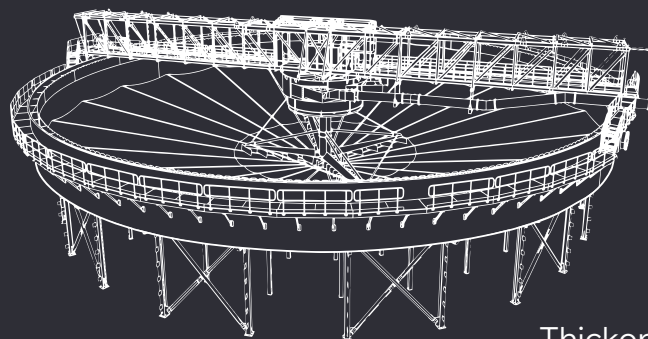


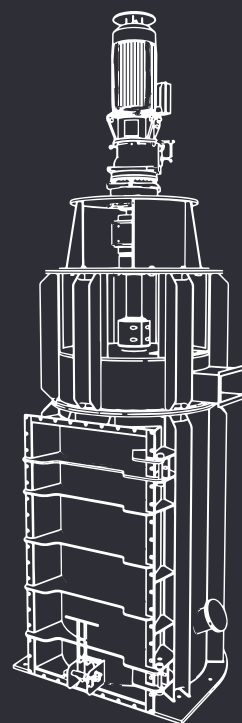


Technology Equipment Manufacturing

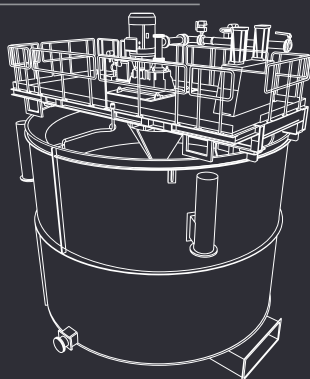
Equipment for the entire processing chain



