

INNOVATION FOR THE FUTURE

创 | 新 | 成 | 就 | 未 | 来



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集团产品册

Corporation Product Album

TIDFORE 泰富

创 新 成 就 未 来

INNOVATION FOR THE FUTURE

INNOVATION SPEED COOPERATION PASSION

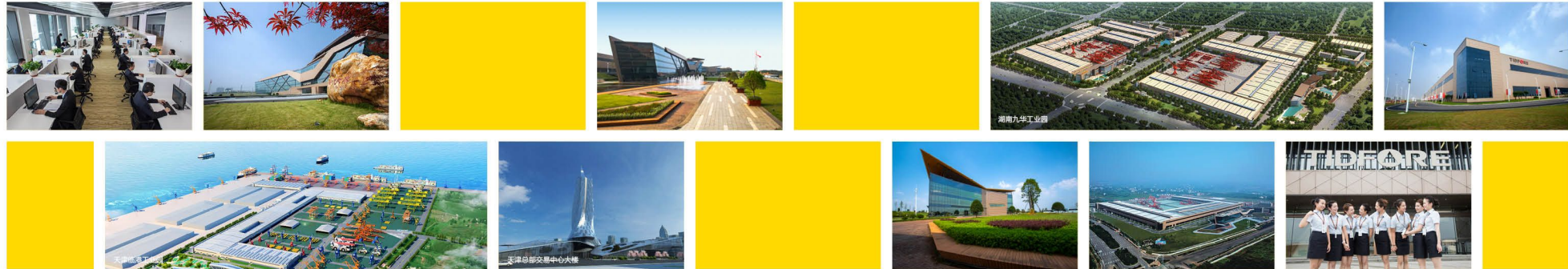
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IMAGE PANORAMA

集团篇



集团介绍

泰富重装集团是一家以先进装备制造及系统配套服务为主的创新型企业集团，主要为客户提供散状物料输送装备系统、港口及海工成套装备的设计、研发、制造、销售、安装、调试、售后服务、融资租赁及配套服务。

公司下设泰富重工、泰富国际工程、泰富国贸、泰富海工、泰富金融租赁、中诚国际等 20 多个子公司，在北京、上海、香港等地成立了分公司，在巴西里约、印度加尔各答、澳大利亚悉尼、韩国浦项等国家设立了办事处。

2014 年，公司的工业总产值突破了 100 亿元大关。公司斥巨资在天津打造全球最具竞争力的一站式国际港口、海工高端装备展览、交易、服务中心及制造、再制造基地，实现了从传统制造业向制造服务型企业过渡的关键转型；战略重组了中诚国际设计院，成功打通了水运系统总包全链条；发起设立的华运金融租赁股份有限公司是我国第一家由民营企业发起设立的金融租赁公司，也是第一家由制造业企业发起设立的金融租赁公司，迈出了“产融结合”的战略步伐。

Group Introduction

Tidfore Heavy Equipment Group is an innovative enterprise mainly involved in advanced equipment manufacture and system supporting services of bulk material handling system, port and marine engineering, covering design, research, manufacture, sales, installation, commissioning, after-sales service and financial leasing.

Tidfore is an enterprise which has more than 20 subsidiaries with branches in Beijing, Shanghai, Hongkong, etc. In 2014, the industrial production value of Tidfore has exceeded \$2 billion. It has invested a one-stop integrity industrial park, covering international port, high-end marine equipment exhibition, trading, service center and manufacturing and re-manufacturing base in Tianjin, which has achieved the key transformation from a conventional manufacturer to a manufacturing service-oriented enterprise. In the same year, Tidfore strategically restructured the China Integrity International Oceanengineering Co., Ltd., which successfully straightened out the general contracting industrial chain of the maritime system.

Meanwhile, Tidfore has also initiated Huayun Financial Leasing Co., Ltd, which has stridden the strategic pace of "Combination of manufacture and finance".

湖南九华工业园

湖南湘潭九华工业园由国际顶尖设计师设计并按照德国工艺要求打造，占地面积 146 万平方米，拥有 12 万平米业界最大的露天总装调试坪，是全球最具规模的现代化的散状物料输送设备生产制造基地之一。

Hunan Jiuhua Industrial Park

The company has two green industrial parks: Xiangtan Jiuhua Industrial Park and Tianjin Harbor Industrial Park with a total area of 3,460,000 m². Jiuhua Industrial Park is designed by top international designers and constructed in accordance with German technical requirements with a commissioning yard of 120,000m². It is also the largest-scale manufacturing base for modern bulk material handling equipment.

天津临港工业园

天津临港工业园占地 200 万平方米，拥有 1.6 千米海岸线，是全球最具竞争力的国际港口、海工高端装备展示、交易中心及制造、再制造基地，也是中国工业 4.0 创新交易服务平台，全球近 300 家高端装备企业、金融、保险、投资机构将落户于此，年销售额和交易量可突破 1000 亿元，并能带动环渤海区域上千亿产业的共同发展。

Tianjin Harbor Industrial Park

Tianjin Harbor Industrial Park is the most competitive international port, marine high-end equipment exhibition, trading center and manufacturing and re-manufacturing base covering an area of 2,000,000m² and has a 1.6 km coastline. It is also the Chinese Industry 4.0 innovative trading service platform. Nearly 300 world's high-end equipment enterprises, finance, insurance, investment institutions will be located here. The sales and trading volume are expected to surpass \$20 billion leading to the joint development of the industries in the circum-Bohai region.

INNOVATION TECHNOLOGY

创新技术篇

泰富重装深知，在科研的世界里不进则退
一个成功的工业企业首先要有一个成熟的科研团队
每年持续增长的科研投入
让泰富的前沿技术和未来产品研发始终保持在行业前列

No advancement means going back in scientific world.
A successful industrial enterprise must maintain a mature scientific research team.
Continuous growth of investment in scientific research every year remains the cutting
edge technology and future product development of Tidfore forefront of the industry.



I. Intelligenzation & Informationization Technology

一、智能信息化技术

1、可视化、信息化、智能化料场管理控制平台

可视化、信息化、智能化料场管理控制平台是集料场可视化管理、作业智能化调度、物料和料堆信息化管理、设备自动化作业等多种先进技术于一体的软硬件平台。

1. Visualized, Informationized and Intelligentized Stockyard Management & Control Platform

Visualized, informationized and intelligentized stockyard management and control platform is a combination of such state-of-the-art technologies as visualized stockyard management, intelligent operation control, information-based material and stockpile management as well as automatic operation.

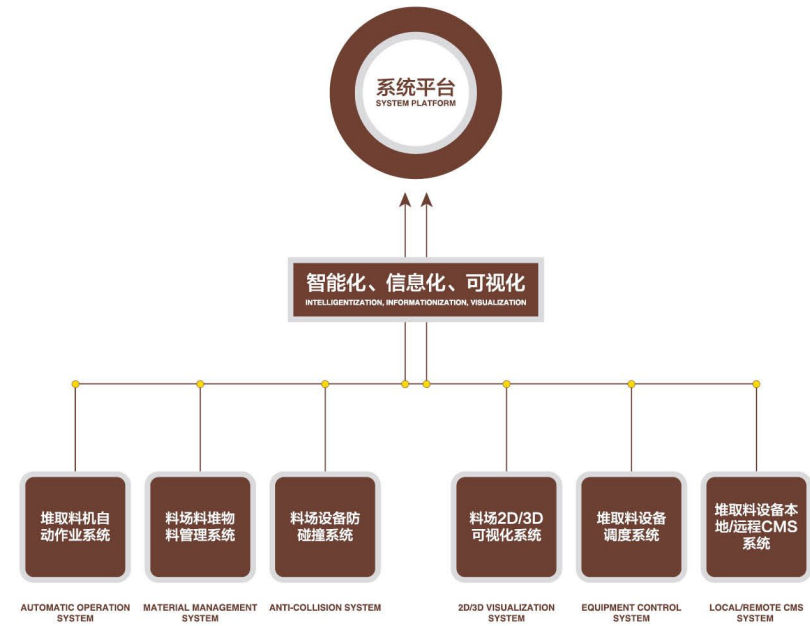


图 智能化、信息化、可视化料场管理控制平台组成
Diagram Composition of visualized, informationized and intelligentized stockyard management and control platform

可视化

可视化主要指料场的可视化、料场设备可视化、作业路径可视化。

堆取料自动作业系统在料场堆取料机上设置有 3 维激光扫描仪，采集扫描数据后通过坐标空间变换后，可得料堆表面网格的坐标值。料场可视化系统在接收料场各台堆取料机提供的局部扫描数据后，将数据进行融合后可以得到料场的整体空间坐标值，从而得到整个料场的可视化模型。

料场设备在堆取作业前和作业中，均可实现作业路径的可视化，操作人员可以非常直观的查看目前作业完成情况，同时在作业过程中系统可以实时更新料堆形状，准确反映料场料堆的变化情况，实现完全意义上的全过程可视化。

信息化

信息化主要是指料堆信息化、设备信息化管理、故障信息化管理。

料场料堆和物料信息管理系统将会追踪每次作业的情况，记录每一个料堆的相关信息，包括物料品种、达到时间、输出时间、作业设备等一系列信息，并采用可视化方式显示给操作人员，同时可利用可视化系统提供的料场模型对料堆进行盘库操作，计算料场物料的库存情况。

堆取料管理系统将会实时采集堆取料设备的相关作业状态信息，并进行集中管理和分析，提供堆取料设备相关的作业状态查看、维护保养计划管理、故障和报警监控，实现设备的信息化管理。

故障管理系统将会将整个料场中各类设备或子系统中的故障信息统一收集到计算机中并进行显示，操作人员可以通过点击故障条目，查看到详细的故障信息，以及相关的推荐解决方案，这样可以及时反馈整个系统的故障情况，并帮助维护人员快速排除故障恢复生产。

料场智能化

智能化主要指作业调度的智能化和设备自主作业的智能化。

在接收到中央作业计划系统下发的作业计划后，堆取料设备调度系统将会自动分析现有料场中对应物料的分布情况、料场区域的分布情况，从而针对堆、取料操作进行自动寻优，智能化推荐一种或多种较优的作业方案。

堆取料自动作业系统可分析现有作业对象区域或料堆的三维模型，从而自主制定具体的运动轨迹和作业计划，启动相关的作业，同时作业过程中系统还将自动分析实时变化的料堆形状，调整控制参数，进而自主地完成堆取料作业，实现真正意义上的无人化自主智能作业。

Visualization

Visualization primarily applies in management of stockyard, equipment and operation route.

Three-dimensional laser scanners are installed on the stacking and reclaiming equipment. The automatic operation system will collect scanning data and formulate coordinate figure of the stockpile. The visualization system will integrate the scanning data and formulate coordinate figure of the entire space so as to form a visualized model of the entire stockyard.

Stockyard equipment operation routes before or under operation can be visualized for operators to acquire current operation conditions directly. The system can also update timely stockpile shape during operation and reflect accurately stockpile variations which contribute to a complete visualized operation.

Informationization

Informationization mainly refers to information-based management of stockpile, equipment and fault.

The information-based management system of stockpile and material will track operation conditions and record relevant stockpile information including material type, arriving time, output time and equipment operation. This can be shown to operators in a visualized manner. Also this system can calculate stock status via stockpile model provided by visualization system.

The stacking and reclaiming management system will collect timely equipment operation information and conduct concentrated management and analysis. It provides such information-based management services as operation status supervision, maintenance and repair schedule management as well as fault and warning monitor.

The fault management system will collect and display entire equipment and system fault information. Operators can acquire specific fault information and recommended solutions by clicking fault entries. Thus the whole system situation is under control and faults can be removed as soon as possible.

Stockyard Intelligentization

Intelligentization mainly refers to that of operation arrangement and equipment autonomous operation.

The stacking or reclaiming equipment system will automatically analyze material and stockyard distributions after receiving operation plans from center operation plan system so as to provide various optimum operation plans.

The stacking and reclaiming automatic operation system is able to analyze current operation areas or stockpile 3D models so as to formulate autonomously specific operation routes and schedules and initiate relevant operations. At the same time, it will automatically analyze in-time stockpile shape variations and regulate control parameters during operation process which realizes unmanned intelligent operation.

