WOLFTEN

special metals experts

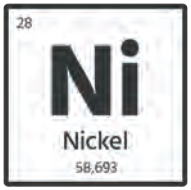
We are among the largest
titanium stockholders
in Central Europe.

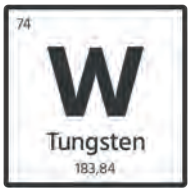
LEADING EUROPEAN EXPERTS IN SPECIAL ALLOYS SINCE 2008

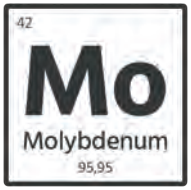
WOLFTEN is a Poland based distributor of non-ferrous mill materials: titanium, nickel, aluminum, molybdenum, tantalum and their alloys, including tungsten sintered products.

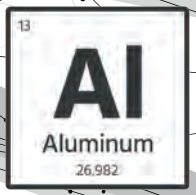
Our offer includes bars, wires, pipes and tubes, foils, flat bars, fasteners such as screws, nuts, washers and fittings: reducers, tees, flanges and pipe collars.

We also offer water jet cutting, guillotine and bend saw machining services.
We provide ready-made details, based on provided technical documentation.
We utilize the just-in-time inventory management strategy with short lead times.










WOLFTEN

MANY YEARS
OF EXPERIENCE

OVER 10 000
OFFERED
PRODUCTS

EVER-GROWING
CIRCLE OF SATISFIED
CUSTOMERS

QUALITY
MANAGEMENT
SYSTEM

AEOF - AUTHORISED
ECONOMIC
OPERATOR STATUS

ABOUT US

WOLFTEN is made of and by experts with many years of experience. We are a Polish company operating on the European market since 2008. Our daily work is about the quality of both – services and materials. We are committed to provide an excellent customer experience and thank to our process standardization you can't beat our large inventory and personalized service.

We have introduced the Quality Management System in accordance with **AS EN 9120B** and I**SO 9001:2015**. All processes undergo regular internal scrutiny and quality control procedures to meet clients' requirements.

All supplied materials conform to international standards, including the aviation, medical or military norms. We have been certified as an **Authorized Economic Operator** allowing for simplified customs procedures and security processes (AEOF).









OUR OFFER

We sell non-ferrous mill products made out of titanium, nickel, molybdenum, tantalum, aluminum and their alloys, including tungsten and molybdenum sintered products. We offer bars, pipes, sheets, wires, strips, foils, fasteners such as screws, bolts, nuts and washers, armature including bends, reducers, collars and flanges as well as powders and sputtering targets for vacuum metalization.

We are one of the leading titanium stock holders in Europe with continually expanding inventory. For our regular customers, we keep constant stock levels, which allows prompt and efficient delivery of products.

We make the difference, not only by offering great deals, but also with short delivery times, confirmed material quality and overall exemplary execution of orders. Our customer portfolio consists over 2000 satisfied clients from all over the globe.

We stand out with flexible solutions and ability to combine the offer and the processes bound by project constraints. We dot each i and cross every t when processing your order.


We maintain
the highest quality
every step of the process.

AVAILABILITY GUARANTEED

Constantly growing stock levels allow prompt delivery, usually within 48 hours.

TECHNICAL CONSULTING

Our experts will gladly share their knowledge on all technicalities and material applications.

GLOBAL REACH

We ship the products across the globe, using efficient and reliable logistics solutions.

WE PROVIDE COMPREHENSIVE SERVICES

- cutting services
- conformity to manufacturing standards
- guarantee of product traceability
- logistics tailored to customer needs
- just-in-time deliveries
- EN 10204 3.1 and 3.2 certificates