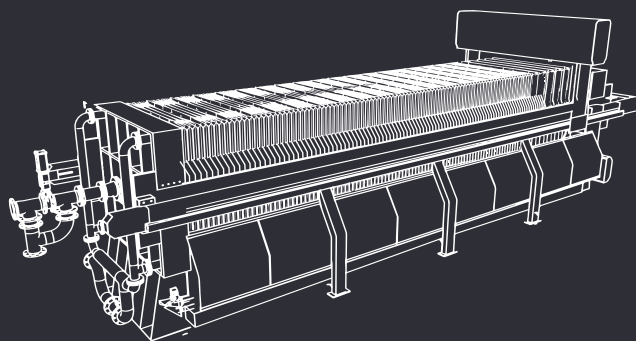
Thickening



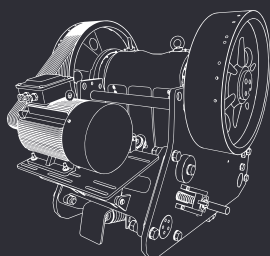
Grinding



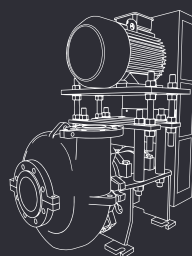
Flotation



Filtering



Crushing and screening



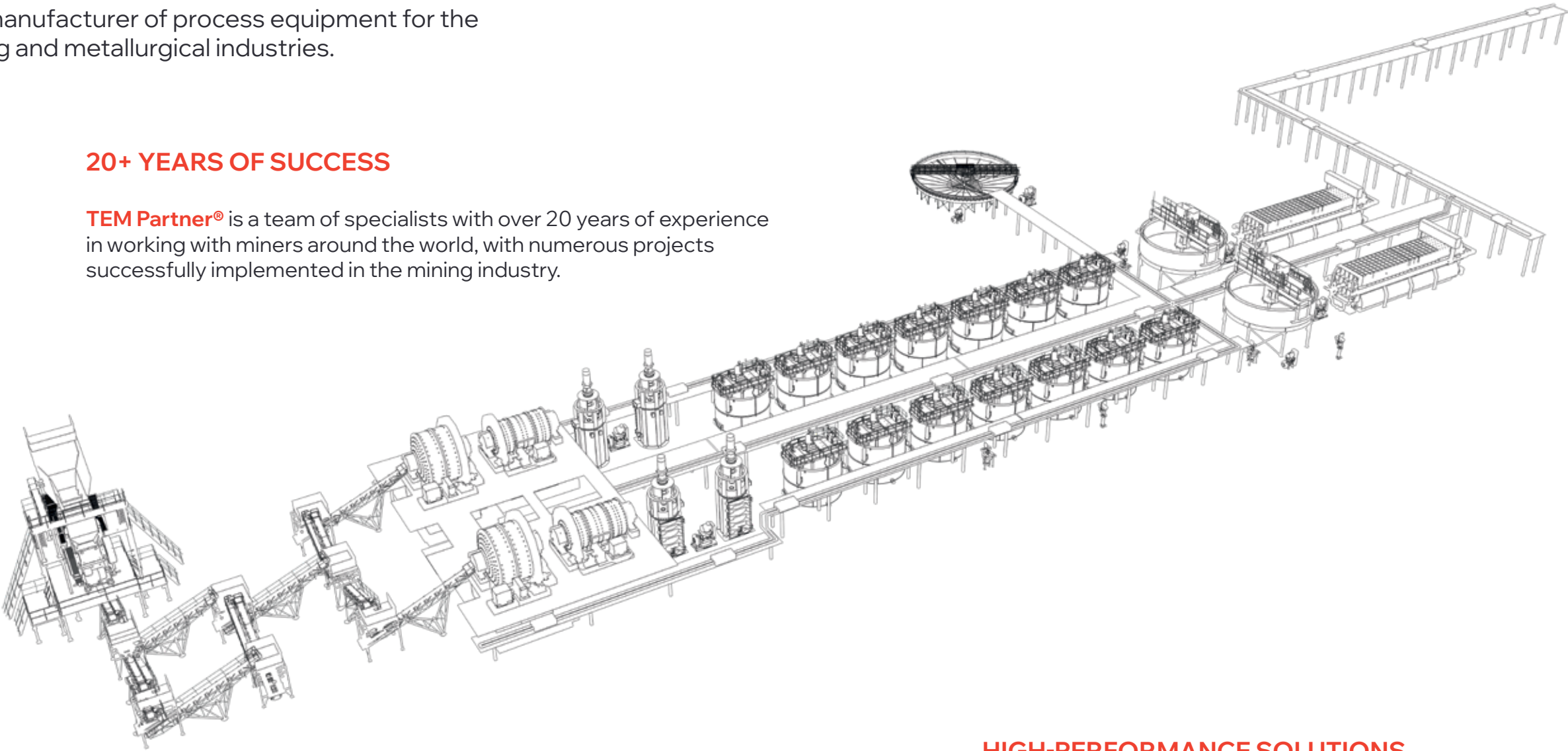
Slurry pumps

COMPANY PROFILE

TEM Partner® is a Russia-based solution vendor and manufacturer of process equipment for the mining and metallurgical industries.

20+ YEARS OF SUCCESS

TEM Partner® is a team of specialists with over 20 years of experience in working with miners around the world, with numerous projects successfully implemented in the mining industry.











FOLLOWING THE BEST GLOBAL PRACTICES IN DEVELOPING MINING AND PROCESSING EQUIPMENT

TEM Partner® focuses on creating and supplying equipment that meets the highest global standards of quality and efficiency, as well as its successful implementation in Russia.

