Precision moulded plate in quality stainless steel for fuel rods for the nuclear power industry.



Fully assembled precision drilling for the tooling industry.



Special clamp for checking paper quality in the food industry.



Spring assembly for car with the most detailed manufacturing techniques and materials.



Assembled control mechanism in quality stainless steel.



Esma delivers tool kits in a variety of versions for heavy vehicles.



Coordinator

In this role we act as a coordinator for your projects, we take responsibility for the entire implementation. It is our daily task to handle complex logistics solutions involving a variety of components that are produced by several manufacturers in different countries and continents.

We also handle warehousing and co-packing and if desired we can offer customer tailored deliveries in customer specified packaging.



Castings



Sintering



Precision forging



Fasteners



Injection moulding



Soundproofing



Supplier to the Swedish automotive industry

Esma has many years experience in supplying components and systems for the automotive industry, for both cars, trucks, buses and rail traffic. These are customers with high demands for function, quality and innovation. The system solutions we deliver may comprise several different production technologies, components and manufacturing processes. Esma also stock components on behalf of clients with deliveries in both short and long runs.

Examples of components and systems for cars, trucks and buses

- ABS sensor wheel
- Air bag components
- Cylinder heads
- Parts for seat adjustment
- Door arch panels
- Door system for public transport
- EGR valves, air, oil and water pumps
- Electrical connectors
- Front axle pivot
- Fresh air vents
- Front module, door module, stamped sheet metal parts
- Window system, driver and passenger windows
- Fibre glass leaf springs
- Wheel bolts
- Wheel nuts
- High-strength fasteners
- High-strength engine screws
- Camshaft arms
- Piston rings for retarder
- Components for braking system
- Components for valve control
- Connectors
- Sound insulating components
- Air vents
- Lightweight components composite
- Precision forged components for power train
- Fibre glass leaf springs
- Roll formed, stretch bent profiles in steel and aluminium
- Sintered components for the power train
- Forged synchronisation components
- Turned components
- Synchronizer hub for gearbox
- Water pump, oil pump, WR valves
- Valve spring washer

Endless possibilities

Esma can provide component solutions for most application areas and in a variety of materials and techniques. Complete systems or selected components in a product.



■ **FASTENERS** in steel, brass and stainless steel. High strength and heat resistant materials. Thread forming threads: Spiral shape and taptite. Thread cutting threads: ST thread, KT thread, MT thread, PW thread and PI thread. Screw/bolt with Torx, Torx Plus, crosshead, internal/external hexagon and more.



■ **WIRE BENDING AND SPRING** tensile, compressive and coil springs.



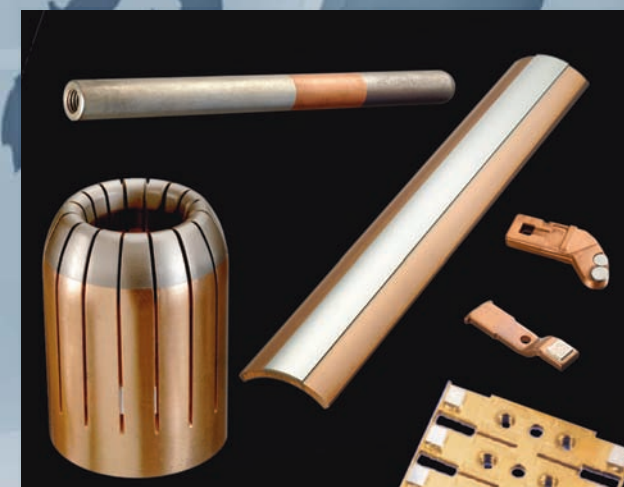
■ **POLYIMIDE** composite components destined for demanding applications where there is wear and friction in combination with high temperatures.