2、远程数据采集、诊断、服务一体化平台

一体化平台采用先进的物联网技术打造一个大数据平台，实现远程的数据采集、诊断和远程服务功能。通过将每一台设备的 PLC 系统连入到 Internet 网络，数据服务器可以远程采集相关设备的运行状态、作业记录等相关的数据，从而建立设备运行数据库系统，实时监控设备的运行。

同时建立故障诊断平台，通过对设备运行数据的分析，实现故障发生前的预警，提醒客户进行检查和规避，从而减少客户因意外停机造成不必要的经济损失，提高设备可靠运行时间。

在提供故障诊断功能时，还可以为客户提供比如保养计划、维修计划等相关的服务功能，帮助客户获得更高的售后服务，同时降低客户的维护保养成本。在设备发生故障客户无法排除时，可以通过远程服务，查看、修改和上下载 PLC 程序，快速定位发生故障的部位，针对常见多故障建立故障处理数据库，在得知故障发生原因时，可向客户说明相关故障的检查、排除方法，为客户提供贴心的远程售后服务。

客户同样可以通过 Internet WEB 浏览器进行访问该软件平台，实现网络化、透明化管理。

2. Integrated Platform of Remote Data Collection, Diagnosis and Service

Based on Internet of Things, the integrated platform combines data collection, diagnosis and remote service. Equipment operating condition, records and relevant data can be collected remotely by data servers through connecting PLC system to the Internet. Thus equipment operation data system can be built up for surveillance.

Meanwhile, a fault diagnosis platform is established for fault pre-warning so as to reduce unnecessary economic loss and increase reliable operation time.

It can also provide customers with such services as maintenance and repair plan. It aims to offer higher service quality and reduce customers' maintenance cost. When a breakdown occurs and customers are unable to fix it, this platform can inspect and repair it remotely. It can provide customers with fault inspection and removal methods via constructing a fault handling database.

This platform can be upgraded by visiting WEB browser so as to realize network-based transparent management.

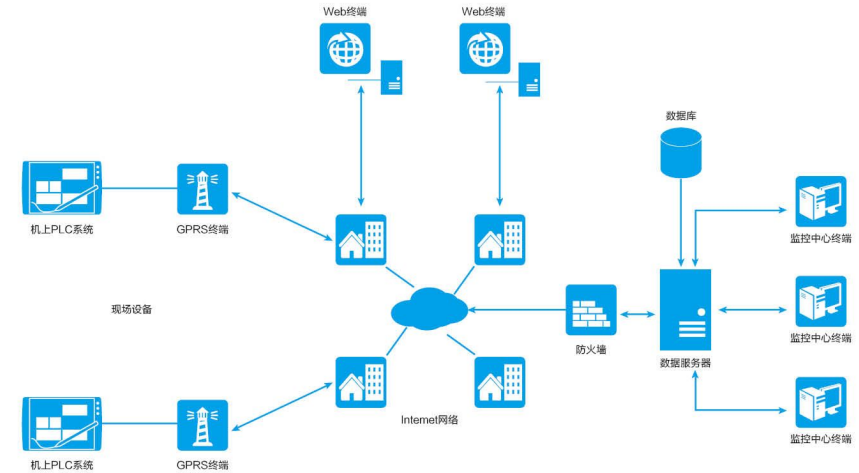


图 远程数据采集、诊断和服务平台架构

Diagram Structure of Remote Data Collection, Diagnosis and Service Platform.



II. Environment Protection Technology

二、环保技术

1、料场封闭

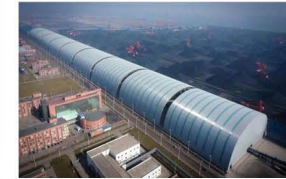
泰富重装能提供多种封闭料场结构设计、制造、施工组织与管理、竣工验收、经营管理在内的系统总承包服务。帮助客户达到提高系统安全性、可靠性、节能降耗、环境保护等指标，从而提高效益，降低成本，增加利润及收回投资额。

泰富重装的露天料场封闭技术，避免了储料转运、储存过程中逸散粉尘对周边环境的影响；有效缓解由于雨雪天气导致的储料水分过高导致的转运淤堵风险；减少了每年进行料场防雨遮盖、防风抑尘喷淋等导致的工作量；可有效提升储料场管理手段，同时还可实现红外测温、自动盘料等料场信息化的升级。

1. Enclosed Stockyard

Tidore provides general contracting services including design, manufacture, construction, management and final acceptance of various kinds of enclosed stockyards. It aims to improve system safety and reliability as well as to save energy and reduce consumption.

Enclosed stockyards enjoy the following advantages: Reduce impacts of dust on surrounding environment during transfer and storage; decrease blockage occurrence during rainy days; lessen workloads on wind-proof, dust suppression spray and rain protection; increase stockyard management efficiency and upgrade information-based stockyard system.

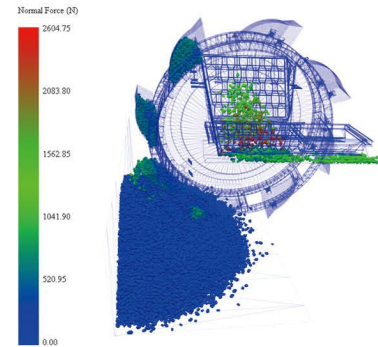


2、料流系统优化

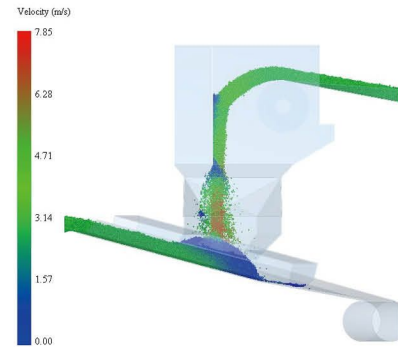
泰富与澳大利亚卧龙岗大学开展合作成立散料研究院，结合澳大利亚的工程研究和实施经验，实现新技术料流系统优化的应用。料流系统优化，主要是指在物料堆取、转运、输送作业等过程中，在保证输送能力及其他功能的基础上，对物料流动过程进行分析和控制，进行系统优化。根据输送系统中的关键点、关键部位布置，结合物料的实际特性（粒径、安息角、含水率等），通过料流系统优化计算获得关键部位的结构布局及形式，同时使系统满足多种物料流量特性的要求，减少物料对系统的冲击，减少扬尘的产生，避免堵料现象的发生，提高输送系统的使用寿命。

2. Optimization of Material Flow System

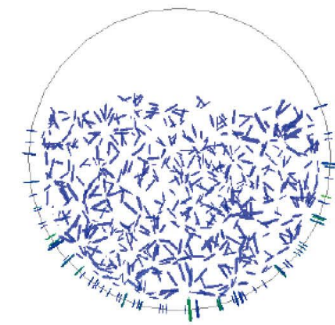
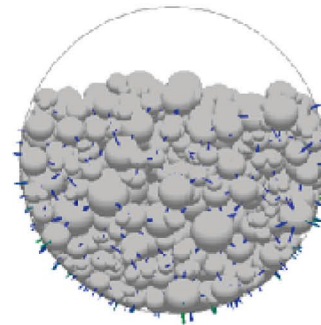
Tidore has cooperated with University of Wollongong (UOW) in building a research institute on bulk material. Tidore aims to apply material flow optimization system in accordance with research and practical experience of UOW. Optimization of material flow system primarily refers to analysis and control of material flow process during stacking, reclaiming, transferring and conveying. It can achieve calculation of structure configuration and situation of key segments based on crucial sections arrangement and material physical properties (particle size, repose angle, moisture content and so on). Meanwhile, it is able to adjust the handling system timely to cater diverse material characteristics and reduce impacts of materials on the system. This can also bring down the volume of dust and occurrence of blockage so as to prolong the handling system's service life.



斗轮取料分析
Analysis of Bucket-wheel Stacker



料斗积料分析
Analysis of Hopper Material Deposit



管带机截面物料作用力分析
Analysis of Material Force of Pipe Belt Conveyor Sections

3、料场降尘、抑尘和除尘

在散状物料输送系统物料输送过程中，极易产生大量的粉尘污染，对人体、设备及环境等产生严重的危害。物料输送系统中粉尘的控制尤为重要，泰富与龙净环保、澳大利亚卧龙岗大学共同开发新型干雾抑尘技术和云雾除尘等先进的技术对粉尘进行抑制和回收。除尘效率达到96%以上。

3. Stockyard Dust Reduction, Suppression and Collection

It is likely to emit large volumes of dust during material handling process which is severely bad for personal health, equipment and environment. Therefore, it is of great significance to control dust generation during material handling. Thus Tidfore has joined hands with Fujian Longjing and UOW in researching and developing new dry-fog dust suppression and cloud-fog dust removal technologies. The dust removal efficiency can reach as high as 96%.

III. Digital Simulation Technology

三、数字化仿真技术

1、智能定制化

泰富开发和建立庞大的可参数化驱动的产品三维模型库，设计人员修改参数链接表中的产品参数后三维设计软件能够自动根据更新后的参数修改并输出相应的三维设计图和二维工程图，大大减少人工绘制图纸的工作量，达到快速设计和出图的目的，所需时间比传统设计周期大大缩短，从而缩短了整个产品的供货周期，既保证了设计周期又保证了产品的质量，同时还大大提高了产品的设计产能。

1. Smart Customization

Tidfore has built a parameterized 3D product model base. With this model base, the 3D design software is able to automatically and accordingly modify and process updated 3D design drawings and 2D schedule drawings based on product parameters input by designers. This has largely reduced workload of labor force and shortened product design cycle.

2、虚拟可视化技术

利用三维制作软件、影视后期剪辑等手段，将公司产品及系统工艺的结构、特点、工作原理等通过三维仿真动画的形式立体呈现出来。使人们更加直观、详实、全方位了解产品功能特点。三维仿真动画应用在公司的品牌宣传、产品展示、系统工程投标、产品涂装配色、工艺装配指导等，为公司提高了品牌影响力，创造了直接效益。

2. Virtual Visualization

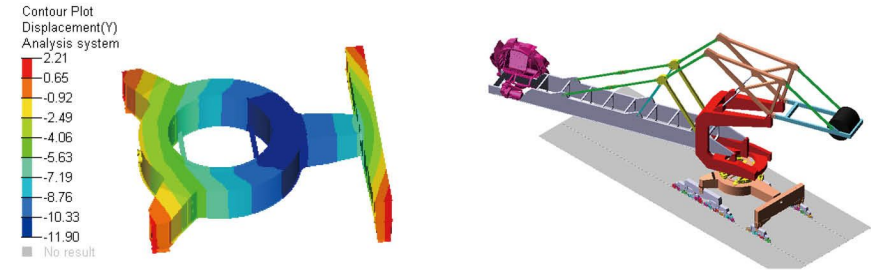
Structures, features and operating principles of equipment and systems can be presented in a 3D-emulational-animation manner by means of 3D development tools and video editing which contributes to a more vivid and thorough understanding of products functions and characteristics. The 3d emulation animation technique is mainly applied in brand promotion, product presentation, engineering bidding, product coating and assembling guidance.

3、计算机仿真分析技术的应用

利用多领域建模工具和仿真技术，对公司产品进行仿真计算与分析，了解机械运行的力学特性。借助分析手段通过优化设计，提高产品质量以及可靠性。主要包括有限元优化分析、动力学分析、先进材料分析、疲劳分析。

3. Computer Simulation Analysis

Conduct products simulation and analysis by means of multi-domain modeling tools and simulation techniques to acquire mechanical prosperities of machine operation. Improve product quality and reliability by optimization design and fatigue design including optimum analysis of the finite element, dynamic analysis, analysis of advanced material and fatigue analysis.