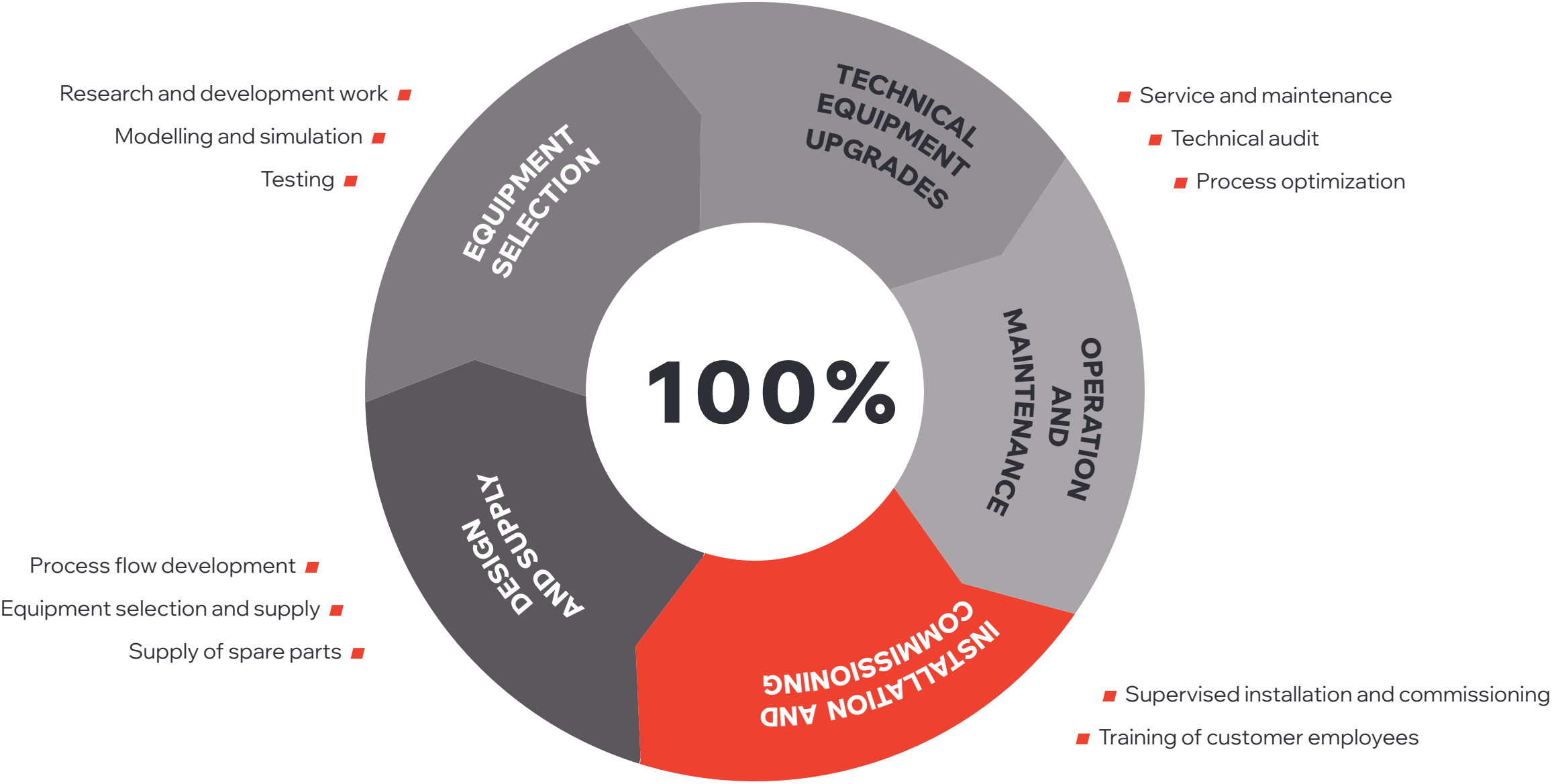
HIGH-PERFORMANCE SOLUTIONS FOR THE ENTIRE PROCESSING CHAIN

We manufacture thickeners and flotation cells using the Russia-based production facilities, develop and implement automated analytical control systems that help improve process areas. We quote and supply crushing and screening equipment, slurry pumps and mills from our exclusive partners in Turkey and China.