WE SUPPLY VARIOUS INDUSTRIES


CHEMICAL INDUSTRY


POWER GENERATION INDUSTRY


MEDICAL INDUSTRY


AVIATION INDUSTRY


METALLURGICAL INDUSTRY


JEWELRY INDUSTRY

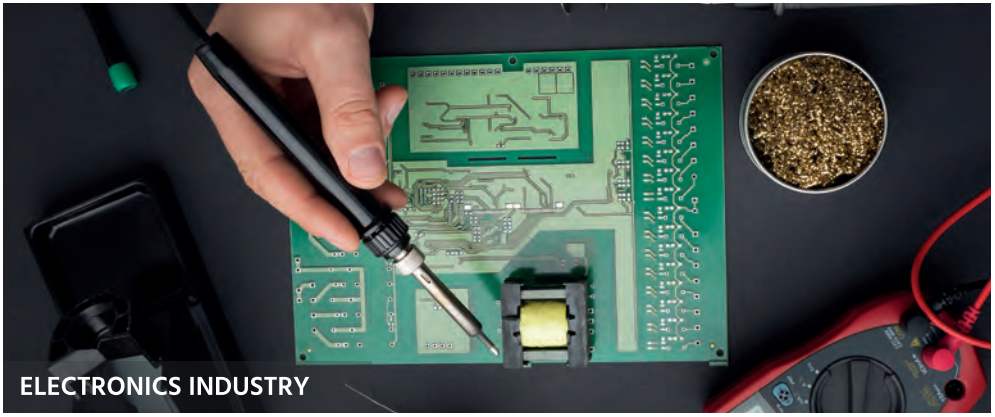

SHIPBUILDING INDUSTRY

AUTOMOTIVE INDUSTRY


PETROCHEMICAL INDUSTRY


MILITARY INDUSTRY


SPORT INDUSTRY

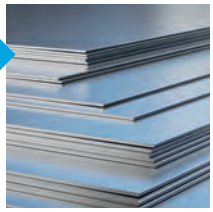

ELECTRONICS INDUSTRY

TITANIUM PRODUCTS

We deliver pure titanium and titanium alloys. We offer bars, sheets and plates, pipes and tubes, armature and fasteners, as well as powders and welding materials. We supply various cast elements based on technical documentation provided by the client. Our products are manufactured according to the international standards (e.g. ASTM, AMS, MIL, ASME) and are certified for various applications, including those for the aviation, military and medical purposes.

TITANIUM RODS

TITANIUM SHEETS



TITANIUM PIPES

TITANIUM BENDS

TITANIUM TEES

TITANIUM REDUCERS

TITANIUM END CAPS

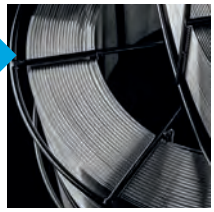
TITANIUM FASTNERS

TITANIUM BOLTS

TITANIUM CASTINGS

TITANIUM POWDERS

WELDING MATERIALS



TITANIUM GRADES AND ALLOYS

GRADE 1	GRADE 2	GRADE 3 i 4	GRADE 5	GRADE 5 ELI/23
GRADE 6	GRADE 7	GRADE 9	GRADE 12	ALLOY Ti-6Al-Nb

Titanium shows great durability and hardness while maintaining plasticity at the same time. Titanium's low density makes it a relatively lightweight metal. Due to its **biocompatibility**, it has become a popular material with wide applications in biomedical engineering. **Corrosion resistance** and endurance in elevated temperatures make titanium a material of choice in the aviation, shipbuilding or chemical industries.

The range of applications is very wide, and along with technological advancements, it constantly grows and expands. Individual grades differ by chemical composition or mechanical properties, and as a result – methods of application. Grades 1 to 4 are considered a commercially pure titanium (~99%), while others are alloyed with metals such as aluminum, vanadium, palladium, tin or molybdenum.

AVIATION INDUSTRY

Aircraft fuselage, fasteners (bolts, screws, pins), wing structural elements, engine parts (fan blades, compressors).

CHEMICAL INDUSTRY

Piping systems, tanks and reactors.

MILITARY INDUSTRY

Elements of armor and heavy loaded structural components.

SHIPBUILDING

Ship hulls, watercraft bodies and other elements.

BIOMEDICAL ENGINEERING

Dental implants, orthopedic prostheses.

NICKEL PRODUCTS

WOLFTEN offers products of nickel and its alloys. We supply bars and rods, pipes and tubes, plates, sheets and tapes as well as armature (bends, tees, reducers, end caps and flanges), welding material, spherical powders and fasteners. We go far beyond catalog products. We gladly respond to extraordinary, unusual demands, supplying the elements described in the technical documentation provided by the client. All offered products are manufactured and classified according to the international technical standards. Compliance with relevant norms is confirmed by material certificates 3.1 according to EN10204.

NICKEL RODS

NICKEL SHEETS

NICKEL PIPES

NICKEL BENDS

NICKEL TEES

NICKEL REDUCERS

NICKEL END CAPS

NICKEL FASTNERS

NICKEL COLLARS

NICKEL FLANGES

WELDING MATERIALS

SPHERICAL POWDERS

NICKEL ALLOYS

ALLOY C-22	ALLOY 200/201	ALLOY C-276	ALLOY 330	ALLOY 400
ALLOY 600	ALLOY 601	ALLOY 625	ALLOY 718	ALLOY 800/h/ht

Nickel acts as a base of many alloys. Alloying elements influence microstructure of the materials, adjusting their parameters such as hardness, attrition resistance in high temperatures, susceptibility to chemical or electrochemical corrosion. These attributes allow them to be used in various applications, such as heat exchangers, chemical containers, elements of kilns or jet engines. It is important to remember, that machining nickel superalloys may turn quite challenging.

