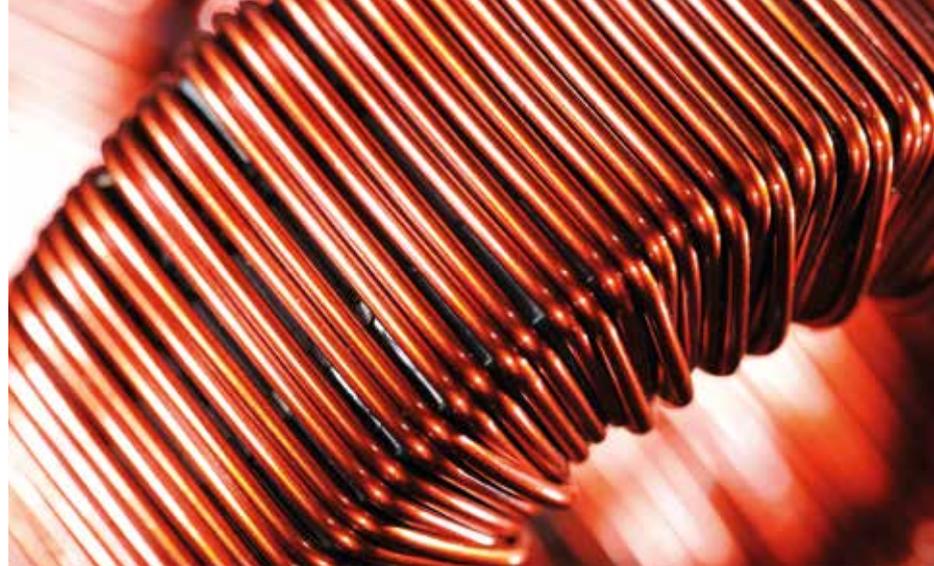
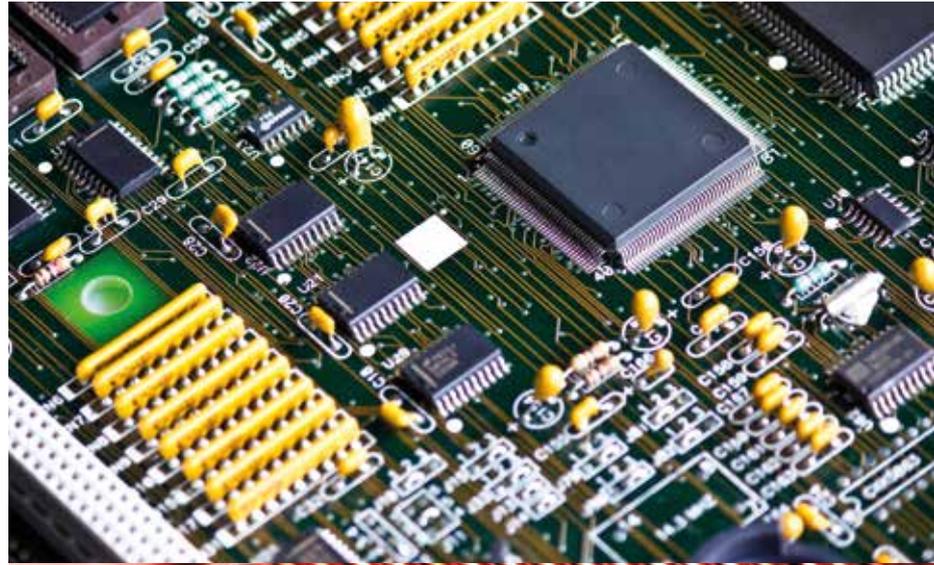


  
Serving you for over 30 years.

Recycling and recovery as  
corporate principles.



# ALKU GmbH - let us introduce ourselves

ALKU GmbH was formed in March 1983 from an idea on how to dismantle cables. From modest beginnings the owners have built a mid-sized German company with commitment and passion, which is now internationally active and a benchmark for the industry.

The company has been a professional and reliable service provider in the recycling industry for over 30 years as an owner-managed company located in Maxhütte-Haidhof in Bavaria. Our range of services now extends from recycling of cables, metals and electronic waste to trading of precious metal-bearing ma-

terials and the dismantling and disposal of transformers. This allows us to bundle our expertise from the various areas and offer a range of services and performance from one source.

Our employees work on customized solutions, always ensuring an efficient and smooth processing of your orders. Our philosophy constitutes meeting the requirements of our customers with an individual, reliable and quick service. By doing so we have been successful in building up long-term and particularly trustworthy business relationships with our customers.