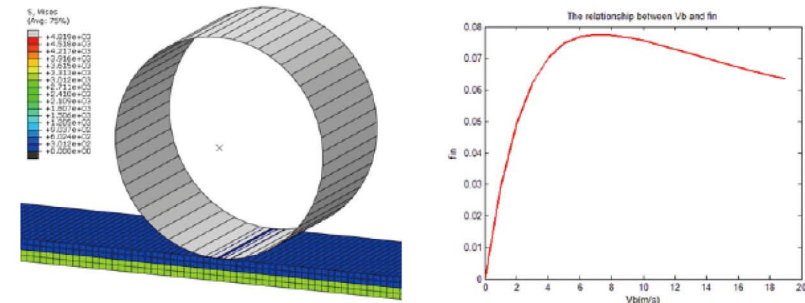


4、圆管带式输送机运行阻力计算分析系统

圆管带式输送机运行阻力的计算是输送机设计中的重点和难点，是准确地进行动力匹配与选型的基础。由于输送带表层的橡胶材料属于典型的粘弹性材料，因此其在运行过程中所产生出的压陷阻力呈现出高度非线性特性。但是在中、长距离或中、大运量圆管带式输送机系统设计过程中，须精确模拟计算启动、运行、停机工况下的各段皮带张力变化，以及拐弯段皮带变形和张力的托辊压力变化影响。为更精确地求解带式输送机的运行阻力，泰富重装集团研究院消化和吸取了当前国内外最新的理论研究成果，并结合有限单元法和离散单元法，探索出一套新的计算方法和理论，可有效模拟中、长距离圆管带式输送机的皮带动态张力变化，为圆管带式输送机的桁架结构设计、输送路线设计、传动系统设计和控制系统设计提供重大依据。

4. Pipe Belt Conveyor Running Resistance Calculation and Analysis System

Being a key point in conveyor design, calculation of running resistance has been the foundation of accurate power matching and model selection. The pressure resistance formed in operation process demonstrates non-linearity features to a large extent due to the adhesiveness of rubber material. However, different tension during initiation, operation and shutdown, belt deformation in bend segments and idler pressure must be accurately calculated in designing of belt conveyors with long distance and large capacity. In order to calculate the running resistance in a more accurate way, a new series of calculation methods and theories have been developed by Tidfore Research Institute by drawing in cutting-edge theories at home and abroad and integrating finite-element method with discrete element method. It can provide crucial data for designing of pipe belt conveyor truss structure, conveying route, drive system and control system.





IV. Test Methods

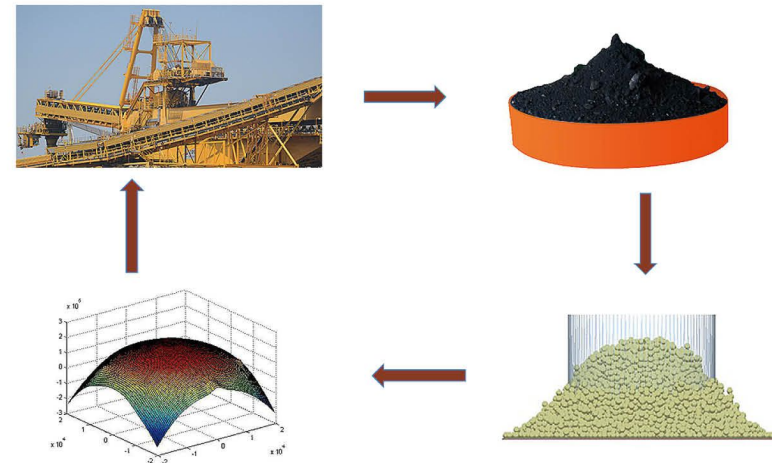
四、测试试验手段

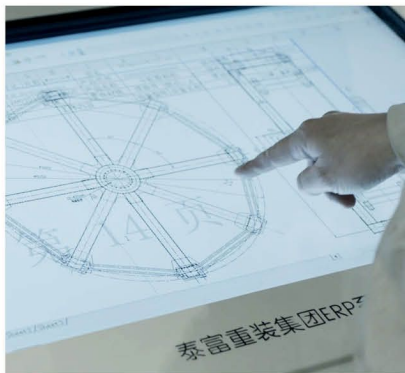
1、物料特性测试试验平台

相同的物料在不同的湿度、含水率等条件不同的情况下其静、动态特性存在较大的差别，以往产品设计过程中往往认为同一种物料其特性始终保持不变，忽略了其实际存在的差异，导致物料在转运过程中流动不顺畅、通过率低、易堵料、易粘料以及扬尘较大。泰富运用散料颗粒学理论和粉体工程技术相结合的方式，应用于物料的料性分析，对物料表面的硬度、颗粒的粘聚性、壁面的附着能力等物理性能研究测试，通过先进测试设备获得决定物料流动特性的堆积密度、安息角、摩擦角、时效性等性能参数数据，测得参数应用于产品设计过程，保证物料在各个运输环节内流动顺畅、粉尘排放低，以提升和确保产品研发设计、技术研究运用的可靠性与有效性。

1. Material Properties Testing Platform

Materials static and dynamic characteristics can vary conspicuously under different humidity and moisture content conditions. However, they have been treated as a constant in previous product design. Consequently, material handling was not smooth enough with low passing rate and blockage and sticking frequently occurred. Based on bulk material particle theory and powder engineering, Tidfore has studied and analyzed such material properties as surface hardness, cohesive quality and adhesive capacity as well as such performance parameters as bulk intensity, repose angle, friction angle and timeliness. These are applied in product design to ensure smoothness of material handling and lower dust emission volume. By this means, reliability and effectiveness of product design and technological research have been improved.





2、智能化技术试验平台

泰富建立了占地 3000 平方米的智能技术化试验平台，平台由料场模型机系统、港口装卸模型机系统、皮带运输模型机系统、中央控制和传动系统、智能化控制系统组成。其中模型机系统均按照 1:3 的比例对原始散料装卸转运设备进行了缩小，并组合成为一个完整的装卸、转运、堆取系统，可模拟实现实际料场堆取和港口装卸系统的基本流程、动作和工艺；中央控制和传动系统可以实现设备及整个系统的运动控制和流程连锁控制；智能化控制系统可以实现料堆的机器视觉识别、堆形的虚拟重构、设备的全自动作业模拟。整个智能化试验平台为泰富提供更加先进可靠的智能化、信息化、可视化散料输送装备和系统提供了一个先进模拟工业化应用的试验环境，必将加速泰富在工业 4.0 时代的创新步伐。

2. Intelligent Technology Testing Platform

Tidfore has constructed an intelligent commissioning yard with an area of 3,000 square kilometers. It consists of stockyard model machine system, port loading and unloading model machine system, belt conveyor model machine system, central control and transmission system and intelligent control system. The scale of the model machines is 1:3. These have formed a complete loading, unloading, transferring, stacking and reclaiming system which is able to simulate basic process, operation and technology of real stockyard stacking and reclaiming system as well as port loading and unloading system. The central control and transmission system realizes interlocked operation and process control of equipment and system. The intelligent control system is characterized by machine visual identification of stockpile, fabrication and restructure of stockpile shape as well as simulation of equipment automatic operation. The entire intelligent commissioning yard has created a testing environment for material handling equipment and system which at the same time will undoubtedly accelerate Tidfore's innovation speed in the backdrop of Industry 4.0.





V. Technological Management

五、技术管理

1、产品生命周期管理 (PLM)

实施集成的一体化的产品全生命周期管理平台, 并和 ERP 集成, 打通设计、工艺、制造、采购、物流和售后的数据链, 实现设计、工艺和制造等相关业务部门的高度协同。

1. Product Life Cycle Management (PLM)

Product life cycle management adopts an integrative management platform and integrates with ERP to straighten out such chain of design, process, manufacture, purchase, logistics and after-market so as to realize internal cooperation of various business segments such as design, process and manufacture units.

2、建立技术标准体系

由专业的标准化团队在标准化管理的科学方式和正确思维指导下, 在“标准”的基础上, 建立多项行之有效、统一协调的企业技术标准, 从而实现提高产品质量, 降低成本, 建立科研、生产最佳秩序, 获得最佳经济效果的目的。

2. Establishment of Technological Standard System

Guided by scientific modes and thoughts of standardization management, a professional team on standardization work has established various practical and effective enterprise technical standards so as to set up a reasonable order between research and production as well as to achieve optimal economic results.



TECHNOLOGY & PRODUCTION

产品篇

“工欲善其事必先利其器”
依托先进的设计理念和制造工艺
泰富产品创造了一个又一个奇迹
科技没有终点，科研之路永不终结
一个充满希望的科技密集型企业正在冉冉升起

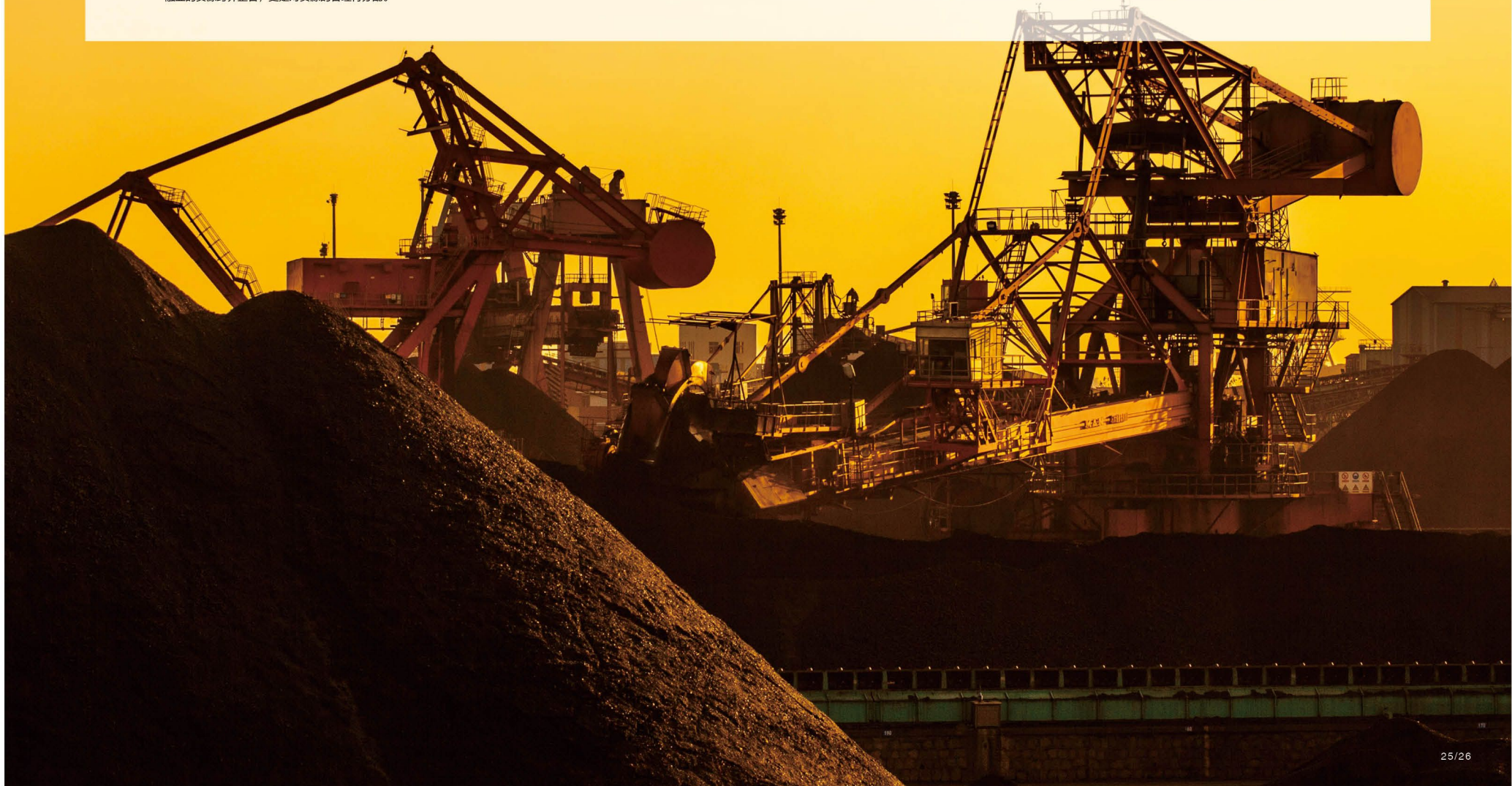
"To do good work must first sharpen the tools".
Relying on advanced design concept and manufacturing process,
Tidfore has created miracles one by one. Science and technology has no end, the road for
scientific research is also longlasting. A promising technology intensive company is slowly
emerging.

传统散料输送系统篇

泰富通过整合社会各界优势资源，在业内开创了系统总承包的全新商业模式。公司立足于技术研发、生产制造、项目管理三大自身优势，联合国内外知名设计院、施工方、设备制造商，为业主提供专业化、个性化的系统解决方案。泰富集团以客户为本，为客户提供从设计、材料采购、制造安装、试运行到售后服务一站式全方位服务。泰富的系统总承包不仅是简单的对制造业和金融业的资源跨界整合，更是对资源的合理再分配。

Bulk Material Handling System

With the brand new business mode of system general contracting, Tidfore supplies professional, individualized solutions for users based on advantages in technical R&D, manufacture and project management. Tidfore provides all services ranging from design, material procurement, fabrication, commissioning to after-sales service. The system general contracting in Tidfore is not simply integrating resources in manufacturing and financial industry but also redistributing resources reasonably.