Nickel may act as an alloying element used to produce heat-resisting, stainless or corrosion-resistant steel.

PETROCHEMICAL INDUSTRY

Heating elements, LNG purification plants, drilling equipment.

CHEMICAL INDUSTRY

Nickel-cadmium batteries, pipeline systems, heat exchangers, condensers and tanks.

AVIATION INDUSTRY

Engine housings, rotors, combustion chambers, blades.

JEWELRY INDUSTRY

Jewelry products.

SHIPBUILDING INDUSTRY

Fuel tanks, pressure tanks for yachts and ships (nickel-based steel), extreme temperature kilns.

TUNGSTEN PRODUCTS

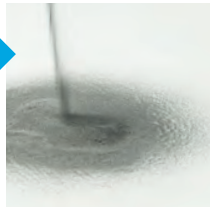
We provide a wide spectrum of tungsten-based products, tungsten-copper and tungsten heavy alloys, i.e. sintered alloys of tungsten with nickel, iron or nickel and copper. Our offer includes bars, wires, bushings, fasteners or crucibles and melting pots. We can also provide tailor-made elements as described by the technical documentation provided by the client.

TUNGSTEN RODS

TUNGSTEN SHEETS

TUNGSTEN WIRES

TUNGSTEN POWDERS



FASTENERS

CUSTOM-MADE PRODUCTS

HEAVY ALLOYS BARS

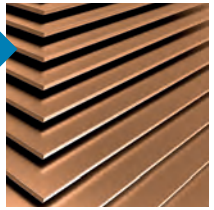
HEAVY ALLOYS SHEETS

TUNGSTEN CRUCIBLES

TUNGSTEN SLEEVES

TUNGSTEN COPPER RODS

TUNGSTEN COPPER SHEETS



TUNGSTEN SINTERED PRODUCTS

Except of pure tungsten with purity up to 99,95%, we also offer tungsten sintered products with common alloying elements such as nickel, iron or copper. Different compositions of the alloy impact the melting point temperature, thermal expansion, electrical conductivity, crack or corrosion resistance and other properties of the given material. Our offer includes sinters such as W90%Ni6%Cu4%, W95%Ni3.5%Fe1,5%, W60-90%Cu10-40%.

Tungsten exhibits a high immunity to corrosion caused by acids (including concentrated nitric acid) and aqua regia. Advantageously, it also maintains durability and strength in high temperatures, fire-resistance and wear-and-tear insusceptibility.

Tungsten is a metal with high hardness, yet is relatively fragile and brittle. This element is the second, right after carbon, least fusible chemical element, with melting point at 3422°C and lowest expansion coefficient out of all known metals out there. It shows a good thermal and electrical conductivity and tensile creep resistance. These, along with high Young modulus make it a widely used material across a number industries.

ELECTRICAL INDUSTRY

Filaments of incandescent lamps, welding electrodes, electrical circuits, connectors.

ELECTRONICS INDUSTRY

Liquid-crystal displays, electronic circuits.

AVIATION INDUSTRY

Aircraft balance equipment, engine elements (shafts, pistons, rotor blades), rocket engine nozzles.

GENERAL INDUSTRY

Machining tools, heavy equipment, high speed cutters, high-temperature vacuum kilns.

MEDICAL INDUSTRY

X-ray tube covers.

MOLYBDENUM PRODUCTS

WOLFTEN's offer includes products made of molybdenum and its alloys, including those with titanium, zirconium, copper and tungsten. There are bars, bushings, flat bars, plates and sheets, fasteners, crucibles and powders. Also, we provide ready-made products according to the technical documentation provided by the client. To improve physicochemical properties of molybdenum, it is often sintered with other elements - TZM being an example, shows higher thermal resistance, higher recrystallisation temperature, improved creep resistance, better mechanical properties and high immunity to chemical corrosion.