We are a powerful service provider for recycling, precious metal trading and the disposal of transformers.



## LET'S GIVE NATURE SOMETHING BACK...

As a modern recycling company our safety precautions, our environmental protection measures as well as the skills of our employees our company are always up to date. Besides our compliance with legal requirements and comprehensive certification provisions we are additionally in a voluntary partnership with the state of Bavaria in the context of the 'Umweltpakt Bayern' for the enhancement of environmental protection in business. We value both, the natural environment and customer satisfaction.

## ... RECYCLING INSTEAD OF DISPOSAL.

Our company is supported by a highly motivated and qualified team that takes the greatest care and pleasure in their work. As a family-run business since the beginning, ALKU GmbH have always placed great emphasis on working together towards the same goal. Commitment, cooperation and flexibility are therefore indispensable and as such we all work together as a team. Great value is placed on mutual respect and a familiar, considerate and amenable relationship within the team.

## QUALITY, RELIABILITY AND TRANSPARENCY...

This trusting relationship is reflected in a good working environment and in the contact with our customers, suppliers and business partners. For this reason we consider to maintain important values in our company, such as friendliness, responsibility, diligence and community.

## ...TO THE SATISFACTION OF OUR CUSTOMERS.

We require highly professional and personal standards from our employees whilst offering responsibility, employee participation, flexibility, opportunities for development and inclusion in the decision-making process. This leads to our employees being dedicated to the company, as we believe in them and promote their skills and abilities. Each individual contributes to making our company what it is today and to its continued development in the future. We value a sincere and partner-like cooperation with our customers. We are convinced that our philosophy sets the standard for a long-term and sustainable business relationship - to the benefit of both sides. Contact us!

## Performance and Service

Both today and in the future ever more significance will be given to the sustainability of raw material resources. We are able to make a valuable contribution to environmental protection with the recycling of the most diverse materials.

As a reputable recycling company we take on any kind of scrap, cable and metal materials. Our customers are companies from industry and commerce as well as communities and the private sector. We offer fair and quick payment as well as various other methods of settlement on request. Your materials are collected and brought to our premises or you can deliver

them using your vehicles. After the weighing process on arrival your material is checked and sorted through for any possible impurities. We pre-separate the materials manually in our dismantling hall and then recycle in accordance with procedure. The entire procedure is precisely and clearly documented. Many years of experience have built up, an extensive knowledge and a comprehensive range of services.

We provide you with the optimal transport solution- quick, flexible and and uncomplicated.



### Available services:



You benefit from:

- A comprehensive range of services in over 6 business segments
- Customized logistic solutions from the smallest amounts to large containers
- Individual service at your request and orientated at your needs
- rapid and transparent processing.

Detailed information on our services is provided on the following pages.

We have additional services available which allow us to match our offers perfectly to your needs.

**LOGISTICS** We provide a flexible transport solution for the collection and delivery of the accumulated materials. Our vehicle fleet includes a range of trucks, container delivery and collection vehicles as well as steel and aluminium dumper trucks ready to deal with the most varied of transport requirements. We also plan the transport process specifically for your materials and quantities in cooperation with professional logistic service providers.

**CONTAINER AND RECEPTACLE DISPOSITION** We provide skips in various sizes from 3 - 20 m<sup>3</sup>, roll-off containers with up to a volume of 38 m<sup>3</sup> as well as crates, pallets and other containers, e.g. big bags or chutes, depending on the material and quantities, for optimal interim storage and transportation.



**MOBILE SHREDDER** Almost all companies produce waste material that needs to be made unserviceable for data protection and production copyright purposes. Our Alpine Rotoplex 28/40 mobile shredder presents an appropriate solution. Data media such as circuit boards, CPUs and components used in the semiconductor industry as well as other electronic components are shredded and rendered unserviceable. We are therefore able to ensure that no other access to the data is possible. Recoverable metals are then separated and melted down in foundries. Besides data destruction our shredder equipment is also suitable for the destruction of reject batches and surplus production providing a mobile solution on site. It is not even necessary for sensitive material to leave your premises allowing the reclamation of waste to be completed at your company.

**ANALYSIS / LABORATORY** Our extensive databank of samples provides analysis and evaluation information on over 4,000 reference materials for quick retrieval. Our databank is able to provide a corresponding specification on the quality and the metal content of your material immediately. Should your material not appear in our databank we arrange for a sample to be analyzed free of charge by an independent institute without delay to obtain a precise and verifiable result. You are remunerated at the daily rate of the respective metal price for the value of the metal content determined.

