KGHM ZANAM

A higher standard of implementation

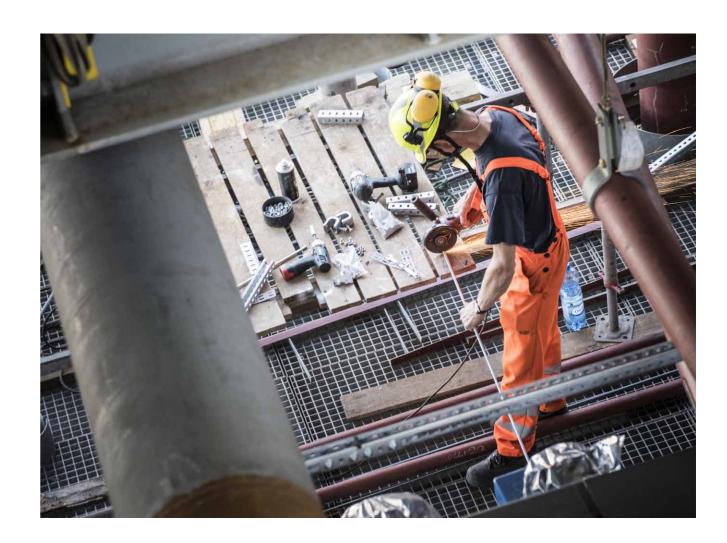


SERVICES FOR INDUSTRY

TABLE OF CONTENTS

About us	1	3
Implementation Services of Industrial Investments and Installations	1	4
Transport and Freight Forwarding Services	i	6
Mining Services	ı	8
Self-propelled Mining and Underground Transportation Machinery Services	1	10

ABOUT US



KGHM ZANAM

is one of the largest Polish manufacturers of machinery and equipment for the mining sector. The company also manufactures equipment used in handling systems, transport installations, stone mining and open-pit mining. Moreover, It is also a major manufacturer of steel and iron castings. In addition to manufacturing operations and a wide range of high quality products, KGHM ZANAM provides investment implementation services in the EPC formula, maintenance and repair services, transport and forwarding services, as well as specialist services in underground mining plants (mining services, machine maintenance services and underground transport services).

IMPLEMENTATION SERVICES OF INDUSTRIAL INVESTMENTS AND INSTALLATIONS

KGHM ZANAM specialises in the comprehensive implementation of investment projects, the provision of modernisation services and maintenance services at industrial facilities.

industrial construction

maintenance







KGHM ZANAM successfully implements investments as a general contractor in the engineering construction sector. We have the qualifications, years of experience, as well as modern and well-equipped machinery which result in prompt execution of top-quality services.

Our technical and organisational potential enables comprehensive implementation of "turnkey" investment projects in the broad sense of industrial construction:

- steel structures
- pipelines and installation
- industrial technologies

KGHM ZANAM carries out tasks in the area of hydrotechnical and specialist construction. At the divisions of KGHM Polska Miedź S.A. responsible for processing and metallurgical processes, KGHM ZANAM provides maintenance services for machines, equipment and installations connected with the process line.

The most important tasks carried out by KGHM ZANAM in the area of investments and industrial installations include:

- 1. performing periodic repair and modernisation of the electric furnace at the Głogów Copper Smelter
- 2. implementation of works under the modernisation of the Sulphuric Acid Plant
- 3. building slag pouring and casting installation with infrastructure for the Głogów Copper Smelter
- construction of industrial water supply system for the Głogów Copper Smelter
- 5. construction of the flash furnace and electric furnace complex
- 6. delivery of a complete system for slag haulage from the electric furnace

- 7. installation of a slag granulation unit with a condensation tower
- 8. delivery of installation for removing coal from copper concentrates by the roasting method
- 9. construction of an installation for flue gas dedusting and desulphurisation
- delivery, assembly and installation of flotation machines in the Ore Enrichment Plant
- 11. ballasting the North Dam at a segment of the N1-N3 section in the Żelazny Most Tailings.

KGHM ZANAM is also involved in the modernisation of the Legnica Copper Smelter as part of an investment task called "Replacement of absorption and drying towers of the Sulphuric Acid Plant". Under the management of KGHM ZANAM, the investment of the SMR (swinging, melting and refining) furnace was completed. In addition, the Company is building the Damówka pumping station in the Tailings Management Plant of KGHM Polska Miedź S.A., and is involved in the construction of a Waste Sorting and Thickening Station.

KGHM ZANAM

TRANSPORT AND FREIGHT FORWARDING SERVICES

KGHM ZANAM provides full logistical support for the entities of the KGHM Polska Miedź S.A. Group and offers transport and freight forwarding services to other business clients.

crane services with automobile cranes

transport of extraordinarly sized and dangerous goods





KGHM ZANAM offers comprehensive transport and forwarding services based on specialised equipment and a fleet of vehicles. Transport and freight forwarding services are provided both at home and abroad. KGHM ZANAM implements:

- ilicensed domestic and international transport of goods
- transportation of goods to EU countries and other European countries

- freight forwarding in the area of transporting goods domestically
- transportation of dangerous goods and
- services related to low-loader transport of extraordinarly sized cargo
- pilot run during services performed with the specialised equipment
- crane services performed with mobile cranes of lifting capacity up to 200 t

KGHM ZANAM is equipped with a car fleet and specialist equipment:

- tractor units EURO 5
- curtain universal semi-trailers, standard 24 t (curtainsider)
- semi-trailers (zremb with lifting capacity up to 60 t)
- tipping semi-trailers (up to 40 m³)
- automobile cranes with a lifting capacity of 130 t and 200 t

KGHM ZANAM has the domestic and EU license to transport goods by road, as well as freight forwarder's and carrier's liability insurance policies valid in the entire European region.