MOLYBDENUM RODS

MOLYBDENUM SHEETS

MOLYBDENUM WIRES

MOLYBDENUM POWDERS

FASTENERS

CUSTOM-MADE PRODUCTS

HEAT RESISTANCE

IMMUNITY TO CORROSION

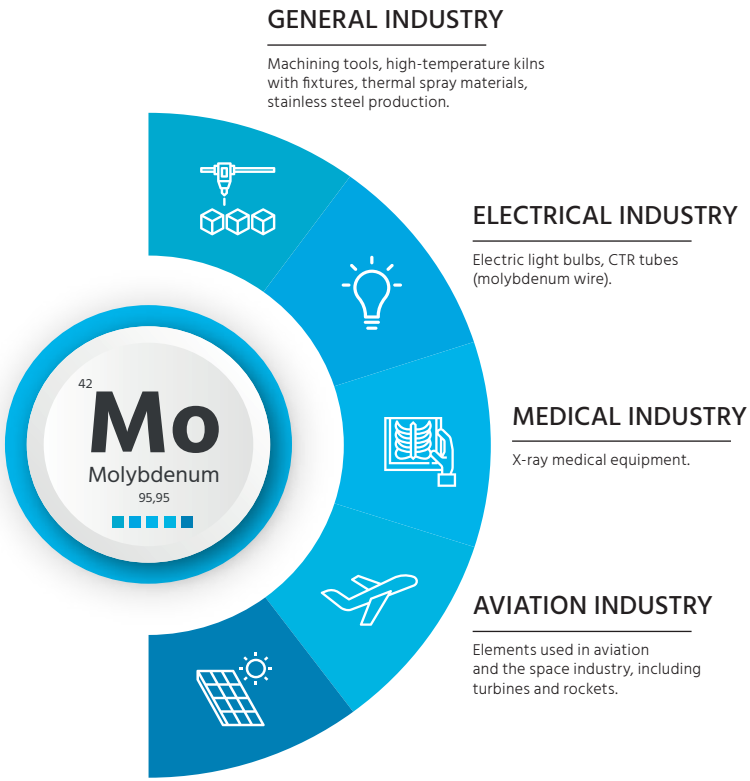
THERMAL CONDUCTIVITY

MOLYBDENUM AND MO SINTERED PRODUCTS

Mo min. 99,95%	TZM SINTERS	Mo50-85%-Cu15-50%
Mo-30%W	Mo-Re (20%/41%/44,5%/47,5%)	MHC (Mo1,2%Hf0,1%C)

Molybdenum with purity of at least 99,95% is broadly used across the spectrum of industrial applications. It is a material which is durable and resistant in elevated temperatures (1100 – 1650°C) as it has one of the highest melting point temperatures. Additionally, high electrical and thermal conductivity along with low thermal expansion makes it a popular material for electrical and electronic devices. Yet another key application of molybdenum is that of photovoltaic use, as this material is used to produce thin film CIGS solar panels.

To increase thermal and mechanical immunity it is sintered with other elements, the most popular being TZM of Mo0,4-0,55%Ti0,06-0,12% Zr0,01-0,04%C.

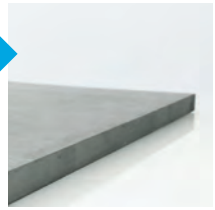


ALUMINUM PRODUCTS

We offer bars and rods, tubes and pipes, profiles, flat bars, plates and sheets made from various aluminum alloys, including: 2024, 2099, 2124, 2219, 2618, 4032, 4988, 5083, 6060, 6005, 6061, 6063, 6082, 6101, 7010, 7020, 7050, 7075, 7175 and 7475. Various project requirements impose a demand and application of the appropriate type of alloy. The addition of silicon, copper, manganese or iron gives a material with increased mechanical properties. Aluminum and aluminum alloys products in our offer are manufactured in compliance with the ASTM, ABS, QQA, AMS, ASNA, LN and EN standards.