# Electronic scrap

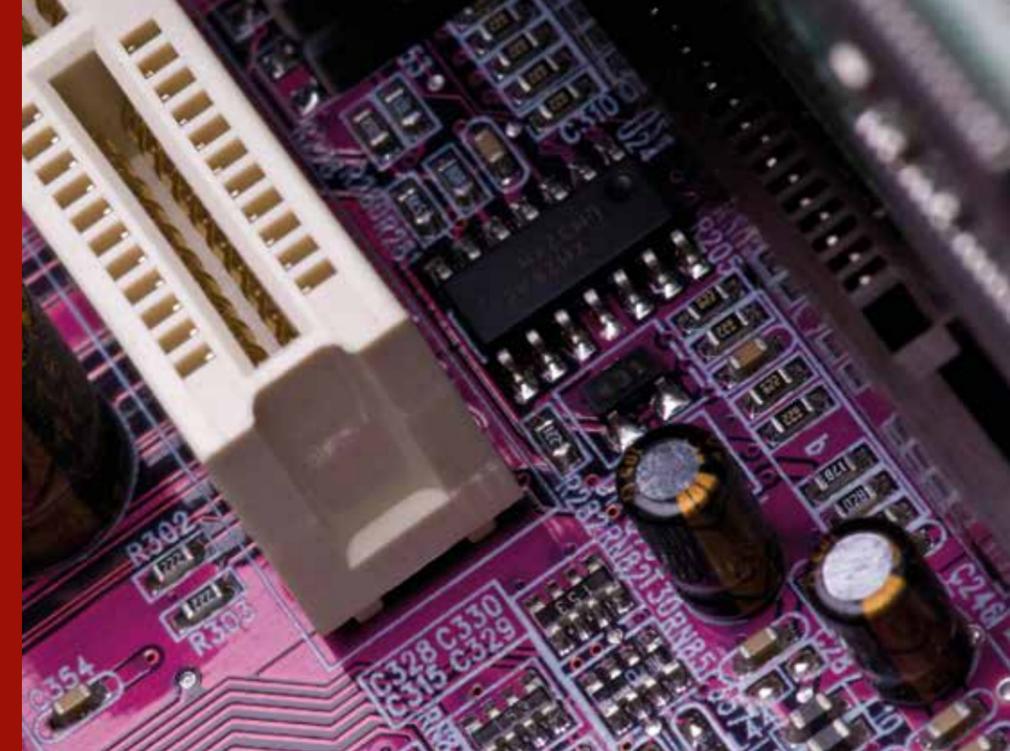
Electronic waste is the most rapidly growing waste sector worldwide. The main causes are economic growth, declining product life cycles and above all rapid innovation in the development of electrical and electronic equipment.

New equipment is constantly being upgraded with components and materials and therefore different recycling technologies are required to keep up with these innovations. Waste electronic equipment often contains valuable secondary raw materials. We shred and sort both complete facilities such as servers, mainframe computers, telephone installations and production equipment and from all industry sectors, as well as separating

the pre-shredded and pre-sorted material according to value. Any pollutants are removed and disposed of in compliance with regulations.

Strict compliance with legal environmental regulations as well as regular training and personnel development are our most important requirements in ensuring professional and thorough recycling of electro waste. We are therefore not just a waste disposal company pursuant to the ordinance on waste management facilities (EfbV) but also a certified initial treatment facility for electrical and electronic waste materials pursuant to the German electrical equipment act (ElektroG).

We ensure that the recycling of your electrical and electronic devices is in accordance with professional standards - you receive a comprehensible and market oriented reimbursement.



At this stage we would like to give you an insight into the broad range of electronic scrap:



## CIRCUIT BOARDS

**Class 1a:** from PCs and main frame computers, motherboards to Pentium 3, plug-in cards

**Class 1b:** from PCs to Pentium 4 or AMD Athlon

**Class 2:** from telecommunications and measuring instruments such as from the car industry

**Class 3:** from consumer electronics

**PRINTED CIRCUIT BOARDS** from monitors and televisions

**CIRCUIT BOARD - BACK PANELS** used in mainframe computers and server cabinets with gilded or selective precious metal coated contact points / strips.

**CIRCUIT BOARDS - UNEQUIPPED** are a frame of flexible or rigid base material used in circuit board manufacture or still unequipped circuit board bases.

**POWER UNITS** serve to supply electric power and voltage

transformation for computers. They contain a **class 3** circuit board in their interior.