Port Handling System 港口码头装卸系统

系统描述:

港口装卸系统包含煤炭、矿石等专业化散货码头，集装箱码头，件杂货码头等。

主要组成:

港口建设工程主要包括水工结构和疏浚工程、土建工程、装卸系统设备部分、配套设备及设备设施部分。

装卸系统主要设备:

翻车机、卸船机、装船机、堆取料机、取料机、带式输送机、门机、起重机等。配套设备及设施：供电和照明、控制、通信、洒水除尘、消防、污水处理系统等设备设施。

提供服务:

可提供港口建设工程总承包、设计、核心装卸设备研发与制造、施工组织与管理、竣工验收、经营管理全过程服务，项目各阶段的设计及技术咨询工作，大型装卸设备的开发和港口自动化控制开发等方面的研究和技术咨询服务。

System Introduction:

Port handling system includes specialized bulk material terminal for coal, ore, grain, etc., container terminal, general cargo terminal, etc.

Composition:

Port construction project mainly includes hydraulic construction engineering, dredging, civil engineering, system equipment, supporting facilities of handling system.

Main Equipment:

Tippler, ship unloader, ship loader, stacker & reclaimer, reclaimer, belt conveyor, portal crane, crane. Etc. Ancillary facilities: power supply and illumination, control, communication, water spray dust suppression, fire protection, sewage treatment system, etc.

Supplied Service:

Tidfore supplies the all services of overall contracting, terminal construction project design; research & development and manufacture of loading & unloading equipment; Construction organization and management, completion acceptance and operation management, together with design and technical consultant in each stages of projects, and the consultant services for technology and development of large scale loading & unloading equipment together with terminal automatic control development.

Steel Metallurgy Stockyard System 钢铁冶金综合原料场系统



系统描述:

钢铁综合原料厂是钢铁企业中专门从事原料、燃料准备生产作业的车间。其范围是从原、燃料入场直至焦化、烧结、炼钢、炼铁等用户的炉前仓，主要环节有受料、运输环节、储料环节、整粒、混匀等。

主要组成:

综合原料场主要由受料设施、堆场设施（一次、二次）、配料混匀设施、供料设施、辅助设施组成。其中受料设施一般包括水运受料、铁路受料和汽车受料；堆场设施用于贮存烧结粉矿、副原料、球团精矿、高炉炼钢用块矿、石灰车间用石灰石、焦炭等；配料混匀设施主要包括：混匀配料槽、混匀配料系统、混匀料场、混匀堆料机、混匀取料机；供料设施包括原料场内转运供料，向各用户接点供料；辅助设施包括取样设施、计量电子秤、喷水降尘、通风除尘及辅助设备等。

提供服务:

泰富重装能为钢铁厂综合原料场的料场工程、配料工程、混匀工程等提供设计、核心设备研发与制造、施工组织与管理、竣工验收、经营管理在内的系统总承包服务。同时，泰富还能提供项目各阶段的设计及技术咨询，以及大型料场设备开发和计算机软件控制开发等方面的研究和技术咨询服务。

System Introduction:

Steel metallurgy material plant is the workshop to prepare raw material and fuels for iron and steel enterprises, its work scope will last from the acceptance of raw material & fuel to coking, sintering, steel making and puddling processes before the furnace bin of users. Main process will include feeding, handling, storage, separating and blending.

Composition:

Comprehensive material stockyard is composed of feeding facilities, stockyard facilities (primary, secondary), distributing and blending facilities, material supply facilities and other accessory facilities. Material feeding will usually adopt water, railway and vehicle transportation mode. Stockyard facilities will be used for storage of sinter ore fine, auxiliary material, pellet concentrate, lump ore used in blast furnace for steel making, limestone and coke used in workshop. Material distributing and blending facilities mainly include material distributing & blending groove, material distributing & blending system, blending stockyard, blending stacker, blending reclaimer etc. Material supplying facilities will supply material for material stockyard through trans-shipment, and supply material for each user point, auxiliary facilities include sampling facility, measuring electronic says, water spray dust suppression, ventilation dust suppression facilities and other auxiliary facilities.

Services:

Tidfore provides such system general contracting services as design, key equipment R&D and manufacture, construction organization and management, as well as completion acceptance and operation management for stockyard projects, burdening projects and blending projects of comprehensive raw stockyard of steel plants. Meanwhile, Tidfore also offers design and technical advisory service at each stage of the project and research concerning large stockyard equipment development and computer software control development.



Coal Handling System for Thermal Power Plant 火力发电输煤系统

系统描述:

火力发电厂输煤系统一般是由煤运进厂内开始，将煤输送到锅炉的原煤斗为止。主要包括：来煤称量、煤的受卸、贮存、运输、破碎、计量、配仓等几个环节。

主要组成:

输煤系统主要包括铁路（水路、公路）卸煤、贮（储）煤场、受煤站、（地下）卸煤沟、卸煤槽、翻车机室、干燥棚、原煤仓、转运站、运煤栈桥、破碎筛分站等设施。

主要设备:

有翻车机、堆取料机、螺旋卸车机、链斗卸车机、环形给煤机、碎煤机、滚轴筛分机、振动给煤机、带式输送机。

提供服务:

泰富重装集团拥有国内一流的输煤技术团队，并与国内多家电力设备专业厂家进行合作。可根据客户的实际情况设计详细的总包方案，提供从土建工程到投产运营的一站式服务。

输煤系统建设以高效、节能、环保为宗旨，致力于工艺科学化、资源节约、环境友好方向的技术方与应用。

System Introduction:

Fired power plant coal handling system usually starts from shipping coal into the factory, and ends after handling coal to the raw coal hopper in the furnace. The whole process includes coal weighing, coal accepting and unloading, storage, transportation, crushing, metering and silo distribution.

Composition:

Coal handling system is mainly used for railway (water way and highway) coal unloading, coal stockyard, coal feeding station, (underground) coal unloading ditch, coal unloading groove, wagon tippler room, coal drying bunker, raw material silo, transfer point, coal handling trestle, crushing and screening station etc.

Main Equipment:

Main equipment includes wagon tippler, stacker reclaimer, screw unloader, chain bucket unloader, crusher, screener, feeder, belt/pipe conveyor, etc.

Services:

Tidfore owns the first-class domestic technical team in coal handling system. To cooperate with many professional electrical equipment manufacturers, it supplies one-stop service from civil project to manufacturing operation for clients while offering detailed general contracting solutions.

Coal handling system construction pursues efficiency, energy-saving and environment protection while devoted to achieving development and application of scientific technology, resource saving and environmental friendliness.

Coal Separating and Washing Engineering System 煤炭洗选工程系统



系统描述:

煤炭洗选是通过大规模机械化连续生产作业，有效地排除原煤中矸石及其它杂质，按市场需求生产优质精煤和不同质量规格的商品煤，是现代煤炭生产销售的重要生产环节。

主要组成:

煤炭洗选过程分为：原煤准备（筛分破碎）、洗选、脱水、脱介、介质回收、分级、煤泥回收、煤泥水处理等环节。

提供服务:

泰富重装集团拥有国内一流的专业洗选煤设计技术，具有进行煤质分析和配套工艺流程的丰富的工程设计经验，能够为选煤工程提供方案、工程总承包、设计、设备研发与制造、施工组织与管理、竣工验收、经营管理全过程服务。

长期从事选煤厂、配煤场、储煤厂、型煤厂等工程建设及技术改造项目各阶段的设计及技术咨询工作，以及选煤设备开发和选煤计算机软件开发等方面的研究和技术咨询服务。

在选煤厂设计中采用世界一流的小时能力 5000t 的快速装车站、大型跳汰机、大型等厚筛、高强度破碎机、大型斗提机等设备，优煤劣煤采用分贮、分筛、分选或混选、块煤浅槽重介，末煤重介旋流器等各种流程以适应不同用户的需要，为煤炭生产企业提供一流的选煤工艺技术。

System Introduction:

Coal washing and separating process will eliminate the gangue and other impurities, supply different size and quality clean coal as per the market need, it's an important process in modern coal producing and sales.

Composition:

Coal washing and separating process includes raw coal preparation (screening and crushing), washing and separating, dehydration, medium removal, medium recovering & grading, coal slime recycle, coal slime water treatment.

Services:

Tidfore group holds classic washing and separating technology for coal, together with abundant engineering design experience for quality analysis and other auxiliary technological processes. It's able to supply all services of project scheme, project overall contracting, design, equipment research & development and manufacture, construction organization and management, completion acceptance and operation management for coal separating projects.

Tidfore also supplies design and technical consultant for engineering construction in coal separating factory, coal blending yard, coal stockyard and coal briquetting plants, each stage of technical transformation projects. It keeps developing coal separating equipment and relative software for computer operation. Technical consultant services can also be provided.

Adopting fast loading station with a capacity of 5,000 t/h, wash-box, large constant thickness screen, high-intensity crusher, large bucket elevator in coal separating plants. Coal of different quality goes through various processes such as separate storage, separate screening, sorting or mixture flotation, shallow groove heavy medium for lump coal, heavy medium cyclone for fine coal so as to satisfy different needs and provide the first-class coal separating technology for clients.



Circular Stockyard Loading & Unloading System

圆形料场装卸系统

系统描述:

环保圆形料场系统是环保型堆场系统，主要用于大宗散状物料如煤、化肥、粮食、矿等的堆存。

全封闭圆形煤场具有占地小、单位面积储煤量大、自动化程度高、运行安全可靠、抗恶劣天气强、对环境污染小、景观好等特点。

主要组成:

环保型圆形料场主要由环形混凝土挡墙、钢结构空间网架穹顶、圆形堆取料机、进堆场皮带机栈桥和地下出料皮带机等组成。

提供服务:

泰富重装集团具备独立建造直径从 80-120 米不等的封闭式圆形料场系统，具备核心设备 - 圆形堆取料机技术开发实力，理论设计储量超 20 万吨。

System Introduction:

Circular stockyard system is environment friendly, mainly used for storage of mass bulk material like coal, chemical fertilizer, grain and mine.

Completely sealed circular coal stockyard saves space, large unit storage capacity, highly automatic, operates safely, meanwhile weather-proof, less environment pollution, artistic..

Composition:

Circular stockyard is mainly composed of circular concrete retaining wall, steel structure space grid dome, circular stacker & reclaimer, stockyard belt conveyor trestle and underground discharging belt conveyor.

Services:

With its technical developing strength, Tidfore builds sealed circular stockyard system with a diameter of 80-120 meters independently, the key equipment-circular stacker & reclaimer, with a theoretical storing capacity of more than 200,000 tons.

New Type Bulk Material Handling System

新型散料输送系统篇



1、环保型散料输送系统

随着国家对大气环境污染力度的不断加强，建立环境友好型散料输送系统也成为了当务之急，泰富通过与国内外高校和企业合作，针对传统的散料输送系统粉尘污染的弊端，开发出了环保型散料输送系统。

1. Environment friendly bulk material handling system

To cooperate with universities and enterprises at home or abroad, Tidfore developed environment friendly bulk material handling system, which has solved the problem of dust pollution in traditional bulk material handling system.

料场的封闭防尘

通过采用钢网架结构的封闭外壳，将整个料场进行封闭，这样就可以将料场的粉尘限制在一个密闭空间内，大大降低对环境的污染。泰富重装能提供多种封闭料场结构设计、制造、施工组织与管理、竣工验收、经营管理在内的系统总承包服务。帮助客户达到提高系统和本单位安全性，可靠性，节能降耗、环境保护等指标，从而提高效益，降低成本，增加利润及收回投资额。

输送过程的防尘

利用料流仿真技术，结合对物料特性的分析和测定，对整个物料输送流动过程的各个扬尘过程进行科学的设计，采用诸如流线型料斗、普通皮带机封闭以及环保型管状带式输送机等技术手段，防止设备在各个转运点、转运过程中产生粉尘污染环境。

Sealed Dust Prevention of Stockyard

Through the sealing shield of steel net structure, the whole stockyard is sealed, thus the dusts will be limited in a sealed enclosure, thus to reduce the environment pollution. Tidfore group supplies system overall contracting services including different kinds of sealed stock yard design, fabrication, construction organization & management and operating management. Helping clients to elevate the system security, reliability, realizing energy-saving and cost-reducing, finally improve economic performance, reduce cost, increase profit and take back the investment.