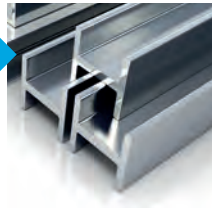
ALUMINUM RODS

ALUMINUM SHEETS

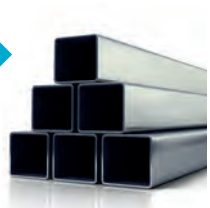


ALUMINUM PIPES

ALUMINUM PROFILES



ALUMINUM PROFILES

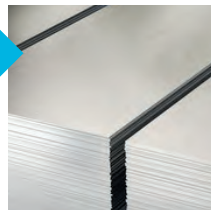


ALUMINUM PROFILES

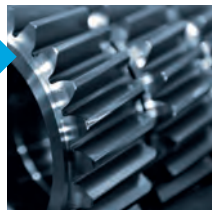
ALUMINUM ANGLES

ALUMINUM FLAT BARS

ALUMINUM FORMS



ALUMINUM CASTINGS



ALUMINUM TAPES

CUSTOM-MADE PRODUCTS

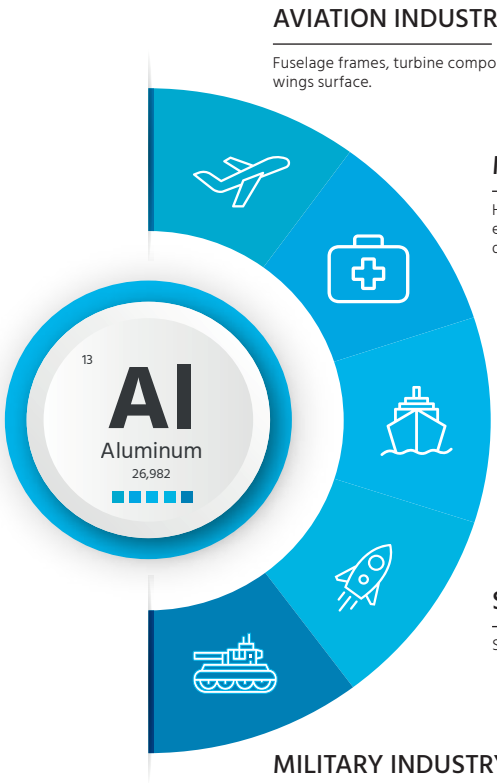
ALUMINUM ALLOYS

2024	2099	2124	2219	2618	4032	4988	5083	6005	6060
6061	6063	6082	6101	7010	7020	7050	7075	7175	7475

Aluminum, in comparison with other metals, is relatively lightweight – nearly three times lighter than iron. It is a good thermal conductor with considerably good electrical conductivity. Its high plasticity makes it a very common material in many industrial applications.

The main industrial applications require multi-element alloys, such as Al-Si-Cu--Mg-Ni or Al-Cu-Ni. These are used in the aviation, space, shipbuilding or medical industries and also for military applications.

Aluminum is made in a number of types with different levels of purity – starting from 99% up to 99,99%, which could be divided up into two main groups: refined aluminum (99,998% to 99,9999% of Al) and primary aluminum (with 99 – 99,8% of Al).



AVIATION INDUSTRY

Fuselage frames, turbine components, wings surface.

MEDICAL INDUSTRY

Hospital bed frames, dental chairs, elements of X-ray cabins, various devices and medical apparatus.

SHIPBUILDING

Components of ships and yachts, structural elements.

SPACE INDUSTRY

Structural elements of space probes.

MILITARY INDUSTRY

Ammunition, missiles, parts and components for military aircraft, various military equipment.

TANTALUM PRODUCTS

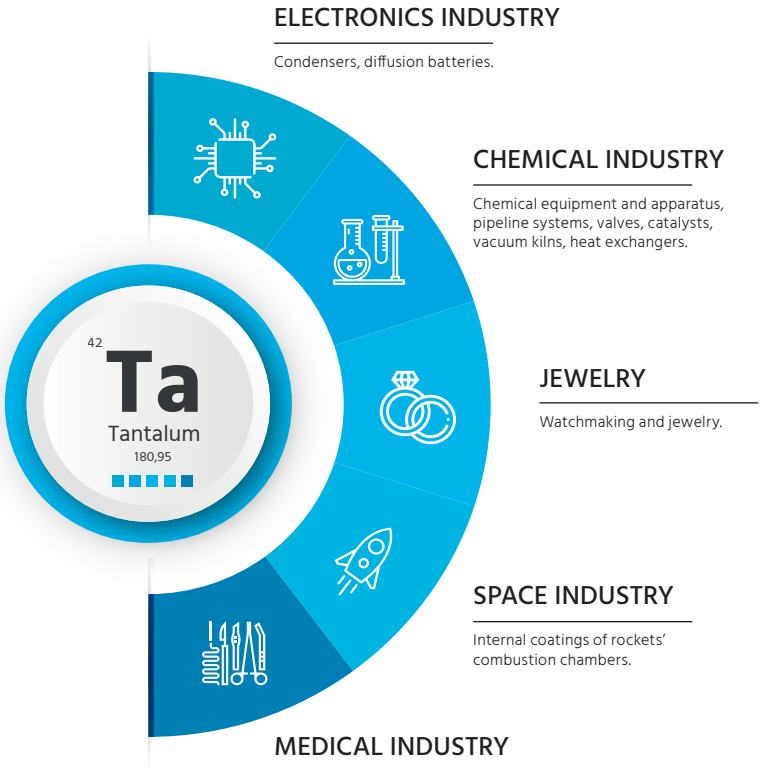
We offer bars, sheets, plates and wires made out of tantalum. Due to its properties, tantalum is used in very specialized applications, including the space and aviation industries, requiring durability and strength in elevated temperatures. Tantalum is very hard (873HV), it is corrosion resistant as well as immune to acids and bases. One of its important properties is biocompatibility. Due to its characteristics, tantalum is widely used in the chemical, medical, electronic or jewelry industries.