-  Technology
-  Engineering
-  Equipment
-  Production
-  R&D Center
-  Automation
-  Service
-  Spare parts

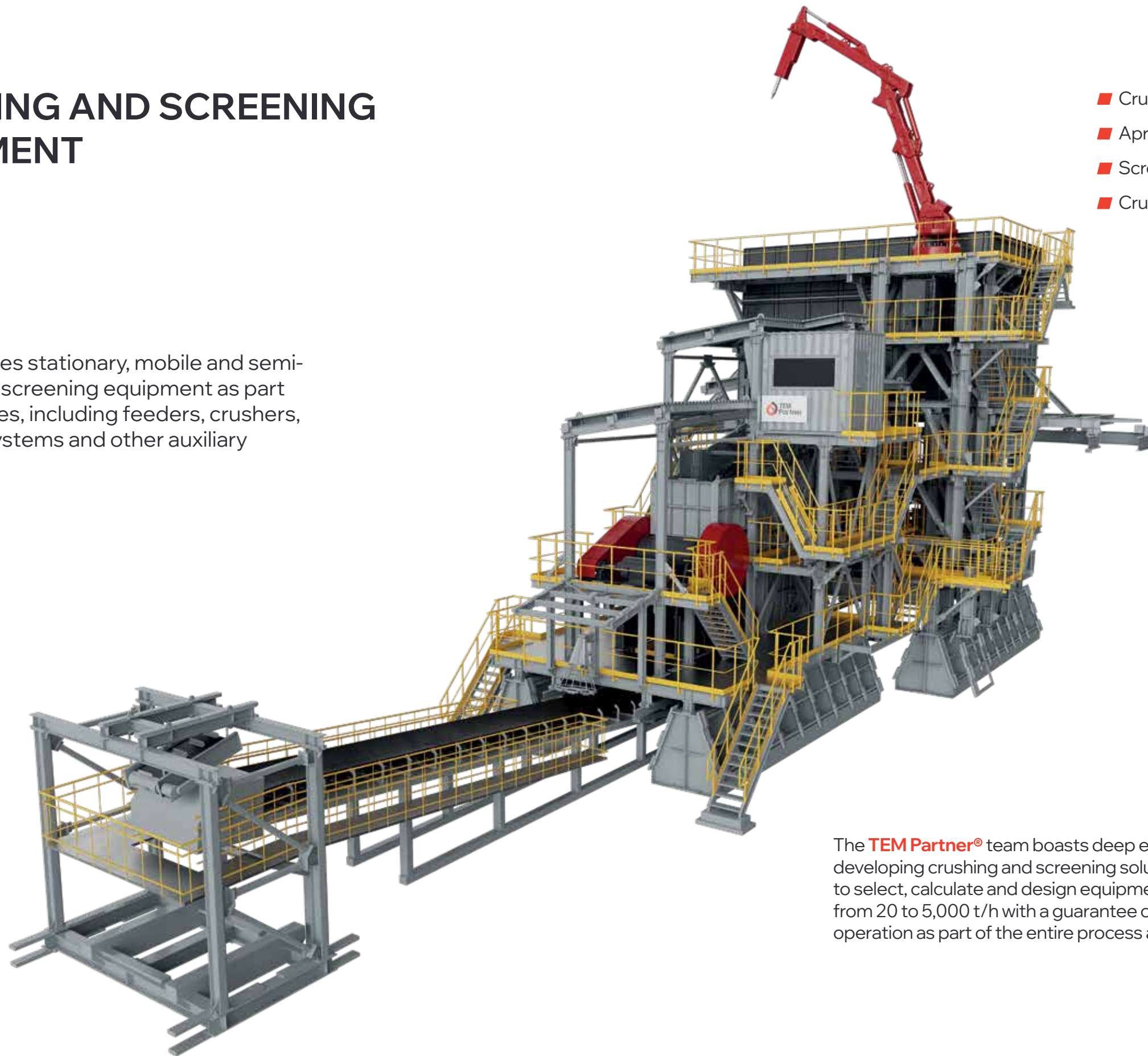
LIFECYCLE SUPPORT FOR PROJECTS

We know how to optimize the production process, monitor product quality and are ready to provide technical and service support to our customers throughout the project lifecycle. We are constantly working on improving our equipment and expanding our product range, based on what businesses really need.



