

# TAKRAF<sup>®</sup>



## **BULK MATERIAL HANDLING EQUIPMENT**

Optimal Solutions & Technologies

*Innovation out of tradition – It pays to talk to a specialist!*

## PRODUCTS AND SERVICES

### Mining Systems and Equipment

- Complete Mining Systems
- Bucket Wheel Excavators
- Bucket Chain Excavators
- Crushing Plants (incl. IPCC systems)
- Apron Feeders
- Belt Conveyors (incl. gearless drive)
- Belt Feeders
- Belt Wagons
- Mobile Conveyor Bridges
- Spreaders
- Transport Crawlers
- Cable Reel Cars
- Shifting Heads

### Bulk Material Handling

- Stockyard and Disposal Facilities
- Reclaimers
- Scrapers
- Stackers
- Combined Stacker/Reclaimers
- Wagon unloading
- Wagon/truck loading
- Belt Conveyors (incl. gearless drive)
- Tube Conveyors
- Ship Loaders
- Ship Unloaders

### Minerals Processing Equipment

- Roll Crushers
- Sizers
- High Pressure Grinding Rolls (HPGR)
- DELKOR Thickeners
- DELKOR Horizontal Vacuum Belt Filters
- DELKOR Filter Presses
- DELKOR BQR Flotation Cells
- DELKOR Belt Linear Screens
- DELKOR Apic Jigs

### Services and Components

- Project Development Services
- Fabrication and Components
- Construction and Commissioning
- Technical Services and Spare Parts



TAKRAF Group, through its established and well-known brands, TAKRAF and DELKOR, provides innovative technological solutions to the mining and associated industries. We leverage our experience, acquired over more than a century, to provide equipment, systems and services that best satisfy our clients' mining, comminution, material handling, liquid/solid separation and beneficiation requirements. Owners and operators around the world trust our engineered solutions to lower the total cost of ownership and reduce environmental impact by improving efficiency with safe and reliable equipment. For sustainable solutions backed by expert service you can rely on TAKRAF Group. Visit us at [www.takraf.com](http://www.takraf.com).

**We at TAKRAF Group are committed to environmental and social sustainability in all our business interactions and have adopted a Zero Harm approach under our global safety promise.**

Owners and operators around the world are confident that TAKRAF Group provides the most suitable solution to their unique project requirements. We assist our clients in overcoming the most complicated challenges in transforming the resource industry towards a sustainable future. We focus on specific areas that are critical for reliable and sustainable operations, as it is here where we best support our clients with innovative solutions that save energy, lower environmental impact and meet or exceed operational requirements.

We are recognized as the world's leading technology provider when it comes to run-of-mine and bulk material handling. Our TAKRAF brand portfolio ranges from overburden removal, to raw material extraction, comminution, conveying, loading/unloading, processing, homogenizing, blending, storage and final loading for onward shipment.

We leverage our global organization and aggregate our extensive expertise by offering a unique combination of both application experience and product based knowledge. Clients therefore benefit from direct technical discussions with our local specialists, who are able to draw upon this expertise and provide the most suitable local solution and service that enhances safety, improves sustainability, decreases costs and increases efficiency.

Our commitment is summarized by:

Safety | Reliability | Innovation | Sustainability



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## BULK MATERIAL HANDLING EQUIPMENT

As a major competitor on the international market, TAKRAF offers system solutions for handling and transporting bulk materials.

The employment of the latest techniques in planning, design and production ensures fast delivery. Alongside individual machines, we also supply complete installations for the handling and storage of raw materials and other bulk goods.

We will advise you on-site to be able to take into account territorial specifics and regulations right from the start.

Our installations take care of unloading, storage, blending, sampling and reloading.

Up-to-date manufacturing techniques ensure that TAKRAF machines and systems for bulk handling are top quality products - providing you with benefits such as high output, high efficiency and high availability.



Our quality assurance system, coupled with efficient project management, ensures that the customer receives consistently high quality, and not only for products manufactured in our own factories.