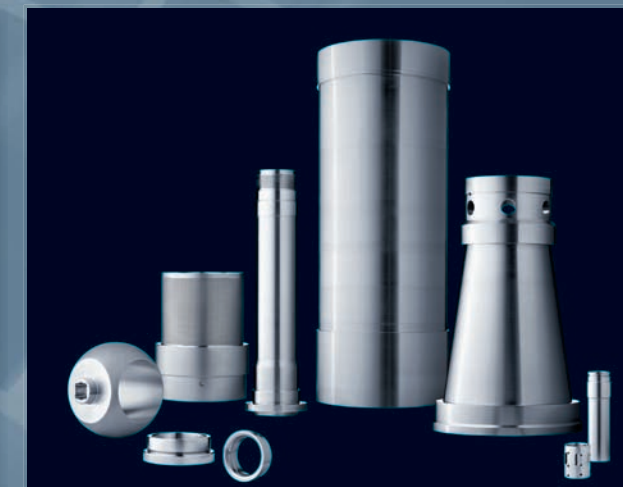
■ **ACOUSTIC PRODUCTS FOR SPEECH TRANSMISSION** Rescue/security services, police, defence, aviation, rail traffic, bus traffic, communications industry, marine technologies.



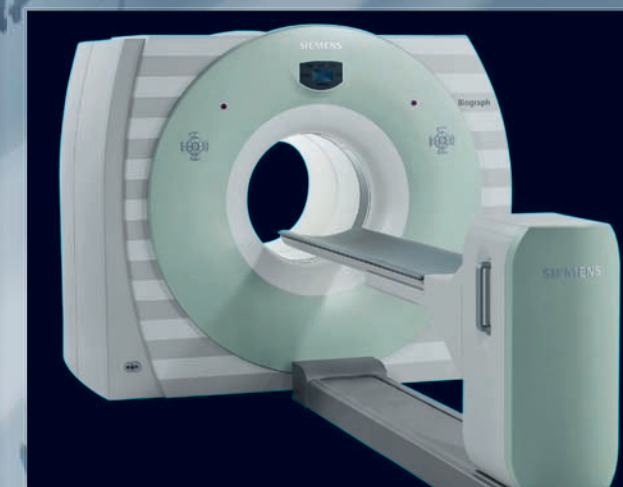
■ **SPECIAL TOOLS** High-quality hand tools in customised and unique designs.



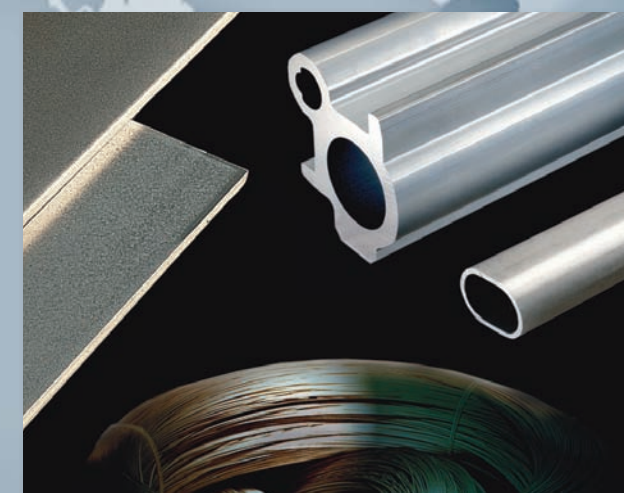
■ **CONTACT MATERIALS** CuWo/CuAg components for high and low voltage. Bi-metal contact (inlays), Ag-based contact material.



■ **CENTRIFUGAL CASTINGS** Rotational casting in high-alloy stainless steel as blanks in the form of tubes, rolls and rings or finished as per drawing.



■ **POLYURETHANE** Components in PUR for demanding applications in areas such as medical technology, here MRI scanner.



■ **SEMI-MANUFACTURE** Galvanic coating with precious metals (Au, Ag, Pd), on tape, wire and sheet metal. Profiles in Cu/Ni alloys. Extruded profiles in special aluminium alloy.



■ **WASTE INCINERATION PLANTS** Gratings and boilers - new construction or modernisation.