01 | CRUSHING AND SCREENING EQUIPMENT

TEM Partner® supplies stationary, mobile and semi-mobile crushing and screening equipment as part of crushing complexes, including feeders, crushers, screens, conveyor systems and other auxiliary equipment.



- Crushing and screening complexes
- Apron feeders
- Screens
- Crushers

The **TEM Partner®** team boasts deep expertise in developing crushing and screening solutions and is ready to select, calculate and design equipment with a capacity from 20 to 5,000 t/h with a guarantee of effective operation as part of the entire process area.

02 | GRINDING

We offer the most advanced and reliable technologies of grinding with operating medium mixing and an advanced development program supplying high-tech equipment for the entire grinding circuit.

PACKAGED SUPPLIES

- Audit and comprehensive analysis of existing ore processing arrangements to identify production bottlenecks and select modern and economically viable solutions
- Turnkey supply of ore processing equipment, from coarse crusher feeders to the beneficiation section, with all equipment aligned
- Thorough inspection of the manufacturing process for all equipment, including the quality of metal used, welded joints, machining, etc.
- Design, supply and setting-up of equipment for grinding control area at the high level of the processing plant management

VERTICAL MILLS FOR FINE AND ULTRAFINE GRINDING

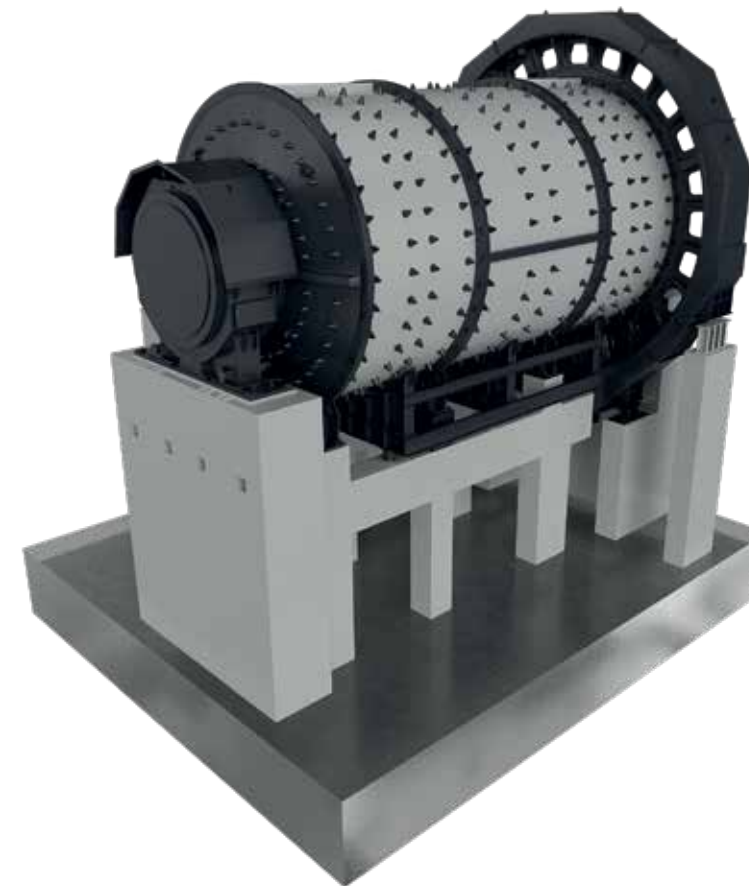
Vertical mills for fine and ultrafine grinding to achieve maximum extraction of valuable components.

We offer two types of mills with grinding media agitation: Medium Speed Tower Mill /MS-TM/ and Medium Speed Agitator Mill /MS-AM/, the optimal solution for any circuit.