**DISC DRIVES** PC disc drives for CDs, DVDs or diskettes. The casing is made of iron and aluminium, the interior contains a valuable circuit board.

**COMPLETE COMPUTER DEVICES** Computers, laptops, mainframe computers and servers complete with all components (motherboard, plug-in cards, disk drives, hard discs, power supply units etc.)

**DEFLECTION UNITS OR COILS** used in televisions, monitors or other screens also contain ferrite and synthetic materials besides copper.

**MONITORS AND TV DEVICES** Monitors, screens, televisions, flat screens and displays have often been used for many years before being recycled. The interior of the devices contains

many valuable but also hazardous materials that need to be recycled with care.

**PERIPHERY EQUIPMENT** Computer accessories such as keyboard, mouse, printer, scanner, etc.

**ELECTRICAL AND ELECTRONIC (USED) EQUIPMENT** are sorted into the following groups:

- Large household equipment and automatic dispensers
- Refrigeration / air conditioning equipment and oil-fired radiators
- Information and telecommunication devices as well as consumer electronic devices (e.g. mobile telephones, PCs, stereo systems, monitors)
- Gas discharge lamps (e.g. fluorescent tubes)
- Small household appliances, lighting fixtures, electrical and electronic tools, toys, medical equipment, sport and leisure equipment as well as monitoring and control equipment

Besides comprehensive consultation you can rely on a smooth and professional disposal or recycling of your electronic devices. We remunerate you for your electronic scrap after processing on the basis of an analysis or direct purchase of the material. Your enquiry can pay off - we have the appropriate solution for your needs.

# Precious metal-bearing materials

Precious metals such as gold, silver, palladium, platinum and rhodium & co. are indispensable for the production of high quality equipment, allowing us to contribute decisively to the relief of the environment by recovery and recycling in the production process.

The range of precious metal-bearing material is very broad. Our special know-how of material quality and its optimal processing is based on more than 30 years of experience in metal trading. The professional knowledge and commitment of highly qualified employees ensures the application of high standards for a smooth and correct processing operation.

The initial controls on the incoming material ensure it is checked and sorted carefully to guarantee efficient recovery of your precious metals. Our database contains over 4000 analyzed sample materials and we work closely together with independent laboratories applying highly modern analysis technology. This allows us to provide an exact determination of the value of fractions of precious metals in order to pay our customers an optimal reimbursement without delay and to provide our purchasers with quality secondary raw materials.

Regardless of the precious metal and the substrate - we are the right partner to find the optimal solution for you!



At this stage we would like to give you an insight into the broad range of precious metal-bearing materials on offer:



**CIRCUIT BOARDS** originating from both mainframe computers and servers as well as from measuring instruments and mobile phones. New models and new areas of application (e.g. smartphone circuit boards) are added continuously as a result of the technical advances made with these appliances. There are separate collection and price classes for the different circuit board types.

**PROCESSORS** are found on all motherboards. They are made of ceramic as well as plastic. The precious metal content varies depending on the model, year made and manufacturer.

**RANDOM ACCESS MEMORY** are mainly found on motherboards in computer devices or PCs. They contain varying quantities of silver, gold and platinum depending on the model, production year and manufacturer.

**PLUGS** are the main connectors used in the electronic industry. They are produced in different variations e.g. in synthetic or metal housings and mostly with gilded pins.

**Provide us with a sample - we will have it analysed free of charge at an independent laboratory. We reimburse you for the metal content at the current price quoted in the market.**

**PRECIOUS METAL-BEARING PRODUCTION WASTE:**  
**COPPER STRIPS** occur frequently as production waste in the manufacture of computer chips as well as in many other areas of the electro industry such as in the production of sun collectors and hybrid engines. Electronic plug connections are often galvanized with gold, silver and where appropriate with a coating of palladium / rhodium, due to their electrical conductivity and physical resistance to abrasion and corrosion.

**COPPER STAMPING STRIPS** are also waste materials in the manufacture of plug contacts in the electroplating industry and pick and place machines. They may contain clearly visible gilding but our processes are also able to recover precious metals hidden from view.

**ALU CASINGS** used in radio technology often contain silver plated casing components. We are able to recover precious metals without losing aluminium components in the melting process (as is otherwise the case).

Let us find the optimal waste recycling process for your **COMPONENTS** from all areas (electronic, military, industry etc.), from all kinds of substrates (copper, brass, aluminium, V2A, plastic, glass etc.) used together with various precious metals (silver, gold, palladium, platinum, rhodium etc.)!