We ensure economical operation of our individual machines and systems, working reliably under all climatic conditions and with low impact on the environment.



TAKRAF's technical planning services focus on:

- Advice during solution development
- Feasibility studies
- Studies into capacity expansion and the refurbishment of existing facilities

We perform services in the planning and realization phases, such as:

- Complete supply, erection and commissioning of bulk material facilities
- Project management and quality control
- Preventive and regular maintenance refurbishment and modernization of existing facilities



TAKRAF supplies:

- Complete systems for bulk material handling, transportation and storage, including requirements of sizing, blending and sampling
- Coaling and ash removal systems for power plants
- Handling systems for technological processes
- Port handling systems
- Stackers
- Reclaimers
- Stacker/reclaimers
- Scraper reclaimers



## COALING AND ASH REMOVAL FACILITIES

TAKRAF has decades of experience in this field.

Our technical know-how ensures the incorporation of optimum solutions in power plant construction.

We supply machines and complete systems for:

- Coaling facilities
- Stockyard management facilities
- Systems based on delivery by rail or road
- Mechanical conveying in ash removal facilities







## FACILITIES FOR THE TREATMENT AND TRANSPORT OF BULK MATERIALS

TAKRAF offers tailored solutions for various requirements and numerous applications.

For the treatment and transport of bulk materials, we supply:

- Process-controlled facilities with continuous or discontinuous handling
- Stacking and reclaiming equipment
- Interim transport facilities
- Facilities for the transport of sensitive materials



The TAKRAF pipe conveyor has been specially developed for the environmentally friendly transport of bulk materials.

In the field of copper mining we offer complete solutions for Heap-Leach Systems.



Powerful stockyard systems complete TAKRAF's range of bulk material handling products.

The line-up includes:

- Stackers
- Reclaimers
- Scraper reclaimers
- Stacker/reclaimers
- Facilities for blending and circular stockyards for all capacities



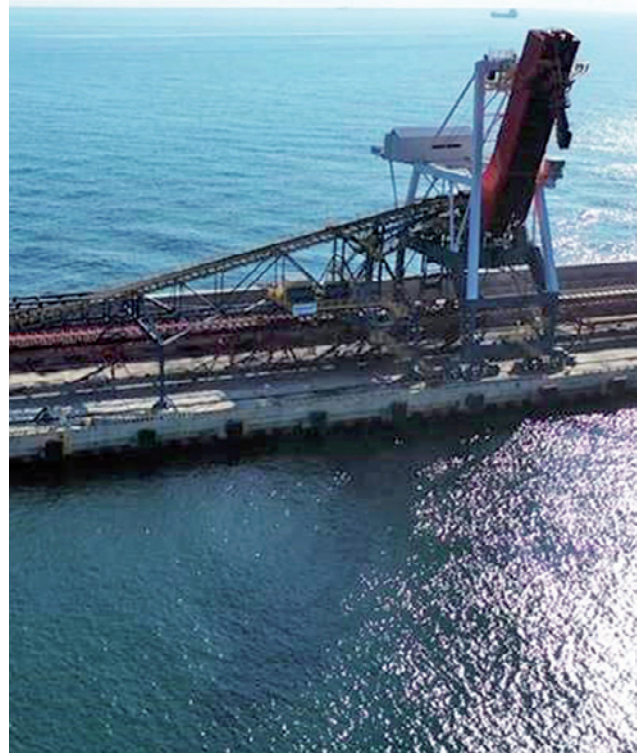
## FACILITIES FOR BULK MATERIAL HANDLING AT PORTS

TAKRAF's unloading, storage and loading systems for sea and river ports are always designed as custom solutions.

TAKRAF's port facilities are used throughout the world. With their high technical standards and state-of-the-art design, our systems satisfy the tough demands faced by modern ports.

TAKRAF's product range includes:

- Ship to shore handling facilities using ship unloaders featuring grab operation
- Equipment for the continuous mechanical transport of bulk goods on land, including loading facilities
- Shore to ship handling facilities with mechanical slewing ship loaders featuring shuttle conveyors for sensitive bulk materials







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