HANDLING
SINCE 1908

BEDESCHI
PADova
1908
Providing reliable and innovative solutions for our customers is our mission since 1908.
Bedeschi was established in 1908 and is today one of the oldest European companies in its industry. At the beginning of the XX century the founder, Guglielmo Bedeschi, designed and built a new “extruder” awarded with the Certificate of Honor and the First Degree Gold Metal, during the international Expo in Turin 1909. Since then the Company has grown and extended its fields of application without losing the advantages and flexibility of a family company. Today the fourth generation is running the Company even if the Group dimension is now comparable to the biggest players in the industries.

Bedeschi diversified Business Units can provide Customers with complete turn-key solutions for:
- Bulk Handling, Marine and Mining
- Container Logistics
- Bricks
More than a century of Bedeschi

Diversification is the Group major asset to nourish its continuous innovation attitude in products and service to tailor fit Customer’s needs.

TAKING THE BEST FROM THE PAST TO BUILD THE FUTURE.
Our Values

We strongly believe that our success relies on PEOPLE. The long lasting relationships with our Customers and our teammates are able to keep us growing every day.
We care about future

A company must be one of the most important actors of social development and environmental protection. We, at Bedeschi, consider this imperative for not only our manufacturing facilities but also for all the solutions we provide to our customers and partners.
We assist you from the very beginning for the entire life of the project and over!

Think Design Build Run

We cover each step of the project execution from the feasibility study and basic design to the assembly, installation, start up and for any need after commissioning, while the plant is in operation. We proudly offer real tailor made solutions for our Customers, optimizing investment returns means well designed installations and innovative mechanical solutions. Our products rate best in the market in terms of energy consumption operational costs and pollution control.
Handling

Leveraging on our experience with moist, plastic and sticky material with our proprietary bucket solutions we can offer now a wide variety of tailor-made solutions to transport and store any type of bulk material like coal, clay, iron ore, limestone, fertilizer, clinker, cereals and many others, covering any capacity from 100 to 10,000 ton per hour. Our well-known double rotor technology for our crushing equipment ensures best performance with wet and sticky materials together with the lowest fines production, making it the perfect choice in a wide range of industrial solution from coal mining to cement raw material handling. Growing scale of international transport of bulk material requires quick and flexible solutions to react to fast changing market demand. Our transhipment expertise is the best answer combined with our on shore applications.
Bulk Handling
STK R - TRAVELLING AND SLEWING STACKERS
Stackers

APPLICATIONS:
- Different kind of application, both indoor and outdoor, up to 7000 m³/h
- Travelling, Slewing, Luffing, Portal on rails and suspended configurations for any type of material (minerals, limestone, clay, slags, food, fertilizer and others)
- Possible stacking methods: cone, chevron, windrow and strata
PAL P - PORTAL SCRAPER RECLAIMER
Reclaimers

- A wide variety of bucket and blades reclaimers for both dry and sticky materials and for indoor and outdoor applications
- Different type of configurations (Traveling, Slewing, Portal, Frontal and Lateral)
- Adaptable to different type of materials (minerals, limestone, clay, slags, food, fertilizer and others. Both for longitudinal and circular storages (with or without walls)
- Different reclaiming solutions adapted to customer needs: blades for dry materials and buckets for sticky materials (Exclusive Bedeschi Solution)
Storages

CIRCULAR STORAGES
LONGITUDINAL STORAGES

Different applications indoor and outdoor, with blending solutions up to more 10. Longitudinal and circular storage for any kind of materials.
VERTICAL WALLS BLENDING STORAGE

Bedeschi BEL C system is able to minimize the space used, guarantying a very effective space occupation ratio. Moreover this special application, with or without walls, provides high homogenization of material in stock and is particularly effective with most and sticky materials.
Conveying Systems