**We haven't mentioned your specific precious-metal waste product?**

**Then just give us a call!**

## Metal & cable recycling

Scrap metal and secondary raw materials. Steel and non-iron metals for example often lend themselves to recycling without a loss of quality. Reprocessing is much more efficient than the production from the primary raw material.

Our function as a waste management facility is the proper recycling of different metals and their delivery into the raw material market as secondary raw materials. Our experts dismantle and sort the contents of small containers right up to large containers. The metal and scrap for recycling is sent

for processing to our contractors (smelters, new metal producers, foundries).

In addition we recycle cables of any type from demolition, production and the recycling of electronic scrap. We are the competent partner for both sorted and mixed copper or aluminium cables as well as for underground cables subject to certification.

**Our fleet of vehicles allows flexible and uncomplicated collection from your site. We would be pleased to provide you with storage tanks and containers.**



We recycle **COPPER** from all materials in all forms e.g. sheet metal, pipes, stamped components, guttering, cooling systems, metal filings, cabling, etc. Copper is one of the most important materials in electrical equipment. It is used for electrical wiring, coils, in engines or on circuit boards. One ton of electronic scrap contains up to 70 kg of copper, one ton of mined copper ore contains on average as little as 5 kg.

**BRASS** is an alloy of copper and zinc. There are also many applications available for brass. For example fittings, stamped components, sheet metal and pipes are manufactured from brass - and recycled by us.

**ALUMINIUM** is a common light metal frequently found in profiles, sheet metal, pipes, stamped components, metal filings, molded components, tire rims, cabling, etc.

**V2A** is found in the food processing industry, sanitation area and has numerous uses in other areas where resistance to corrosion and fluctuations in temperatures is required.

**LEAD** is used for roofing as lead sheeting, for water pipes in old buildings, as lead weighting for tire rims, as ammunition or for storage of energy in car batteries.

**ZINC** is frequently used in mass production processes for moldings, zinc sheeting is used e.g. for roof guttering, for roof and facade cladding. The balancing weights on tire rims are also made of zinc.

**TIN** is used in tableware, tubes, pins, figures and even organ pipes. Technology also has many uses for tin as a protective plating against corrosion. We mainly process bars of soldering tin, excess solder and scrapings arising from tin-lead or tin-silver alloying processes.

## Transformer recycling

An additional area of business is the dismantling and disposal of small, medium-sized and large transformers. We are constantly completing disposal projects in close cooperation with industrial customers and power suppliers. We operate efficiently and with care to ensure that as much valuable material as possible is recycled.

The dismantling is completed in our company dismantling hall as well as directly at your location professionally and reliably - without interrupting your business operation. A specially trained team of experts in dismantling transformers is focused on solving any problem as well as working competently and

flexibly together with you on site. We offer you the benefits of a one-stop service, in addition to safety, environmental protection and economic aspects:

- **Flexible time schedules and collection**
- **Professional disposal of the accumulated material**
- **Oil disposal with verification**
- **Complete dismantling of other facilities and transformer periphery**
- **Strict compliance with legal provisions relating to the safety of employees and the environment**

**Our range of capability and experience ensures that you receive the best possible offer.**

**LOCAL AREA NETWORK TRANSFORMERS AND SMALL TRANSFORMERS** are collected from your location using trucks with tarpaulins or our truck with a crane. Our comprehensive logistic possibilities enable us to offer you the collection of smaller units.

**MEDIUM SIZED TRANSFORMERS** We transport all transformer types with different weights e.g. from your substation, warehouse or company. We arrange the optimal transportation as part of the service.

**LARGE TRANSFORMERS** It is often more economical to dismantle real 'heavyweights' on location. Our team of specialists are able to dismantle even the heaviest transformers and of course in strict compliance with work safety and environmental protection.

High raw material prices ensure that used transformers remain a favoured economic asset. Transformers are completely dismantled by us and recycled according to the following categories:

- **Transformer housing**
- **Coils of copper or aluminium**
- **Cold or hot-rolled transformer sheet metal**
- **Wood and paper residue**
- **Transformer oil**
- **Porcelain parts**

### YOUR CONTACT FOR TRANSFORMERS AND TRANSFORMER DISMANTLING:

Hermann Bindig

hermann.bindig@alku-gmbh.de

Tel.: +49 9471 60194-19

# Recycling - Base plates

We work in close cooperation with the company Replast in respect to PVC recycling. Replast produces floor coverings, components for traffic signs, cable bridges and ducts as well as pontoon plates and base building blocks from recycled cable polyvinyl chloride (PVC). These include, for example, slowing thresholds and other floor plates with a wide range of applications. The different types of plates are used in trade fair halls, sport stadiums, stables or industrial enterprises.