Dust Suppression in Handling Process

Using material flow simulation technology, the binding properties of materials analysis and determination, the transport of the material flow process of each dust process to carry on the scientific design, used as streamlined hopper, ordinary belt conveyor closed and environment-friendly type tubular belt conveyor technology and means to prevent dust pollution of the environment in each transport and transport process.

转运过程的抑尘

利用云雾除尘、干雾抑尘等新的抑尘手段，能快速有效地抑制诸如堆料取料作业面、汽车卸料棚和输送机转运站等处的扬尘，甚至可以实现在线的降尘回收利用，大大减少了常规抑尘措施如电除尘、布袋除尘、喷水除尘带来的电耗、水耗的问题，使客户的抑尘设备利用率大大提高。

Dust Suppression During Transfer.

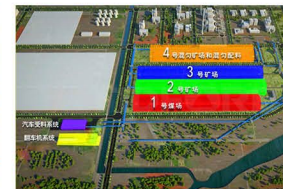
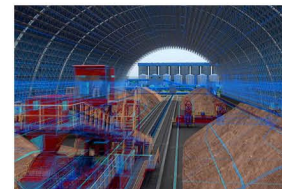
Use mist or dry fog for dust suppression, effectively control the flying dust, vehicle discharging bumper and the conveyor transfer station, even recycling the collected dust. It has greatly reduced the power and water consumption for traditional dust suppression, greatly elevates the using ratio of the dust collecting equipment from clients.

2、智能化、信息化、可视化散料输送系统

通过在传统散料输送系统中引入先进的智能控制、图像处理和信息技术等相关先进技术可以实现整个料场系统的智能化、信息化、可视化功能，帮助客户降低成本提升价值。

2. Full Automatic Bulk Material Handling System

The entire stockyard system can be intelligentized, informationized and visualized with such cutting-edge technologies as intelligent control, image processing and information technology so as to help customers lower costs and increase profits.



智能化

- 1、料场料堆表面形状的机器视觉识别与判别；
- 2、料场堆取设备的机上无人全自动化作业；
- 3、作业路径的预估规划；
- 4、料场设备作业方案的自动寻优与推荐；
- 5、料场堆取设备的安全防碰撞；
- 6、取料料流的稳定性；
- 7、堆料堆形的规整性和料场的高利用率。

Intelligentization

1. Machine vision recognition and identification of stockpile surface shape;
2. Full-automatic operation of stockyard stacking and reclaiming equipment;
3. Prediction and planning of operation route;
4. Automatic optimization and recommendation of stockyard equipment operation program;
5. Anti-collision system for stockyard stacking and reclaiming equipment;
6. High stability of material flow for reclaiming;
7. Clear and neat stockpile as well as high utilization rate of stockyard.

信息化

- 1、堆取设备的远程信息管理和故障诊断；
- 2、物料信息的自动跟踪；
- 3、作业信息的记录和统计。

Informationization

1. Remote information management and fault diagnosis of stacking and reclaiming equipment;
2. Automatic tracking of material information;
3. Recording and collection of operation information.

可视化

- 1、作业结果堆形和堆场空间分布可视化预览；
- 2、料场料堆分布的二维和三维可视化。

Visualization

1. Visualized preview of stockpile shape and special distribution;
2. 2D and 3D visualization of stockpile distribution.

通过上述的技术，可以提高料场设备作业可靠性、降低人力成本和维护成本、提高料场设备调度科学性从而提升料场的吞吐量，帮助客户降本增效，提升市场竞争力。

With the application of the above technologies, operation reliability of stockyard equipment can be increased; labor costs can be reduced as well as rationality of utilization of stockyard equipment can be improved. Thus it is favorable for customers to strengthen their market competitiveness.

Bulk Material Stacking/Reclaiming Equipment
散料堆取设备篇



Boom Type Stacker & Reclaimer

臂式堆 / 取料机

堆 / 取料机是一种高效率连续装卸机械，主要使用在散货专业码头、钢铁厂、大型火力发电厂和矿山等散料堆场，用于装卸铁矿石（砂）、煤炭、石灰石等散状物料。臂式斗轮堆 / 取料机，顾名思义，是采用悬臂式架构，取料和堆料装置放置在悬臂前端。

公司目前臂式堆 / 取料机产品主要有：臂式斗轮取料机、臂式堆料机、臂式斗轮堆取料机、臂式混匀堆料机、臂式刮板混匀堆取料机、臂式刮板取料机。

Stacker & reclaimer is the high efficiency continuously loading & unloading machine, mainly used in specialized bulk material terminal, steel plant, large scale fire power plants and mines to load & unload bulk material like iron ore (sand), coal and limestone. Boom type bucket wheel Stacker & reclaimer adopts cantilever type structure, reclaiming and stacking facilities are positioned at the front of the boom.

Presently, the main boom type stacker / reclaimer that Tidore produces are boom type bucket wheel reclaimer, boom type stacker, boom type bucket wheel stacker reclaimer, boom type blending stacker, boom type scraper blending stacker reclaimer, boom type scraper reclaimer.



臂式斗轮堆取料机

堆料能力：最大 20000 t/h
取料能力：最大 16000 t/h
回转半径：最大 60 m

Boo Type Bucket Wheel Stacker reclaimer

Stacking Capacity: Max. 20,000 t/h
Reclaiming Capacity: Max. 16,000 t/h
Rail Gauge: Max. 60m



臂式斗轮取料机

取料能力：最大 16000 t/h
回转半径：最大 60 m

Boom Type Bucket Wheel reclaimer

Reclaiming Capacity: Max. 16,000 t/h
Rail Gauge: Max. 60m



臂式堆料机

堆料能力：最大 20000 t/h
回转半径：最大 60 m

Boom Type Stacker

Reclaiming Capacity: Max. 20,000 t/h
Rail Gauge: Max. 60m

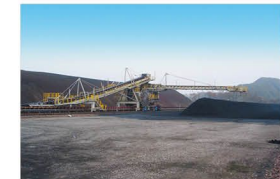


臂式混匀堆料机

堆料能力：最大 16000 t/h
回转半径：最大 50 m

Boom Type Blending Stacker

Reclaiming Capacity: Max. 16,000 t/h
Rail Gauge: Max. 50m

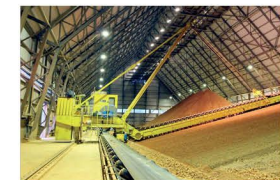


臂式刮板取料机

取料能力：最大 2000 t/h
悬臂长：最大 45 m

Boom Type Scraper Reclaimer

Reclaiming Capacity: Max. 2,000 t/h
Rail Gauge: Max. 45m



Gantry Type Stacker/reclaimer

门式堆 / 取料机

门式斗轮堆取料机是一种高效连续的装卸机械，与臂式斗轮堆取料机应用场合相同，尤其是适用于大型散装物料储料场。

Gantry type bucket wheel stacker reclaimer can load and unload continuously with high efficiency, with the the same application with boom type bucket wheel stacker reclaimer, it's especially fit for large scale bulk material stockyard.

特点:

1. 料堆横截面为梯形，料场利用率高；
2. 易于实现大跨距，目前应用实例最大为 65M；
3. 斗轮取料时做直线运动，无回转大轴承；电气控制系统简单，无需变频调速；
4. 斗轮回转驱动采用通用卧式减速机，速比小，一般 45~60，易于采购与维护，成本低；
5. 起升机构采用卷扬机，结构成熟、简单、可靠，维护量小；
6. 工作时操控简单、易于实现自动化；
7. 料场物料完全在斗轮工作行程内，无需辅助设备即可取尽料场物料；
8. 在设备堆取料机能力相同的情况下，门式斗轮堆取料机比臂式造价低。

Advantages:

1. Trapezoid cross section will elevate the stockyard using ratio.
2. A larger span, with the largest application of 65 m presently.
3. Reclaiming straightly without slewing bearing, simple electrical control is independent from frequency or speed variation.
4. Adopt horizontal type reducer for bucket wheel slewing driving, small speed ratio of 45~60, easy for purchasing and maintenance, low cost.
5. Hoisting unit adopts winch, mature in structure, simple and reliable, less maintenance.
6. Automatic control, easy operation when working.
7. Stockyard material fully in the bucket wheel work range, which can all be reclaimed without auxiliary equipment.
8. With the same stacking or reclaiming capacity, gantry bucket wheel stacker reclaimer will be more economical than boom type ones.



门式斗轮堆取料机

堆料能力：最大 20000t/h
取料能力：最大 16000t/h
回转半径：最大 65m

Gantry Type Bucket Wheel Stackers Reclaimer

Stacking Capacity: **Max. 20,000 t/h**
Reclaiming Capacity: **Max. 16,000 t/h**
Rail Gauge: **Max. 65m**



门式斗轮取料机

取料能力：最大 16000 t/h
轨距：最大 65 m

Gantry Type Bucket Wheel Reclaimer

Reclaiming Capacity: **Max. 16,000 t/h**
Rail Gauge: **Max. 65m**



门式 / 半门式刮板取料机

取料能力：最大 4000 t/h
轨距：最大 65 m

Portal / Semi-Portal Scraper Reclaimer

Reclaiming Capacity: **Max. 4,000 t/h**
Rail Gauge: **Max. 65m**





Bridge Type Reclaimer

桥式取料机

桥式堆 / 取料机适用于长条形料场，是一种高效连续作业的散状物料大型装卸设备，主要应用于港口、码头、矿山、冶金、水泥厂、储煤场、焦化厂、钢铁厂、发电厂等散料存储料场。

公司目前桥式堆 / 取料机产品主要有：桥式单、双斗轮（混匀）取料机、桥式刮板取料机。

As a large loading & unloading equipment which works continuously with high efficiency, bridge type stacker/reclaimer fits the long strip stockyards, and are mainly used in terminals, ports, mines, metallurgical plants, cement plants, coal stockyards, coking plants, steel plants and power plants for bulk material reclaiming.

Presently Tidfore mainly produces bridge type stacker/reclaimers like bridge type single (dual) bucket wheel (blending) reclaimer, bridge type scraper reclaimer.

特点:

1. 投资省、能耗低，使用成本低、生产效率高
2. 结构合理，设备稳定性好
3. 桥式混匀取料机，混匀效果好，物料适应性强
4. 操作简单，安全可靠，易于实现自动化

Advantages:

1. Less investment, low energy consumption and cost, high efficiency.
2. Reasonable structure, high reliability.
3. Bridge type blending reclaimer can blend well with a good material adaptation.
4. Automatic control, simple operation, safe and reliable.

桥式双斗轮混匀取料机

取料能力：最大 5000 t/h
轨距：最大 65 m

Bridge Type Double Bucket Wheel (Blending) Reclaimer

Reclaiming Capacity: Max. 5,000 t/h
Span: Max. 65m



桥式刮板取料机

取料能力：最大 2500 t/h
轨距：最大 60 m

Bridge Type Scraper Reclaimer

Reclaiming Capacity: Max. 2,500 t/h
Span: Max. 60m



Circular Stockyard Stacker Reclaimer

圆形料场堆取料机

圆形堆取料机是一种安装在封闭的圆形料场内，进行高效率连续装卸作业的机械，主要用于散货专业码头、钢铁厂、大型火力发电厂和矿山等散料堆场装卸煤炭、石灰石、矿石（砂）、石油焦、粮食、工业盐等。

公司目前圆形料场堆/取料机产品主要有：臂式圆形堆取料机、门式圆形堆取料机、桥式斗轮圆形堆取料机、桥式刮板圆形堆取料机。

Circular stacker reclaimer is installed inside sealed circular stockyard for high efficiency continuous loading & unloading work, which are mainly used in bulk material terminal, steel plants, large scale fired power plants and mines for stockyard coal, limestone, ore (sand), oil coke, grain and industrial salt loading & unloading.

Presently, Tidore mainly produces below circular stockyard stacker/reclaimers: boom type circular stacker reclaimer, gantry type circular stacker reclaimer, bridge type bucket wheel circular stacker reclaimer, bridge type scraper circular stacker reclaimer.