TANTALUM RODS

TANTALUM SHEETS

TANTALUM WIRES

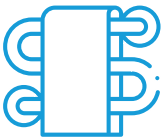
TANTALUM TAPES



METAL POWDERS

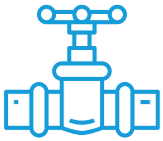
WOLFTEN offers spherical metal powders intended for 3D printing or sintering. The most popular products are titanium spherical powders, tungsten and nickel or molybdenum and cobalt alloys. On request, we can supply other metal powders. Powders allow products of complex geometry in one component with very high accuracy and precision and at the same time, they maintain a vital properties of the given metal. This unleashes spherical powders' ever increasing popularity across many industries.

THE APPLICATION OF METAL SPHERICAL POWDERS



parts of heat exchangers

exhaust systems



components of hydraulic systems

propellers

aircraft components

liquid fluid rockets

dental prostheses

hip and knee implants

gas turbines

POWDERS IN WOLFTEN'S OFFER

- TITANUM POWDERS
- TUNGSTEN POWDERS
- CoCrMo SPHERICAL POWDER
- NICKEL POWDERS
- MOLYBDENUM POWDERS

Spherical powders are commonly used in 3D printing and metal injection molding (MIM). They are used to make gas turbines and propellers, aircraft and rockets components, heat exchangers and exhaust systems as well as dental or orthopedic prostheses.

SPUTTERING TARGETS

WOLFTEN offers sputtering targets with purity reaching up to 99,999%, diameters ranging from 2,54 to 203,3 mm and shapes of discs, bars or bushings. Offered products fit most typical magnetron sputtering devices available on the market. On demand and for R&D purposes, we offer non-standard targets, based on customer's technical guidelines. We can provide targets made out of any alloy or metal.

The purity of offered products spreads between 99,5% up to 99,999% - depending on the production abilities related with particular substance.

All materials are delivered along with test certificates confirming their purity.

APPLICATION OF VACUUM SPUTTERING

Sputtering and deposition of thin layers as a technology becomes an important player in modern manufacturing processes. Vacuum sputtering could be applied on various substrates – conductors and insulators, regardless the surface – metal, ceramic or plastic. This technique is used for thin layer deposition with the purpose of serving and adjusting mechanical, optical, chemical or electrical functionality of the substrate, with ever-growing range of industrial applications.