Belt Conveyors

- Specific solutions for Cement, Lime, Chemical, Coal, Mining products, Oil & Gas, Aggregates, Grains, Cereals and other Alimentary products
- Overland conveyors with energy generative solutions
**PIPE CONVEYORS**
- Material is fully enclosed for highest environmental protection
- Flexible path design with curves
- High capacity up to 1500 tph
- Possible two way transport

**BOX CONVEYORS**
- Conveyor is completely enclosed in order to avoid dust emissions and contamination (i.e. rain) from outside to inside
- Inspection doors are located on all the key parts of the machine
- Loading point connections are sealed with elastic rubber
- Easy maintenance
Elevators

- Belt and Chain Bucket Elevators
- Special design for offshore applications
- Specific solutions for Cement, Lime, Chemical, Coal, Mining Products, Aggregates and Others

Hoppers

- Tailor made
- Robust
- Fixed or mobile on rails or rubber tyres
- Well proven on a wide variety of products ranging from coal, clinker, limestone, ores, chemicals, fertilizers and grains
Eco hoppers

Bedeschi Eco-Hopper is an economical and flexible solution, able to satisfy the highest environmental standards, thanks to the capability to minimize the dust pollution ensuring the maximum efficiency during the grab discharge cycle.

- Scalable to different grab sizes (from 1 to 37 cubic meters)
- Perfect with any kind of material equipped with pulse-jet bag filter with high filtration efficiency and less compressed air consumption
- Discharge to conveyor, truck or Bedeschi Apron Feeder
- Movable on rubber tyres
Case Histories
ENEL
(Italy)

Bedeschi supplied Enel with 2 circular storages in 2011; the Group completed the automation of the Federico II bunker, in Brindisi (IT). The project, one of the most innovative in Europe, consists of 2 indoor domes completely computerized for the storage and reclaiming of coal, feeding the whole plant. The domes, with a diameter of 150 m and the height of 45 m each, are ones of the biggest in Europe. The handling system, supplied by Bedeschi, satisfy the higher design, functional and safety standards.
Turkmenbashl Port
(Turkmenistan)

Turkmenistan Government awarded to GAP, one of the most important Turkish contractors, the construction of a brand new port for passengers, containers, bulk materials including a ship building and repair facility.

Bedeschi as leading provider of bulk handling solutions was awarded the supply of the turn key bulk material handling system, with two lines for grain and bulk materials. Highest environmental standard and state of the art construction and automation standard are the basic requirements to participate in a project that is going to be the calling card of such an important emerging Country.
Vista Sand (United States)

Bedeschi was awarded the contract for the supply of a storage and reclaiming system of frac sand (40-70 meshes) for Winkler County Texas plant. The supply consists of two orthogonal storage systems -50,000 and 100,000 Tons each-, completely automatic. This is another proof of Bedeschi continuous effort toward innovation and up-to-date technology in different industries. Each storage provides a stacking and reclaiming capacity of 900 ton/h thanks to the installation of 2 stackers and 2 portal reclaimers.
Off Shore

Offshore transshipment essentially means transfer of dry bulk cargo like coal or iron ore or other bulk material from large vessels into smaller vessels or vice-versa. The transhippers do have a distinct advantage over shore terminal because they can be implemented without the need for carrying out dredging, to enable large vessel to come alongside, in addition to not be cost prohibitive which the shore terminals are. Dredging, which is environmentally sensitive issue creates a havoc with marine fauna in addition to be extremely expensive. Moreover and most importantly, the implementation time of the floating terminal is much shorter as compared to the shore terminal. The floating solutions are environmentally safe too.
On Shore

Every shiploader is designed to match the specific project requirements and the client’s specific needs. This is why Bedeschi supplies customized solutions to maximize the efficiency and environmental protection. Some shiploaders have shuttle type delivery boom with reversible belts, while others have retractable mechanism capable to extend the outreach; some have been fitted with straight delivery spout while others have incorporated a distributing chute designed to deliver cargo in all parts of the holds in order to avoid broken spaces. Clients rely on Bedeschi experience to export cement, clinker, coal, petcoke, iron ore, urea, bauxite, limestone and fertilizers.
Shiploader

Bedeschi still proudly offers TAILOR MADE solutions for its Customers, highly standardized components manufactured in its Italian workshop are combined with Best engineering to optimize investment returns. This means well designed installations and innovative mechanical solutions for the wide range of machinery the company can offer: slewing luffing & telescopic SHL, slewing luffing & travelling SHL and Luffing & Travelling (A-Frame).