特点:

1. 投资省、能耗低，使用成本低、生产效率高；
2. 结构合理，设备稳定性好；
3. 桥式混匀取料机，混匀效果好，物料适应性强；
4. 操作简单，安全可靠，易于实现自动化；

Advantages:

1. Independent stacking and reclaiming, high equipment using ratio.
2. Dome structure, highly environment friendly and artistic
3. Automatic and intelligent
4. Weather proof, stable material composition.

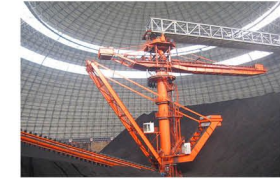


臂式圆形堆取料机

最大堆料能力：6800 (t/h)
最大取料能力：3000 (t/h)
最大料场直径：136 (m)

Boom Type Circular Stacker Reclaimer

Max Stacking Capacity: **6800 t/h**
Max Reclaiming Capacity: **3000 t/h**
Max Stockyard Diameter: **136m**



门式圆形堆取料机

最大堆料能力：6800 (t/h)
最大取料能力：3000 (t/h)
最大料场直径：136 (m)

Gantry Type Circular Stacker Reclaimer

Max Stacking Capacity: **6800 t/h**
Max Reclaiming Capacity: **3000 t/h**
Max Stockyard Diameter: **136m**



桥式斗轮圆形堆取料机

最大堆料能力：10000 (t/h)
最大取料能力：6000 (t/h)
最大料场直径：120 (m)

Bridge Type Bucket Wheel Circular Stacker Reclaimer

Max Stacking Capacity: **10000 t/h**
Max Reclaiming Capacity: **6000 t/h**
Max Stockyard Diameter: **120m**



桥式刮板圆形堆取料机

最大堆料能力：2500 (t/h)
最大取料能力：1200 (t/h)
最大料场直径：120 (m)

Bridge Type Scraper Circular Stacker Reclaimer

Max Stacking Capacity: **2500 t/h**
Max Reclaiming Capacity: **1200 t/h**
Max Stockyard Diameter: **120m**



Bulk Material Handling Equipment

散料输送设备篇



圆管带式输送机

圆管带式输送机是在槽形带式输送机的基础上发展起来的特种带式输送机，广泛应用冶金、矿业、化工、电力、建材、港口等行业的散料输送系统。它的输送带在输送过程中是以圆管状形式存在，圆管带式输送机一般由尾部过渡段、管状段和头部过渡段三部分组成。

优点：

- 1、采用管状输送的目的是增大输送带对物料的包围，实现对物料的密闭输送，物料在输送过程中不洒落、不飞扬、不泄露，真正的实现了无公害化输送，净化了环境；
- 2、圆管带式输送机由于卷成管状，降低了横向刚度，使输送带以较小的弯曲半径作空间弯曲、输送；
- 3、由于物料被包围在输送带圆形截面内，增加了物料与输送带内表面的相互摩擦力，故可提高输送机的倾角；
- 4、无跑偏现象。

最大管径：Φ700mm 最大运距：9000m
最大输送能力：6000t/h（矿）3500t/h（煤）

Pipe Belt Conveyor

Pipe belt conveyor is a special kind of conveyor developed on the basis of troughed belt conveyor. Its belt is shaped in pipe type. It is generally composed of tail transition segment, pipe segment and head transition segment. It is widely applied in bulk material handling systems in such industries as metallurgy, mining, chemical engineering, electricity, construction and port.

Advantages:

1. Pipe belt conveyor increases the enclosure of materials and achieves environmentally friendly enclosed conveying environment.
2. Formed in pipe shape, a pipe belt conveyor enjoys a shorter bending radius for conveyance.
3. Larger conveyor inclination angle.
4. Zero occurrence percentage of misalignment.

Max. Pipe Diameter: Φ700mm
Max. Handling Distance: 9000m
Max. Handling Capacity: 6000t/h (ore) 3500t/h (coal)

普通带式输送机

带式输送机是一种理想的高效连续输送设备，与其他运输设备（如机车类）相比，具有输送距离长、运量大、输送物料范围广泛、装卸方便、连续输送、运费低廉等优点，而且运行可靠，易于实现自动化和集中化控制，还可在输送过程中同时完成若干工艺操作。因此，广泛的应用于冶金、矿山、港口、煤矿、电厂、建材、化工等各个行业。

最大带宽：2600mm；最大带速：8m/s；
最大输送能力：16000t/h（矿）8400t/h（煤）

Common Belt Conveyor

Common belt conveyor is an ideal handling equipment featuring high efficiency and continuous operation. Compared with other handling equipment, it is characterized by long conveying distance, large handling capacity, and wide range of applicable material type, easy loading and unloading and low-cost of freight charges. Its high reliability facilitates automatic and centralized control of the whole operation process. With such advantages, common belt conveyor is widely applied in various industries such as metallurgy, mining, port, electricity, construction and chemical engineering.

Maximum belt width: 2,600mm;
Maximum belt speed: 8m/s;
Maximum handling capacity: 16,000t/h (ore); 8,400t/h (coal)

Stock Yard Loading & Unloading Machine

料场装卸设备篇

(1) 翻车机卸车系统

机型分类：分为贯通式和折返式二种形式。
规格分类：分为 C 型单车式和 C 型双车式二种规格。



C 型单车式
C-Type Single Carriage Wagon Tippler

A. 贯通式:

由单拨车机调拨系统。系统由单车翻车机、拨车机、夹轮器、止挡器、振动煤篦、洒水除尘装置组成。

B. 折返式:

由翻车机、拨车机、迁车台、推车机、夹轮器、安全止挡器、振动煤篦、洒水除尘装置等组成。

(1) Car Dumper System

Type: Central hollow type and retracing type.
Specification: C type single carriage type and C type dual carriage type.



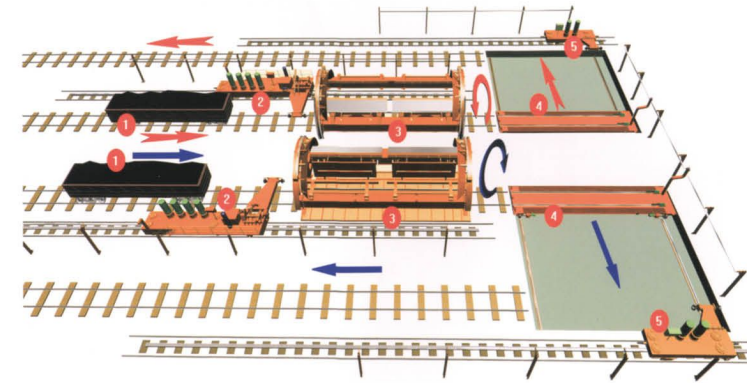
C 型双车式
C-Type Dual Carriage Wagon Tippler

A. Through Type

System is allocated by a single car puller. System is composed of single car wagon tippler, car puller, wheel clamp, brake, vibrating coal grating and water spraying dust removing devices.

B. Retracing Type:

Composed of wagon tippler, tippler, transfer platform, car puller, wheel clamp, brake, vibrating coal grating and water spraying dust removing devices.



①铁路货车 ②拨车机 ③双车翻车机 ④迁车台 ⑤推车机
折返式翻车机卸车系统平面布置图
Retracing type wagon tippler unloading system layout chart

型号及名称 Model and Name	贯通式 Through Type		最大取料能力 (t/h) Retracing Type	
	单车翻车机 Single Car Wagon Dumper	双车翻车机 Dual-car Wagon Dumper	单车翻车机 Single Car Wagon Dumper	双车翻车机 Dual-car Wagon Dumper
技术参数 Technical Parameter				
翻卸重量 (t) Unloading Weight (t)	100 - 140	200 - 280	100 - 140	200 - 280
翻转角度 Turning Angle	0° - 175°			
卸车效率 (节/h) Unloading Efficiency (Carriage/h)	23 - 40	40 - 72	20 - 25	30 - 40
装机容量 (kw) Installed Capacity (kw)	145	165	165	185
适用车型 Adaptable Automobile Mode	C60, C62, C63, C64, C70, C70A, C76, C80, C100			
说明：表中数据仅供参考，请根据实际需要订货。 Description: Data in the sheet is only for reference, pls order as per actual need.				



(2) 快速定量装车站

快速定量装车站是将煤炭、矿石等散状物料快速精确装入汽车、火车中的大型计量装车系统，广泛应用于煤矿、集运站、港口等场所。集智能识别、自动精确称重、快速装车、自动取样、数据报表自动处理、远程故障诊断等功能于一体。其特点是装车速度快，称量精度高，维护成本低，使用寿命长。

(2) Rapid Quantitative Loading Station

As a large measurement loading system, rapid quantitative loading station will accurately load bulk material like coal and mine into vehicle and trains, which focuses intelligent recognition, automatic weighing weighing, sampling and report data processing, and remote diagnosis system together. Its advantage is rapid loading, high weighing precision, low maintenance cost and long service life.

It focuses functions of intelligent identification, automatic and precise weighing, rapid loading, automatic sampling, automatic data report processing and remote fault diagnosis, with the advantages of fast loading, precise weighing, low maintenance cost and long service life.

(3) 液压翻版卸车机

液压翻版卸车机能够对非自卸汽车运输的散状物料进行自动卸载，具有卸车吨位大、卸车时间短、运行可靠、操作简单的特点。广泛应用于煤炭、港口、化工、粮食等行业。

(3) Hydraulic Flap Truck Unloading Machine

Hydraulic flap unloading machine unloads bulk material from vehicles automatically, which is with a large unloading tonnage, short unloading time, reliable operation and simple control. It has been widely used in coal, terminal, chemical engineering and grain unloading industries.

(4) 螺旋 / 链斗卸车机

螺旋 / 链斗卸车机是一种高效的机械化卸煤设备，能将煤从铁路货车上迅速卸下，减少铁路列车滞留时间。广泛应用于煤炭、冶金、化工、建材等行业进行煤炭、砂子、石灰等散装物料的卸车作业。分为螺旋卸车机和链斗卸车机。

(4) Screw/ Chain Bucket Cargo Unloading Machine

Screw/ Chain bucket unloading machine unloads coal with a high efficiency, which unloads coal from railway freight cars rapidly and reduces the residence time of railway trains. It has been widely used in coal, metallurgy, chemical engineering and building material industries for bulk material of coal, sand, lime unloading, which can be divided into screw unloading machine and chain bucket unloading machine.

TERMINAL WATERWAY ENGINEERING SYSTEM

港口水运工程系统





Business Scope

业务范畴

泰富重装将整合供应链的优势力量，全面联动世界各国的合作伙伴，最大限度满足客户港口项目需求。

Tidfore will integrate the advantage of the supply chains and fully unite its partners around the world to meet the customer maximize needs of harbor project.



泰富重装集团长期致力于为国内外港口水运客户提供项目工程解决方案。集团雄厚的设计制造实力，搭配集团为海内外客户提供的多元化融资方案，使之能够为港口、航道、修造船厂、通航建筑物和水上交通管制等水运工程，提供港口设备供应、港口升级或新建工程总承包、项目管理和项目开发等一站式服务，并承接水运工程勘测、设计咨询、工程科研、试验检测、设备的租赁及维修等多项业务。

Tidfore Heavy Equipment Group Co., Ltd. has been devoted in providing system project solution to domestic and abroad customers in port & waterway sector. The group owns outstanding design and manufacturing strength, together with its diversified financial solutions offering to the national & international client. Therefore, for the waterway engineering of ports, channels, ship repair & build plant, navigation structure and Maritime traffic control system etc., the group can provide one-stop service of port equipment supplying, contracting for new-build/upgrading port project, construction project managing and project development, etc., as well as manifold business such as survey, design, consulting, project of scientific research and test, equipment rental & maintenance for waterway engineering.

设计制造实力

泰富重装集团在湘潭和天津拥有 2 个港口成套设备生产销售基地；在上海和青岛设有 2 个港口水运系统设计院。在此基础上，集团还引进可行的国际融资方案，全面联动世界各国的合作伙伴，满足了从勘测、设计、制造，到施工、安装、试运行，甚至后期的港口的运营、移交等一系列的港口水运项目要求。

Design & Manufacturing

Tidfore Heavy Equipment Group Co., Ltd. has two bases for the manufacturing & sales of port complete set equipments in Xinagtan & Tianjin; and also has two R&D Institutes for development of port & waterway engineering system, in Shanghai & Qingdao. The group also introduces feasible international financial solutions, cooperates with international partners within the supply chain. With these advantages, Tidfore are able to take various project tasks for port & waterway engineering even to the port operation and final possession transfer.