CONVENTIONAL HORIZONTAL MILLS

- AG / SAG mills
- Trunnion overflow / grate ball mills
- Trunnion rod mills



AUXILIARY EQUIPMENT

- Liner handlers
- Hydraulic hammers for bolt backing-out
- Ball dosing units, etc.
- Systems for analytical monitoring of grinding unit efficiency



Ready-to-use units with the alignment of all process equipment and automation systems



Ore processing systems with high-pressure grinding rolls

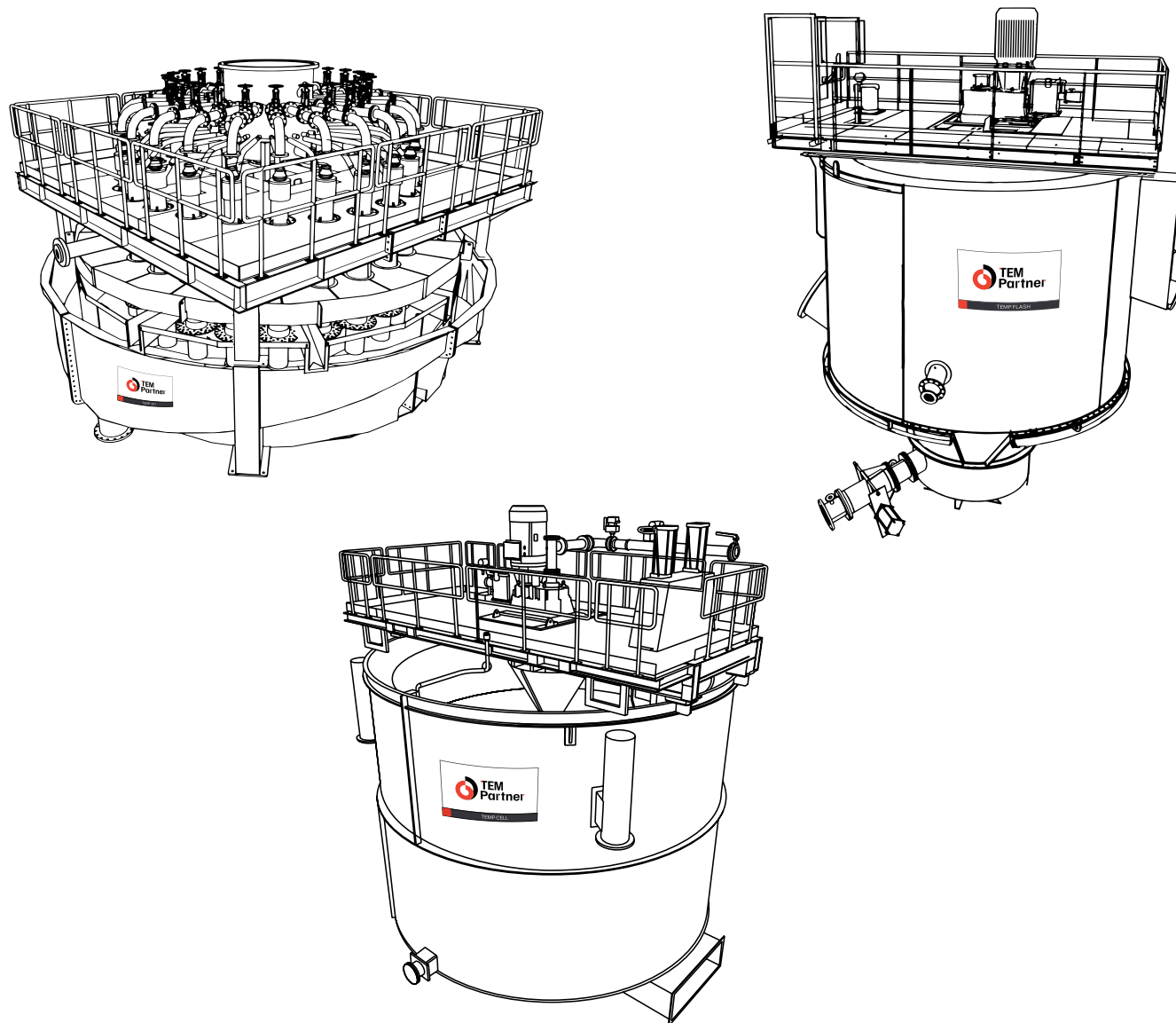


Automated cyclone pumps

03 | FLOTATION

TEM Partner® is a Russian developer and manufacturer of high-tech equipment for primary and flash flotation sections. We not only supply equipment, but also provide process guarantees, perform installation supervision and commissioning.