6 I KGHM ZANAM

MINING SERVICES

KGHM ZANAM offers a comprehensive range of services in the area of preparatory works, underground construction, belt conveyors and blasting.

mining and assembly work underground

underground blasting





UNDERGROUND ASSEMBLY WORK

KGHM ZANAM provides specialist assembly services in horizontal excavations used to transport excavated horizontal material to shafts with discharging vessels. The most important tasks of the units responsible

for underground assembly works include the construction and modernisation of the belt conveyor systems and operation of the belt conveyors.

KGHM ZANAM has recently carried out or is carrying out, among others, the following assembly work:

- installation and modernisation of belt conveyors (extension of the A-183 conveyor, installation of the L-195 conveyor, modernisation of the N-465 and A-15 conveyor)
- operation of belt conveyors under a long-term contract
- construction of Heavy Machinery Chambers
- the construction of ore and URB scoops
- construction of Fuel Chambers
- building a logistics center

KGHM ZANAM also has experience and offers the possibility of automating belt conveyors in underground mining facilities. In addition, the company specialises in the construction of underground electrical switchgear as well as cable routes and pipelines.

UNDERGROUND MINING WORK

KGHM ZANAM carries out specialist works related to the construction, maintenance and protection of excavations and the construction of underground infrastructure. Among the wide range of mining services offered the following should be mentioned: Drilling of corridor excavations, conversion of corridor excavations in rockbolt support, performance of the roof ripping and sidewalls, building ventilation stoppings,

construction of driveable (heavy) and non-driveable (light) bridges, sump cleaning, enclosure of cable and pipeline slings.

KGHM ZANAM has recently completed or is in the process of drilling drifts and is carrying out works related to the improvement of the ventilation network in the mining facilities of KGHM Polska Miedź S.A.



UNDERGROUND BLASTING

Cutting of rock raw materials in underground mining facilities by means of blasting is the basic method of obtaining large quantities of appropriately ground excavated material, which guarantees high efficiency of loading, transport and processing operations.

Since 2013, KGHM ZANAM has been providing blasting services in the mining facilities of KGHM Polska Miedź S.A. under existing long-term agreements.

In the area of blasting services, KGHM ZANAM provides full support of, including, among others:

- mechanical loading of emulsion explosives with use of the machines of the blast Truck machines
- transporting inactive explosives, detonating cords electric and non-electric detonators, and two shot blasters
- ioading explosives with a mobile lift platform

It is possible to apply the technology used at projects related to drilling road and train tunnels.

KGHM ZANAM provides high quality blasting services. The experience of the engineering and technical staff as well as the constant search for and implementation of new solutions through the improvement of blast trucks allows to improve the efficiency and safety of blasting.

KGHM ZANAM

SELF-PROPELLED MINING AND UNDERGROUND TRANSPORTATION MACHINERY SERVICES

KGHM ZANAM offers after-sales technical support for its products. Providing adequate service to the operating mining machines minimises downtime and interruptions in production, which translates into a high level of machine availability.

self-propelled underground mining machinery service

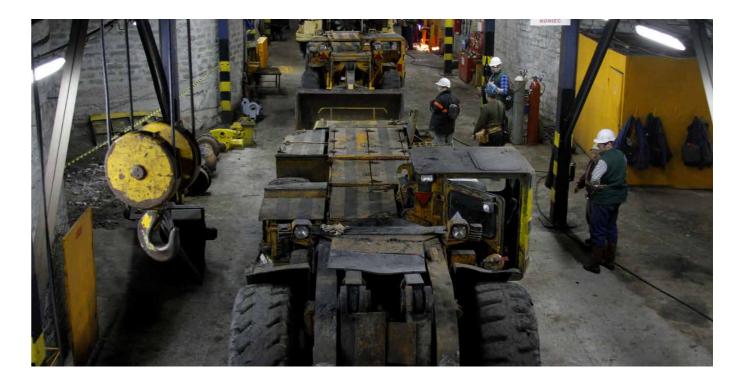
rubber-tyred transport underground





KGHM ZANAM, in the area of underground self-propelled mining machinery (SPMM) service, provides warranty and post-warranty services for domestic and foreign customers. Based on a number of service agreements, KGHM ZANAM provides professional service and technical support in order to secure the production and maintenance of machinery in mining facilities. A warranty is provided for the service performed.





The tasks of the units responsible for the SPMM underground service include:

- providing warranty and post-warranty services for SPMM and other devices manufactured by KGHM ZANAM S.A.
- sale of parts and components for machinery and equipment
- periodic inspections
- machinery upgrades and overhauls
- training operators in handling machinery
- technical counselling

The technical support is provided by the units responsible for the underground SPMM service implementation:

- dispatchers responsible for receiving complaints and post-warranty repair reports
- maintaining a system of their registration and coordination
- specialised services for sub-assemblies included in machinery and equipment manufactured by KGHM ZANAM
- specialists in the Repair Service Department responsible for selling spare parts who have their own central warehouse available
- experienced and qualified staff and modern diagnostic equipment

The technical background of the Repair Service Department is being constantly innovated and enriched with the newest control and measuring devices.

KGHM ZANAM also provides comprehensive underground transport services using self-propelled transportation trucks (SPTT), intended for transporting people, rods, hazardous and explosive materials. The company offers its customers comprehensive transport services based on its own fleet of transport vehicles.

10 KGHM ZANAM



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