■ **CUTTING PROCESSES** in various metallic materials, including plastics. Turning, milling.



■ **FORGING** in different materials and sizes, both as a blank and finished product. Hot forming, cold forming



■ **CASTING** chill casting, pressure casting, precision casting, rotational casting.
Components in different casting techniques, both as a blank and finished product as per customer drawings .



■ **PUNCHING AND BENDING** normal punching, fine punching.
With fine punching you can get clean cutting surfaces and even displace materials for different functions.

The big picture

Esma represents you during the delivery programme and promotes your interests in dealings with producers and freight companies.

Regardless of whether it is a case of complete systems or selected components in a product or sometimes even from several producers in different countries. We then take responsibility for the logistics up to delivery to your warehouse if you desire. We are your partner in the complete business process.



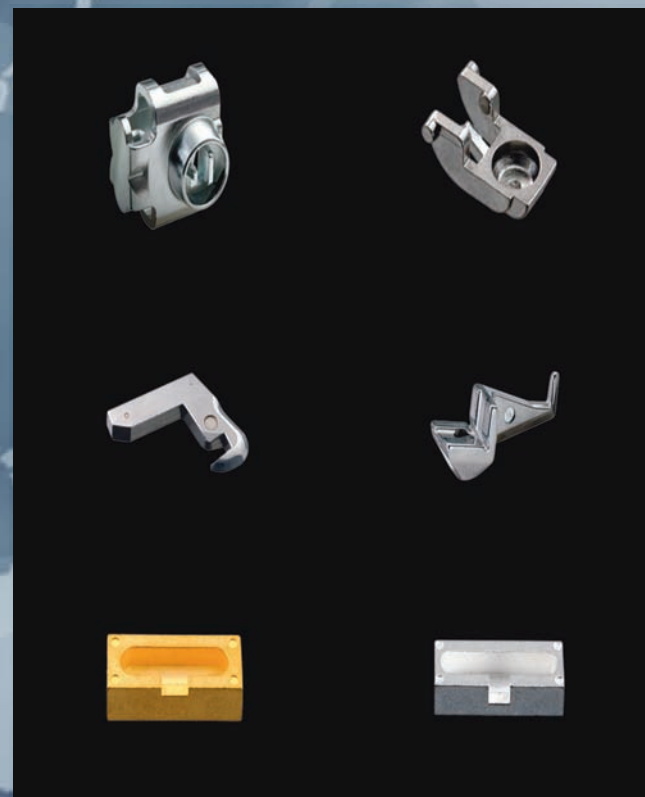
■ **PRESSING** cold flow pressing.