TEM Partner® supplies equipment for the entire flotation cycle including automation systems, pumps, regrind mills, cyclones and other equipment.





TEMP CELL MECHANICAL-AIR FLOTATION CELLS


- Leading flotation technology
- Chamber volume of 5 to 630 m³
- Symmetrical design
- TEMP FLOW agitation mechanism
- TEMP DRIVE
- Special froth launder structures
- Preventing accumulation of valuable components in the circulation circuit



 Russia's only manufacturer of large flotation cells with a working volume of 5 to 630 m³

 The only manufacturer of flash flotation cells in Russia

 Selection of equipment using advanced software and technology. State-of-the-art laboratory facilities

 Original TEM Partner® drawings

TEMP FLASH FLASH FLOTATION CELLS

- These are used to recover opened valuable minerals in the grinding and screening circuit
- Effective particle extraction in particle size classes of 50 to 800 µm P80
- Increased target metal yield
- Reduced oversludging of valuable minerals
- Improved quality of finished concentrates
- Productivity of 80 to 1800 tons of ore per hour
- The special TEMP FLASH FLOW agitation mechanism is designed to work in aggressive environments with large particles of material and a high solid content
- The TEMP FLASH double-yield technology optimizes operation of the grinding circuit with maximized production efficiency and minimized impact on water balance



TEMP JET EJECTOR FLOTATION CELLS

- It is used in the beneficiation of coal, non-ferrous and precious metals.
- Highly efficient flotation technology with low operating costs, stable operation and easy control
- High quality concentrate
- High performance with a small space occupied
- Easy process and parameter control
- Low maintenance costs
- Absence of major mechanical components typical of traditional flotation cells
- No forced air supply is required to carry out the process
- Easy flotation process adjustment
- Maintenance without stopping a flotation cell



Cutting-edge automation and control systems



20+ years of experience in design and manufacture of flotation cells



Proven extraction technologies



Russia-based production facilities



TEM Partner® supplies equipment for the entire flotation cycle including automation systems, pumps, regrind mills, cyclones and other equipment

04 | THICKENING

TEM Partner® is a leader in the design, manufacture and supply of state-of-the-art, high-efficiency thickening equipment.



Thickeners are custom-designed for each individual project given pulp and location characteristics.

The design process begins with dynamic thickening studies on a laboratory setup with a diameter of 100 mm.



TEM PARTNER® RANGE OF THICKENING EQUIPMENT

- TEMP Conventional conventional thickeners
- TEMP High Rate high efficiency thickeners
- TEMP High Density high density thickeners
- TEMP Paste paste thickeners
- TEMP Clarifier clarifiers



Ø UP TO 100 M

- High performance with small diameters
- Smaller footprint
- Correct selection of the thickener type and size based on tests, with process-related guarantees
- Optimal flocculant consumption
- Effective feeding system
- Robust design
- Long service life with no need to replace parts
- Hydraulic drives and rake lifts protect thickeners against damage
- Low power consumption
- Simple thickener control and management system

05 | FILTERING

TEM Partner® supplies filtration equipment in partnership with YON, the Turkey-based manufacturer.

TEM PARTNER® RANGE OF FILTERING EQUIPMENT

- Horizontal chamber and diaphragm press filters
- Vacuum drum, disk, belt filters








HORIZONTAL PRESS FILTERS

- Chamber and membrane type, both standard and customized sizes
- Wide range of filter plate sizes of 250x250 mm to 2,500x2,500 mm from the world's leading manufacturers Lenser, JVK, Klinkau
- High filtration pressure of 8 to 16 bar
- Fully automated press filter operation control system

FULL SET OF AUXILIARY OPTIONS

- Quick plate opening system – low operation cycle time
- Automatic shaking system
- Automatic fabric washing system – extended service life and high filtering ability of fabrics
- Feed pumps for chamber and diaphragm installations
- Filtrate and wash pumps
- Cake unloading and transportation conveyor
- Tank equipment
- Automation



-  Индивидуальное проектирование
-  Испытания по фильтрации
-  Оптимальные технические решения
-  Полностью автоматизированные технологии фильтрации
-  Технологические гарантии
-  Высокие показатели скорости фильтрации
-  Широкий диапазон размеров

06 | SLURRY PUMPS



TEM Partner® is an exclusive partner of YPT, the Turkey-based pump manufacturer. We offer high-performance and reliable centrifugal pumps for pumping of viscous and abrasive media at mining, metallurgy and coal industry operations.