SOLAR PANELS

DETAILS TO BE COVERED WITH HARD LAYERS

AUTOMOTIVE AND ARCHITECTURAL GLASS

ELECTRON MICROSCOPES

FLAT PANEL DISPLAYS

FIBER-OPTIC COMMUNICATION DEVICES

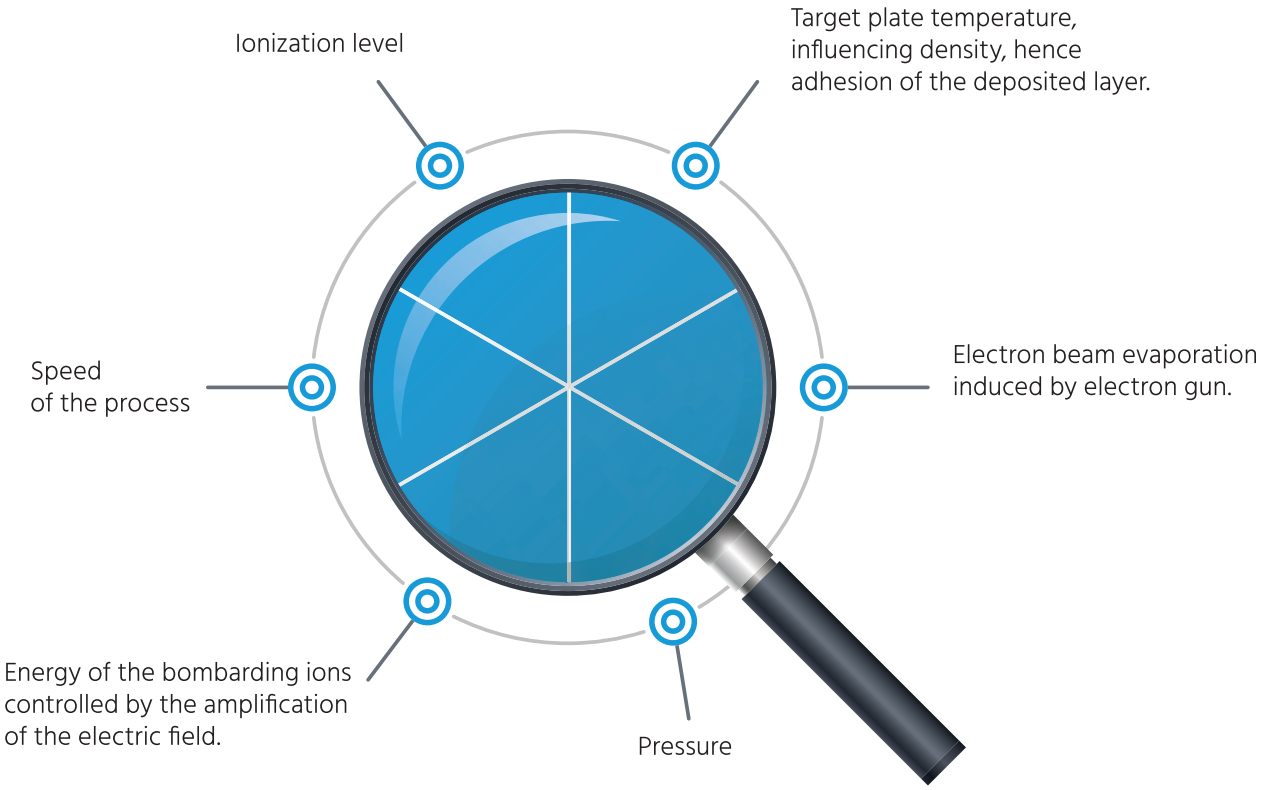
MAGNETIC STORAGE DEVICES

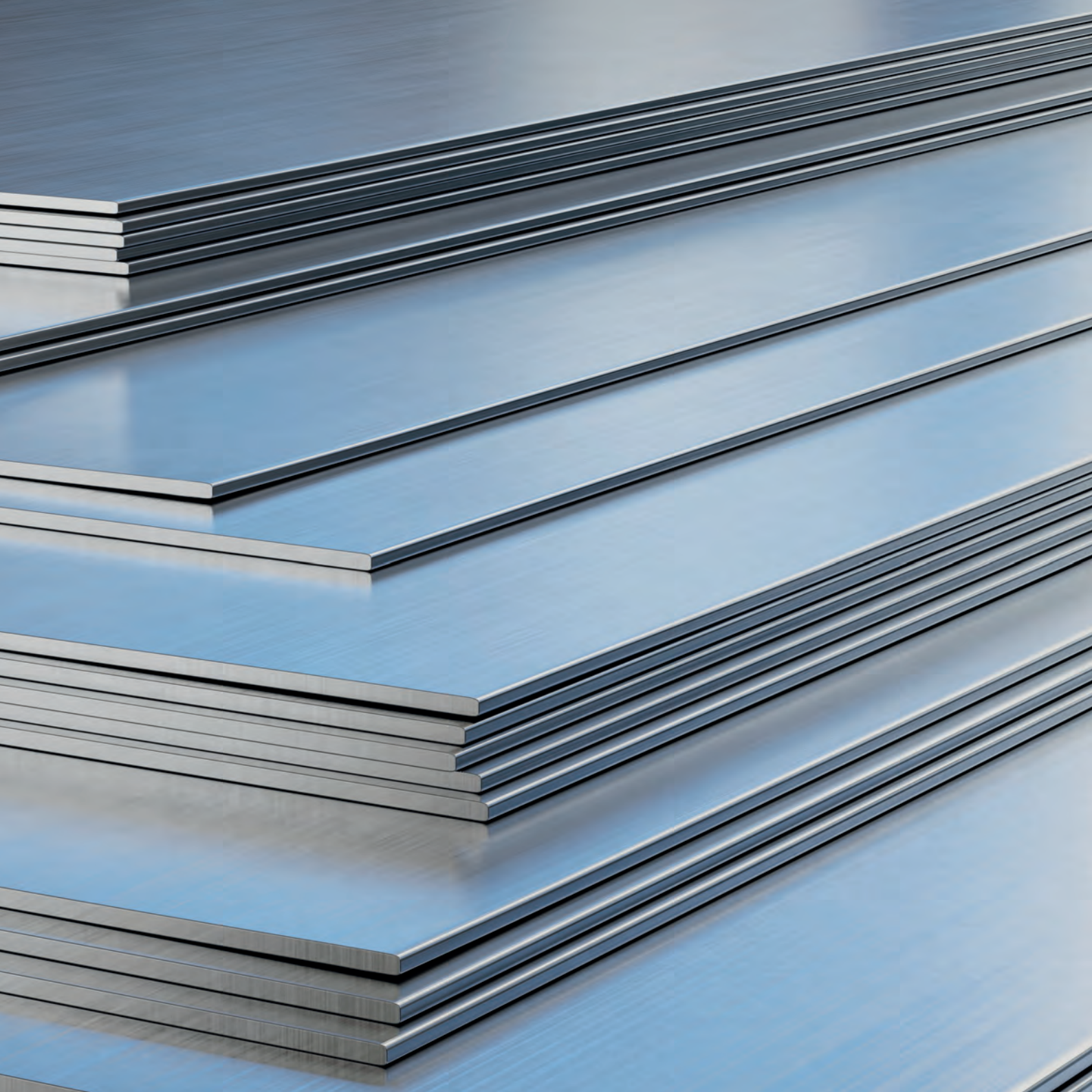
SEMICONDUCTORS

VACUUM SPUTTERING TECHNOLOGY

Vacuum magnetron sputtering is a method of thin layer deposition on the surface of elements with complicated shapes, allowing to control the thickness of such layers. This process takes place in a vacuum chamber - a low pressure environment composing of inert gases. There are various methods and modifications to this technology, as the deposition methods or mechanisms of expulsion may differ.

BASIC SPUTTERING PARAMETERS





We focus on cooperation and follow transparent rules.

WOLFTEN'S MANAGEMENT

We've been bound by the passion, and this very passion influences every step of the way towards building and strengthening our brand. Development is an important aspect of our business, therefore we invest in state-of-the-art equipment, personnel training as well as constant warehouse supplies and expanding the product range to meet the dynamically changing market needs. Individual approach to the client and proficient customer service has always been the priority. We believe that certified, high quality products have to go hand in hand with impeccable communication, reliability and friendly atmosphere. Doing business with WOLFTEN is about professionalism and customer focus.

Cohesive team of professionals
is the key to success.

MATERIAL NORMS AND STANDARDS

All non-ferrous metal products conform to specific norms, assuring homogeneity of used materials, which then impacts the properties of the given structure, device or tool. This is, of course, linked to the quality and, most importantly - safety of use. Moreover, some industries allow only certified materials, strictly complying with the required norms.

ASTM International

American Society for Testing and Materials

American ASTM standards are used all over the world, across various industries, governing quality management systems, material tests and a global trade. ASTM International introduced over 12.000 norms, which are directly related with quality improvement of the devices and products manufactured according to them.

AMS

SAE International

AMS standards are the guiding rails in the aviation and space exploration industries, especially in terms of safety. They describe the materials, allowed tolerances, procedures and quality control processes.

ASME

The American Society of Mechanical Engineers

ASME standards refer to innumerable applications, but for us, the key standards are the ASME Boiler and Pressure Vessel Code. ASME standards are complementary to those of ASTM, yet with additional stipulations and parameters.

MIL