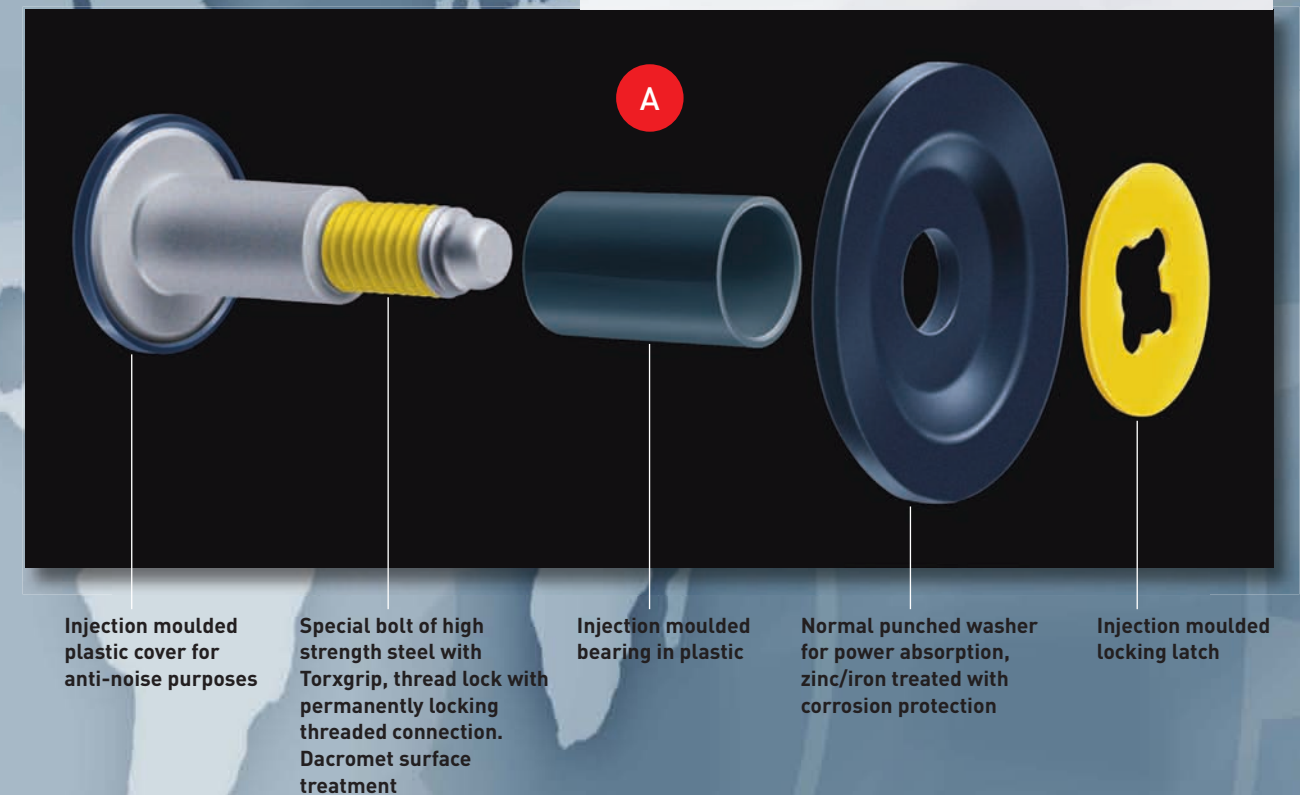
■ **CASTING AND INJECTION MOULDING**



■ **SINTERING** complex components in powder metal, such as bearings and toothed components in most metallic materials.



■ **MIM** Metal Injection Moulding. The components can weigh anything from a few grams to several kilograms.



A A typical example of system solutions for the automotive industry is the hinge joint, the support bolt for the rear right seat of a car. It consists of an assembly of five different components from seven producers in three countries and

is delivered ready for installation by the customer. Assembly and quality control is carried out by a QS-approved producer who delivers the product directly to the customer. Esma is responsible for all the logistics.

Esma's business idea is to combine solid technical skills with a high level of service in order to deliver cost-effective component and logistics solutions to the Swedish manufacturing industry. The company was founded in 1951 by Henryk Eiger and Erich Stör and has a strong market presence. Esma is a privately owned and managed company with about 40 employees.

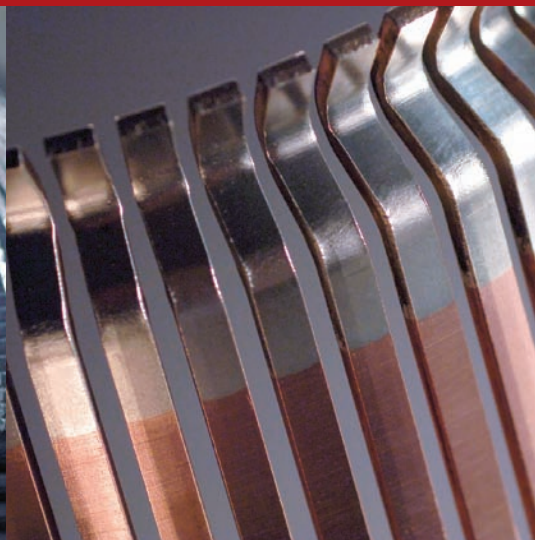
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