MTP AND MT SERIES SLURRY PUMPS

- Heavy duty single casing pumps
- Various types of impellers – semi-open, closed, vortex
- Ability to use multistage pumping schemes
- Capacity of 10 to 1,000 m³/h,
- head up to 90 m with metallic parts, up to 50 m with rubber-lined parts
- Pump suction diameter of 50 to 300 mm



AHM SERIES SLURRY PUMPS

- Double-casing pumps for particularly harsh conditions with highly abrasive materials
- Interchangeable wear resistant high chromium alloy or rubber linings
- Sliding frame for easy maintenance
- Reduced pump suction speed for minimal damage from large and heavy particles
- Capacity of 1,000 to 2,500 m³/hour, head up to 60 m



DK SERIES VERTICAL FROTH PUMPS WITH CONICAL TANK

- Single autonomous unit, easy installation and connection
- No need for special foundations
- The pumps can run dry during unlimited period of time
- Minimal maintenance costs, no need for water supply to the seal
- Capacity of 750 m³/h
- Head up to 30 m



DL SERIES VERTICAL SEMI-SUBMERSIBLE PUMPS

- Reliable pumping of materials from open sumps
- The pump has no shaft seals or submersible bearings and does not require water supply
- Impellers of various types – semi-open, closed, vor-tex
- Immersion length – 800, 1,200, 1,500, 1,800 mm
- Capacity of 5 to 1,000 m³/h
- Head up to 50 m



07 | ENGINEERING | AUTOMATION | SERVICE

The mission of **TEM Partner®** is to ensure the efficient operation of businesses. To make this happen, we employ the integrated approach, from expert knowledge and experience in the selection of process solutions, design of equipment and production sites to the supply of equipment, spare parts and service support for projects.

ENGINEERING AND DESIGN

THE TEM PARTNER® IN-HOUSE ENGINEERING CENTER PROVIDES:

- designing thickening and flotation equipment
- designing various types of equipment drive mechanisms
- designing production lines
- developing analyzers of chemical element concentrations in pulp and on-line and balance sampling systems

In the course of developing, manufacturing and supplying equipment, we place the main emphasis on the quality of our solutions - the equipment must ensure high performance and reliable operation.








The pre-design stage plays a significant role in ensuring the quality and reliability of solutions: process engineers determine the dimensions of equipment and process parameters of machines based on calculations, laboratory and pilot plant tests. **TEM Partner®** engineers and designers have a wealth of experience in designing mining and processing equipment for plants around the world and the most advanced software available.



PROCESS AUTOMATION

All **TEM Partner®** equipment comes with proprietary, custom control tools to improve the performance, safety and energy efficiency of flotation cells and thickeners.

To implement control systems, platforms of domestic and foreign suppliers of automation system equipment are used.

-  Integrated solutions for production automation
-  Automation systems engineering
-  Drive control systems
-  Instrumentation
-  Industrial automation
-  Industrial data networks
-  Developing software for automation systems

SERVICE SUPPORT

50+ service specialists and process engineers from **TEM Partner®** provide service support for production sites

- Field technical and process audit
- Experience in arranging service maintenance of both individual equipment and production complexes with TEM Partner® technicians and process engineers permanently available within the framework of long-term service support program.
- Conducting tests and selecting the correct engineering solution
- Supervised installation and commissioning works
- Training of enterprise employees
- Service support during the warranty and post-warranty periods
- Supply of spare parts for TEM Partner®'s proprietary equipment and equipment from foreign manufacturers, the possibility of organizing a consignment warehouse with the involvement of service specialists



T ECHNOLOGY
E QUIPMENT
M ANUFACTURING
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