SLEWING LUFFING AND TELESCOPIC SHL
SLEWING, LUFFING AND TRAVELING SHL
LUFFING AND TRAVELING SHL (A-FRAME)
TRIMMING SPOUT

TELESCOPIC CASCADE CHUTE

BULK THROWING MACHINE

TELESCOPIC AND TILTING CHUTE
Rubber mounted travelling SHL

Simpler solution to avoid civil works on the dock.
Ideal for lower capacity and smaller vessels.
Modular trucks discharging hopper or interface
with upstream conveyors.
Self-propelled solutions.
Shipunloader

Capacity from 100 to 1500 tph rails or tyres mounted Chain unloader for minimum power consumption, gentle material handling and environmental protection. Kick in, Kick out for optimal hatch coverage. Highest average unloading rate thanks to very low profile of the elevator foot.
Vale (Brazil)

ORE FABRICA and ORE SOSSEGO are the biggest transshipments all over the world conceived for VALE, the world leader producer of iron ore. Due to the economies of scale to handle materials using cape-size ships (too big to enter many ports) Bedeschi conceived floating ports off-shore providing the ships with belts and cranes to allow the handling of raw material toward ships or barges with reduced dimensions, allowing their entrance and loading on the quay. Even this machine is not something new, Bedeschi and Vale carried out these systems with higher daily capacity (more than 100,000 tons/day) complying with all the most strict environmental standards.
Yara Le Havre (France)

Bedeschi has supplied the raw materials handling machine for the new Le Havre port shiploader for Urea, belonging to Yara France. The contract is an EPC based including commissioning and startup activities. The shiploader is designed for loading at a rate up to 250 t/h and vessels with a capacity up to 20,000 DWT. The shiploader is luffing and travelling type and it is equipped with the traditional belt conveyor boom.

The machine was installed in substitution of the existing one at the harbor terminal, located a few kilometers away from the Le Havre Yara plant and will become the connection point for the final products export operations.
Cereal Docks (Italy)

Bedeschi supplied an order in Italy (Marghera, Venice) for a rail mounted continuous mechanical Shipunloader CSU 800/29,5 for soya beans. The equipment, with a rated capacity of 800 tons/h can unload ships up to Panamax size, had been built and tested in the Italian Bedeschi workshop, which offers the latest technological tools and facilities for the perfect machining and testing of these special items.

The scope of supply consists in a fully erected shipunloader, the example of Bedeschi capability to follow the customer requests and the market trends for this kind of equipment.

Fully erected solution, means the machine hasn’t to be erected on site, but will be delivered already assembled directly to its final working position. The fully erected approach has been proposed to ensure a higher standard of convenience to the customer minimizing the assembly and commissioning time at site, very important especially when destination dock is difficult to be served from the land or when the activities cannot be interrupted.
Mining
Mining products

Apron feeders
- Inclined Feeders
- Horizontal Feeders
- Width up to 3000 mm
- Length up to 20 mt
- Hinged and curved pans by frontal scraper
- Perfect pans cleaning

Normal duty crushers
- For sticky materials compressive strength up to 800 kg/cm²
- Diameters up to 2000 mm
- Width up to 3000 mm
- Output up to 2500 t/h
- Scrapers for rollers cleaning