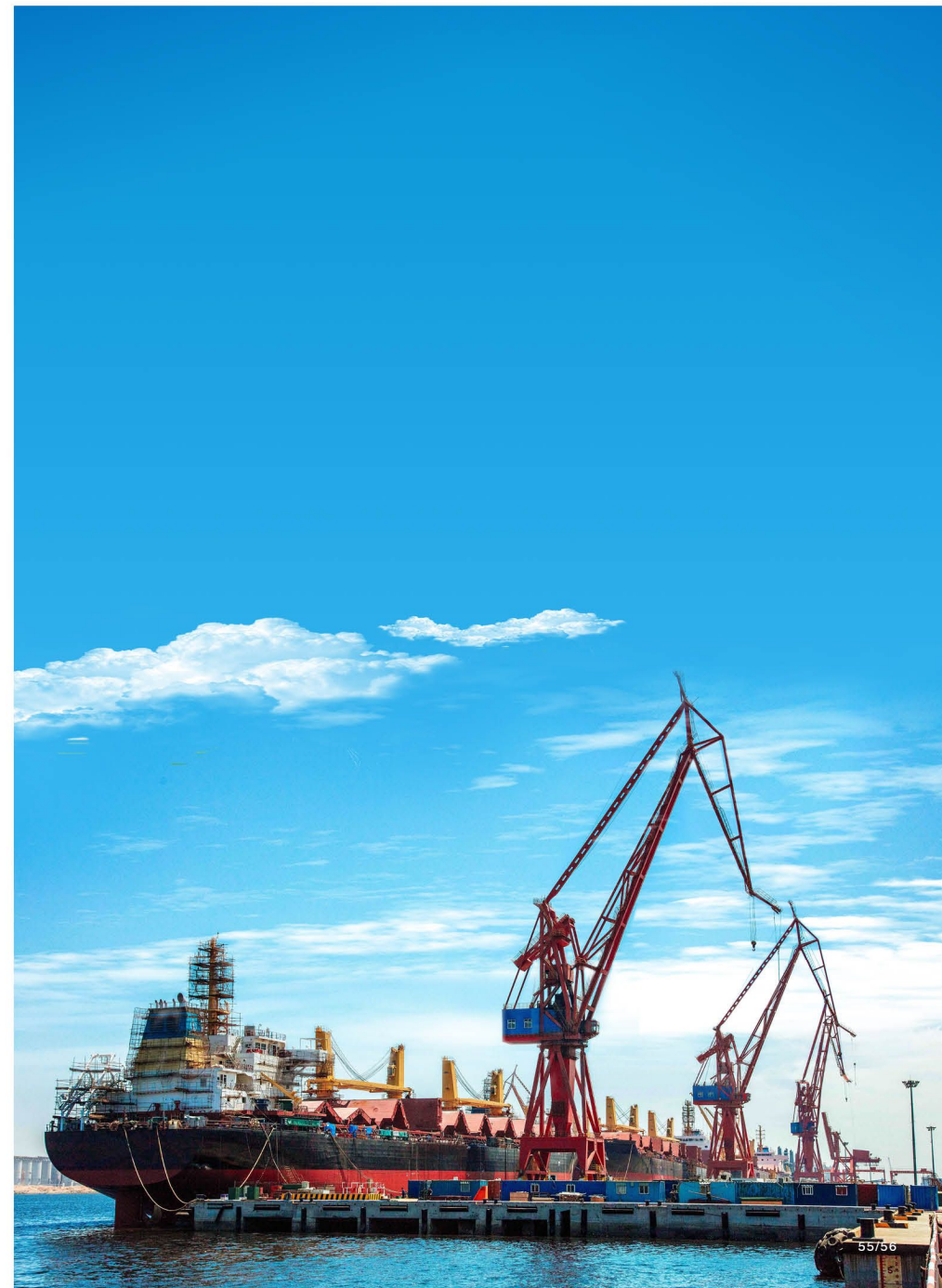
专利技术

- 1、海港工程的沉井式圆筒结构（实用新型）
- 2、沉箱运输船舶（实用新型）
- 3、起锚设备及具有所述起锚设备的船舶（实用新型）
- 4、多功能拖缆机及具有所述拖缆机的拖轮（发明专利）



Patents

1. Open caisson cylinder structure for sea port construction (Utility Model)
2. Box caisson transportation ships (Utility Model)
3. Anchor gear and ships with such gear (Utility Model)
4. Multi-functional towing winch and tugboat with such winch (Invention)



Single Unit Equipment

单机设备

装船机

最大生产能力: 20000t/h

Ship Loader

Maximum capacity: 20,000t/h



门座式起重机

最大起重能力: 160t
最大幅度: 60m

Portal Crane

Reclaiming Capacity: Max. 16,000 t/h
Rail Gauge: Max. 50m



桥式抓斗卸船机

生产能力: 3500t/h

Bridge Type Grab Ship-Unloader

Capacity 3,500t/h (coal)



龙门起重机

最大起吊能力: 1200t
跨距: 236m

Gantry Crane

Maximum hoisting capacity: 1,200t
Span: 236m



连续式卸船机

生产能力: 1200t/h (煤炭)

Chain Bucket Type Ship Unloader

Capacity 1,200t/h (coal)



岸边集装箱起重机

最大起吊能力: 75t
最大臂幅: 75m

Shore Side Container Handling Crane

Maximum hoisting capacity: 75t
Maximum boom outreaching length: 75m



Offshore Mobile Terminal

海上移动码头

泰富重装集团开发的新一代海上移动码头，为国际领先的第五代产品。功能最全、吨位最大、装卸最快、效益最高，填补了国内空白。系统由动力船、卸船机、带式传送系统、装船机、控制系统、计量系统等组成，具有自航、自驳、自控及仓储功能，被誉为真正意义上的“智能海上移动码头”。

The new off-shore mobile terminal invented by Tidfore Heavy Equipment Group Co., Ltd is the international leading one of the fifth generation. With the most complete function, the largest tonnage, the fastest loading and unloading speed and the highest efficiency, it has filled the domestic blank. The whole system is composed of driving ship, ship unloader, belt conveying system, ship loader, control system, metering system featuring self-propelling, self-berthing, self-controlling and self-storage, which has been honored as the indeed "Intelligent Off-shore Mobile Harbor".

最大装船能力：3000t/h

最大卸船能力：3000t/h

Maximum ship loading capacity: 3,000t/h

Maximum ship unloading capacity: 3,000t/h

产品功能

自驳功能：一次靠泊能实现全程连续装卸作业，装卸船过程中无移泊无等待，同时在不改变原有码头泊位能力和不需要扩建码头的基础上可实现大船上的干货通过过驳平台倒运到小船进港，将小船上的散料倒运到大船上出港。

仓储功能：利用平台自身舱位进行储藏，在下次装船时再通过装船系统进行装船，一次性储存煤、矿石可达 17.5 万吨。

自航功能：平台上部装卸船设备可根据大船与小船的位置自行调整装卸位置，达到一次靠泊能全程连续装卸，在全过程中无移泊无等待，可实现同时装卸的智能控制高效运行模式。

自控功能：具备远距离自航功能，可满足多区域作业，机动性强，运行成本低。

Product Function

Self-berthing function: It can achieve continuous loading and unloading operations without shifting berth and waiting, also it can achieve reshipment of dry bulk material between the large cargo and the barge by lightering platform without changing original berth capacity and expansion dock.

Self-storage function: To store with its own space, the ship loading system will only be used at the next ship loading, once storage can hold 0.175 million tons of coal and minerals.

Automatic control function: The upper platform ship loading and unloading equipment is able to adjust the operating location as per the dimensions of ships all by itself, to realize whole course continuous loading with only one berthing.

Self-propelling function: It maintains long-distance self-propelling function, to satisfy multi-area working, with strong maneuverability, low operation cost.



技术创新

- 1、过驳平台装卸船设备一体化。
- 2、装卸船机防倾覆锁定装置。
- 3、装卸船可伸缩式机臂架系统。
- 4、基于机器人视觉技术的散料输送设备智能控制。

智能化装船系统、智能化卸船系统、远程故障诊断技术、海上过驳平台物流管理的信息化和智能化。

Technological Innovation

1. Integrated lightering platform for loading and unloading equipment.
2. Locking device of capsizes for loading and unloading ship.
3. Retractable machine arm system on loading and unloading ship.
4. Intelligent control of bulk cargo conveying equipment is based on robot vision technology.

Intelligent loading system, intelligent unloading system, remote fault diagnosis technology, informatized and intelligentized logistics management for offshore lightering platform.

产品优势

- 1、功能最全、吨位最大、装卸最快、效益最高。
- 2、有效节约大量物流成本，为客户带来可观的经济效益，有效提高国家战略性资源（铁、矿石、粮食、煤炭）在境外采购价格上的话语权和主动权。
- 3、大量节约使用成本：产品设备故障点较行业主流产品减少 60% 以上；设备维修作业量减少了 40% 以上；船舶安装改造时间减少 70% 以上；作业人员减少了三分之一。
- 4、不改变港口状况，不增加港口巨额投资，解决了国外矿石、煤炭等散料运不出来的问题。
- 5、避免因修建大量港口及大型深水泊位造成的对沿海岸自然环境的破坏与污染，有效的保护海洋环境。
- 6、为客户提供“个性化”物流服务，实现货主与航运企业之间的共赢。

Product Strengths

1. Complete function, the largest tonnage, the fastest loading and unloading, and the highest efficiency.
2. Effectively save a lot of logistics costs and bringing considerable economic benefits to customers.
3. Save a lot of using cost: Compared with popular products, equipment failure points are decreased by 60% or more; equipment maintenance operation is reduced by more than 40%; ship installation and reassembling time is cut down by more than 70%; operating personnel reduced by one third.
4. Solve the problem of ore, coal and other bulk material which cannot be transported from foreign country without port condition changing or large investment on port.
5. Avoid the damage and pollute on coastwise natural environment cause by construction of a large number of ports and large deep water berths, effectively protect the marine environment.
6. Provide customers with "personalized" logistics services; achieve win-win business between cargo owners and shipping companies.