- The use of PVC granulate offers the following benefits:
- Easy installation / removal
  - Applications for fixed exterior and interior surfaces
  - Resistance to chemicals and weathering
  - Flame resistance
  - Non-slip surface
  - Easy maintenance
  - Easily divisible (for precise laying in composite spaces)

Comprehensive service, expert consultation - efficient concepts.



**FLOORS OF ANY TYPE** The plates form an even, non-slip surface. The tongue and groove system creates a seamless join without edges or swelling.

**SENSITIVE SURFACES** The plates are ideal for the protection of sensitive surfaces such as grass, ice or certain types of hall floors. They prevent dirt marks, dents or other signs of wear and tear. The plates themselves leave no traces and are easily removable.

**OUTDOOR ACTIVITIES** These plates are weather resistant and non-slip, making them suitable for all kinds of outdoor sports activities. In addition their cushioning effect prevents injuries through falls.

**ZONING** Pedestal base plates are also produced from recycled PVC. They are used either individually or for multi-purposes e.g. in parking garages or at racing circuits. In addition they may be disassembled and set up again at another location at any time as opposed to permanently mounted materials.

**EQUESTRIAN SPORTS** Equestrian activities also benefit from the versatility of the base plates by using them not only as an insulation layer in horse boxes, but also as a cushioning, non-slip base for riding arenas and paddocks.

**The special feature of these plates is that all products of Replast are produced from a 'waste product' - namely recycled PVC. Resources are therefore used optimally and the environment is supported.**

## Recycling concepts

Our qualifications and many years of experience in our field of business allow us to meet the requirements of our customers and set up individual recycling concepts in mutual cooperation. Our evaluation and the correct classification of the material types you have accumulated, as well as the assessment of any further measures required lead us to an overall solution in which economic and environmental aspects have equally been considered.

We would be pleased to receive your questions and support you with advice and our expertise. We see to your needs and offer you the ideal solution for the recycling of your materials in accordance with your requirements. Our service covers all relevant areas - from logistics, organization and implementation to the procedural and waste compliant requirements.

## Certifications

We offer our customers individual service of a high level of quality. Responsible environmental and quality management is therefore indispensable in our operations as a recycling company.



**Certified waste management facility in accordance with § 56 KrWG (recycling and waste act):** ALKU GmbH is a certified waste management company pursuant to § 2 of the waste management facility ordinance (EfbV). In the line of our waste management activities we guarantee personnel and technical requirements such as reliability, technical and general know-how of our personnel through a surveillance agreement with the PÜG (certified test and surveillance institute).



**Certified initial processing facility in accordance with § 11 ElektroG (electrical and electronic equipment act):** Agreement on the handling of used electrical and electronic devices. Our company fulfills all requirements pertaining to initial treatment, meaning dismantling, disassembling and the shredding of used electrical/electronic devices and electronic components.

We possess the following certifications that we regularly update:



**Certified safety management system in accordance with SCC\*:** Proof of specific skills in respect of safety, health and environmental protection (SGU) on the basis of the SCC regulations 'Safety Certificate Contractors'. The SCC certification enables us to guarantee safe and reliable implementation of the technical services for our customers on site. It is especially important in sensitive areas such as the dismantling of transformers, that high safety standards are maintained and that appropriate handling procedures by skilled personnel are ensured without interrupting the production operations of the contractor.

### Emission control authorization

Our company site is in possession of an official authorization as being compliant with provisions relating to environmental and water protection, work protection and facility security as well as the prevention of air pollution, noise and waste.



**BAYERN**

**Partner in the 'UmweltPakt Bayern' (environmental pact of Bavaria)**

Our participation in the environmental pact of Bavaria declares that we are showing foresight in the prevention of environmental pollution and being effective in our efforts to protect natural living conditions through non-bureaucratic cooperation between state and industry.

ACTIVE

LOYAL

KEEN

ULTIMATE



## Contact:

The ALKU team is always available to answer all your questions relating to the subject of recycling! Speak to our experts!

### TRADE BUSINESS

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PÜG certified waste management facility in accordance with § 56 KrWG



Certified initial processing facility in accordance with § 11 ElektroG



Certified safety management system in accordance with SCC\* Safety Certificate Contractors



Partner in 'Umweltpakt Bayern'