Heavy duty crushers
- Up to 2000 kg/cm² material compressive strength
- Diameters up to 1200 mm
- Width up to 3200 mm
- Output up to 2500 t/h
Stationary units
- Combination of inclined or horizontal apron feeder and roller crusher
- High volume Receiving hopper up to 200 m$^3$
- Rear and side feeding of the hopper by dumpers

Semi-mobile units
- Skid mounted combination of inclined apron feeder and roller crusher
- Hopper’s feeding by payloader

Mobile units
- Crawler mounted combination of inclined apron feeder on roller crusher
- Self propelling units by diesel generator and hydraulic motors
- Hopper’s feeding by payloader
The heart of the mining process: roller crusher/sizers

Functioning principle.
Working parameters: outlet grain size, power and maintenance.
Functioning principle

The rotors turn in opposite directions in order to allow the material to flow through the gap between the two toothed rollers. Rotating speed of the roller sizers is slightly different (10%-20%) in order to crush through compression strength and tensile and shear stress.

The peripheral speed of the rollers is slow, between 1.5 and 3 m/s, when compared to the impact machines speed, which is over 15 m/s.

When the raw materials are plastic, a higher differential speed (20%) is selected. Raw materials are crushed by either compression strength or tensile and shear stress.

CRUSHING BY SHEARING AND TENSILE STRESS
When hard and rocky materials are processed, the differential speed is low (10% or less) to ensure that the compression strength effect is successful.

DIFFERENT SPEED FOR OBTAINING BOULDER BEST CRUSHING POSITION
The low peripheral speed is a particularly relevant factor because it allows for a remarkable reduction of the wear rate of sizer. Roller design allows a very high materials reduction ratio up to 1 to 10 at each crushing stage. Double roller sizers are equipped with scrapers which make it possible to keep the grooves and the work roller surface perfectly clean, avoiding any kind of clogging even with very sticky materials.

Sizers can be installed to suit different installation requirements, even one on top of the other, with the primary crusher feeding the secondary crusher directly through a chute.
Working parameters
Outlet grain size, power and maintenance

In double roller sizers crushing technology, outlet granulometric size depends on:
- The gap between the two rollers
- The size, shape and number of teeth

The most important and qualifying tooth characteristics are:
- Number of teeth on each roller and position on the roller
- Tooth shape
- Tooth thickness

The wide selection of the number and the shape of teeth allows a great crushing flexibility. Low peripheral speed means low power consumption:

many application tests confirm an average power absorption of 0,3-0,4 kWh each Ton crushed. Another qualifying characteristic of the Bedeschi sizers, compared to the impact crushers, is that thanks to the design and operational qualities they are able to generate, during the process, a low quantity of fines particle

even with hard and rocky material. This is an important advantage when the crushed material has to be operated by a modern vertical mill that works at high efficiency only when feed by granular material and minimal amount of fines particles.
Case Histories
Nalco (India)

National Aluminum Co., the Indian giant exploits several bauxite mines in central India and since 1985 has chosen Bedeschi as technological partner for all their crushing needs.

Bauxite can result in hard and sticky agglomerates sometimes very difficult to crush, Bedeschi experience with such difficult applications has brightly solved their needs since the very beginning.

This mutual partnership resulted in the supply, among others, of three giant double roll crushers RL 1600/2000, the latest being delivered these days.
Shurovo (Russia)

Everybody knows that raw materials are natural products and each individual project is a new experience and a fascinating challenge and require specific solutions, especially when we treat moist materials both in hot and cold countries. Clearly, the conditions can be even worse in very cold countries, where very wet raw materials freeze, thereby causing further handling problems.

In this case Bedeschi supplied a complete Mobile Crushing Unit to Shurovsky Cement in Russia. Bedeschi has a big know-how and a hundred year experience, in handling moist materials in extreme situation and creating new plant fit for cold countries, like in the former USSR countries or in Eastern Europe. Treating moist sticky materials has to be paid attention to the design of these machines, with special regard to size, shape, lining and construction features.
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