U.S. Department of Defense

MIL standards refer to the materials and products used in the military industry. They strictly describe what processes and materials need to be used in the manufacturing process. These standards are also used by other governmental or technical organizations as well as general industry.

AWS

American Welding Society

AWS standards code on various aspects of welding and materials joining methods. They are widely recognized and in many cases are the bases of welding requirements and a part of welding supervision personnel training.

ISO

United Registrar of Systems

ISO standards are internationally agreed common standards for various branches of industry. ISO standards relate to processes within the company and management and control of these procedures.

PN

Polish Committee for Standardization

Polish Standards include European norms and standards, which impact a genuine European single market. Polish norms adopting European norms are denoted as PN-EN. This confirms that the given standards relate to both, local and European standards, which is an important aspect for free movement of goods in Europe.

DIN

Deutsche Industrie Norm

DIN standards are a German industrial norms and standards, accepted all over Europe. They stipulate technical and quality-related parameters. DIN standards overlap the Polish PN norms.

QUICKLY AND RELIABLE

We know how important the order fulfillment process is, that's why we take an extra mile to provide logistics and strict delivery procedures. We ship our products all over the world, each time choosing the most optimal and safe delivery method. We deliver brittle and fragile products in the intact condition. We constantly monitor our shipments and closely control the carriers. We work only with the renown and most reliable freight forwarders.

Our warehouse is located in Poland and has dedicated packing and collection areas. Each imported piece of material is scrupulously checked and it undergoes internal quality control procedures. We obey the principles of product identification and traceability – all products are marked with individual number to guarantee transparency. Products offered by WOLFTEN are delivered along with 3.1 test certificates according to EN 10204 standard.

LOGISTICS YOU CAN TRUST

Undoubtedly, what tips the scale and makes WOLFTEN stand out is the ability to provide competitive, elastic shipping solutions to meet the committed delivery schedules. We work with the just-in-time inventory management strategy.

Our headquarters and warehouse are located in Poland.

Every day, our logistics department looks after efficient delivery processes.

We deliver products anywhere in the world.

WOLFTEN Sp. z o.o.
Buforowa 125, hala 5
52-131 Wrocław, Poland

NIP PL8942937188
KRS 0000604080
REGON 020722350

wolften@wolften.pl
+48 71 333 47 16

www.wolften.pl