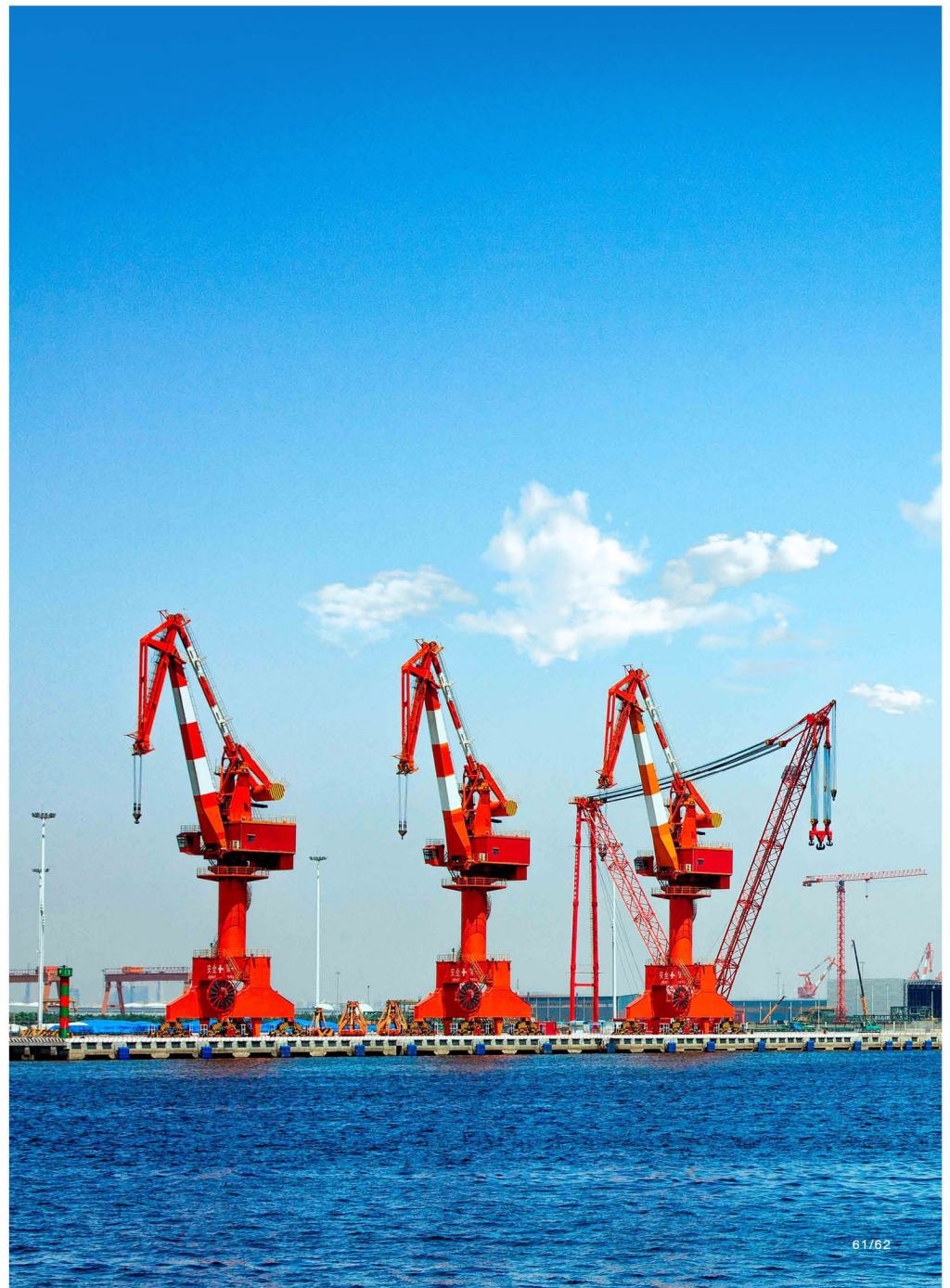
浮吊
Floating Crane

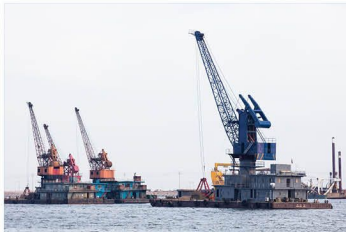


海上风电吊装平台
Offshore Wind Power Lift Platform

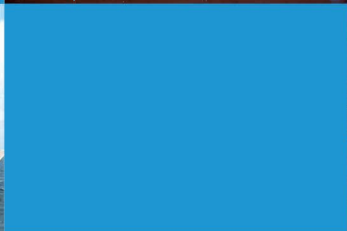
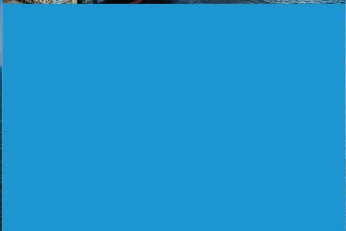
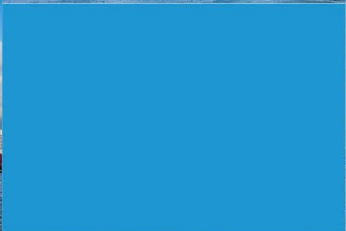
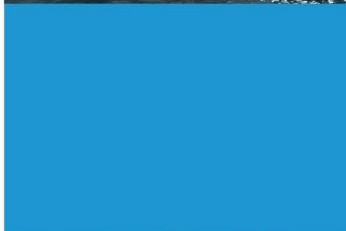
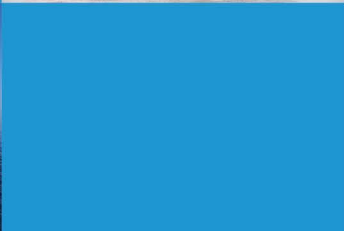
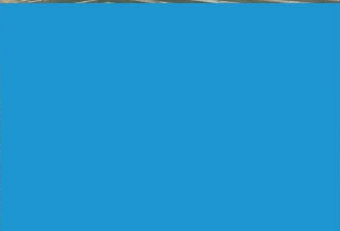
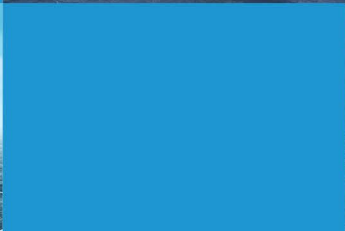
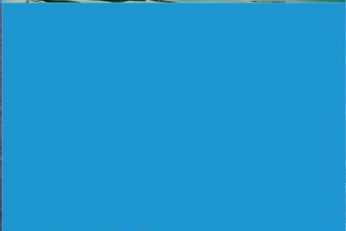


钻井平台
Drilling Platform





TIDFORE



PRODUCTION PERFORMANCE

生产业绩篇



Bulk Material Handling System Performance

散料输送系统业绩

泰富通过整合社会各界优势资源，创行业之先，为客户提供从技术、设计、制造、安装、到资金融通等一站式、全方位的系统解决方案，从而实现客户利益的最大化，创造出双赢甚至多赢的局面。

Tidfore has created a complete one-stop system solution for clients ranging from technology, design, manufacture, erection to accommodation of funds realizing the maximum benefit of clients.

系统工程项目

现代制铁焦化原料场散料输送系统
韩国三星工程输送设备系统
中煤鄂尔多斯能源化工有限公司贮煤场系统总承包
临汾欣洁源洗配煤厂项目洗煤厂项目总承包
如皋港务集团有限公司港口、洗煤厂项目设备融资租赁
四川夹江规矩水泥有限公司水泥厂输送系统总包
湖南嘉禾县南岭水泥有限公司水泥厂输送系统总包
湖南永州莲花水泥有限公司水泥厂输送系统总包
湖南蔡家洲砂石翻坝输送系统 EPC 工程项目
江苏盐城港响水港双港作业区设备购置及安装工程

湖南蔡家洲砂石翻坝输送系统 EPC 工程项目
Hunan province Ca ijia state dam getting over handling system EPC engineering project



Main Overseas Projects

Hyundai Steel bulk material conveying system of coke stockyard
Korea Samsung engineering conveying equipment system
China Coal Erdos Energy Chemical Industry Co., Ltd coal storage yard system general contracting
Linfen Xinjeyuan coal washery project general contracting
Fugao Port Group Co., Ltd port, coal washery project equipment financing and leasing
Sichuan Jiajiang Guiju Cement Co., Ltd cement plant conveying system general contracting
Hunan Jiahe Nanling Cement Co., Ltd cement plant conveying system general contracting
Hunan Yongzhou Lotus Cement Co., Ltd cement plant conveying system general contracting
Hunan province Ca ijia state dam getting over handling system EPC engineering project
Jiangsu Yan city port Xiangshui Port dual-port working area facility purchasing and installing engineering project

江苏盐城港响水港双港作业区设备购置及安装工程
Jiangsu Yan city port Xiangshui Port dual-port working area facility purchasing and installing engineering project



昆钢集团综合原料场散料系统

Kunming Steel Group Comprehensive Raw Stockyard Bulk Material System



武汉钢铁集团散料输送系统

Wuhan Iron & Steel Group Bulk Material System



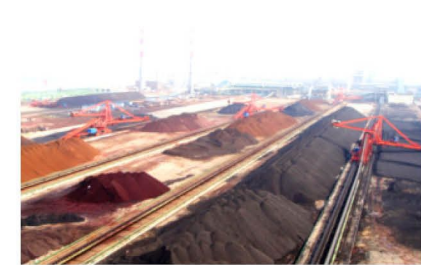
巴西淡水河谷散料输送系统

Brazil Vale Group Bulk Material Conveying System



重庆钢铁集团原料厂

Chongqing Iron & Steel Group Raw Material Plant



湖南嘉禾县南岭水泥有限公司水泥厂输送系统总包

Hunan Jiahe Nanling Cement Co., Ltd Cement System



天津天钢联合特钢有限公司综合原料场

Tianjin Tiangang United Special Steel Co., Ltd comprehensive raw material stockyard



Performance Reference

单机业绩

单机项目

印度 Lanco 集团 AnparaC 电厂 (DQL1600/1600 · 41 斗轮机)
土耳其 BEKIRLI 超临界燃煤机组 (DQL650/1500 · 45 斗轮机)
武汉钢铁集团公司 (DQL1200/1560 · 40 斗轮机)
湘潭钢铁集团有限公司 (QLH500 · 30 混匀取料机)
南京港龙潭港区 (DQLZ1800/3600 · 35)
浙江浙能舟山煤电项目筹建处 (QL3000 · 45)
中铝重庆铝厂 (QLH600 · 34 双斗轮混匀取料机)
广东韶钢松山股份有限公司 (DQL1200/1200 · 32 斗轮机)
天津冶金集团轧三友发钢铁有限公司斗轮机项目 (1000/1400T/H 斗轮堆取机 4 台, 1300T/H 混匀堆料机 1 台, 1000T/H 双斗轮取料机 1 台)
巴西淡水河谷圣路易斯港项目 (QL10400.50 斗轮取料机)
2011 年 2 台
巴西淡水河谷圣路易斯港项目 (DL4900.28 堆料机)
2011 年 2 台
巴西淡水河谷几内亚项目 (DL4900.28 堆料机) 2011 年 2 台
韩国浦项制铁光阳港项目 (DL6000.28 堆料机) 2008 年 1 台
韩国浦项制铁光阳港项目 (DL1200.30 堆料机) 2008 年 1 台
韩国浦项制铁光阳港项目 (QL600.30 取料机) 2008 年 2 台
韩国浦项制铁桥式刮板取料机 (400.32) 2008 年 1 台
土耳其阿特拉斯电厂 (DQL1000/1500.45 斗轮堆取料机) 2 台
广西贵港永泰仓储码头 (5035 门机)
荣鑫伟业港务有限公司 (MQ40-33/MQ25-33 门机)
荣鑫伟业新材料有限公司 (回转窑、烘干机)
中科永利港务有限公司 (MQ40-45/MQ25-45 门机)
中科永利新材料有限公司 (回转窑、烘干机)
荣鑫伟业新材料有限公司压片机项目 (压片机)
湘江蔡家洲航电枢纽沙石翻坝 (皮带机、管带机)
常州禄安洲长江码头斗轮机 (斗轮机 DQL4000/3000 45M)
贵州华锦铝业 (QG800/40 桥式刮板取料机)
百色西矿斗轮机 (DQL800/1000 35M 斗轮机)
浙江协和码头 (MQS2533 (2), MQS4033 (1) 门机)
广东广新盛特印尼广青镍业有限公司年产 60 万吨镍铁冶炼及其配套 2 × 150MW 火力发电项目 (DQL1000/2400 · 35M 斗轮机)
山东董海港业股份有限公司门机项目 (16T-30M 门机)
岳阳县鹿角码头 (40.5-25 门机 1 台, 10-25 门机 1 台, M10-30 浮吊门机 2 台, B1000 皮带机)
陆海港务 (钦州) 门机改造项目 (GQ-4033 固定式起重机改为 MQ-4033 门座式起重机)

Equipment Production

India Lanco Group AnparaC Power Plant (Bucket-wheel Stacker-reclaimer DQL1600/1600-41)
Turkey BEKIRLI Supercritical Coal-fired Units (Bucket-wheel Stacker-reclaimer DQL650/1500-45)
Wuhan Iron & Steel Group Corporation (Bucket-wheel Stacker-reclaimer DQL1200/1560-40)
Xiangtan Iron & Steel Group Co., Ltd (Blending Reclaimer QLH500-30)
Nanjing Port Longtan Harbor District (DQLZ1800/3600-35)
Zhejiang Zhenheng Zhoushan Coal-fired Power Plant Project (QL3000-45)
Aluminum Corporation of China Chongqing Aluminum Plant (Double Bucket-wheel Blending Reclaimer QLH600-34)
Guangdong Shaogang Songshan Co., Ltd (Bucket-wheel Stacker-reclaimer DQL1200/1200-32)
Vale of Brazil St. Louis Port Project
Bucket-wheel Reclaimer QL10400.50 2011
Vale of Brazil St. Louis Port Project Bucket-wheel Reclaimer QL10400.50 2011 2 sets
Vale of Brazil St. Louis Port Project Stacker DL4900.28 2011 2 sets
Vale of Brazil Guinea Project Stacker DL4900.28 2011 2 sets
POSCO Kwangyang Port Project Stacker DL6000.28 2008 1 set
POSCO Kwangyang Port Project Stacker DL1200.30 2008 1 set
POSCO Kwangyang Port Project Reclaimer QL600.30 2008 2 sets
POSCO Bridge-type Scraper Reclaimer 400.32 2008 1 set
Turkey Atlas Power Plant Bucket-wheel Stacker-Reclaimer DQL1000/1500.45 2 sets
Guangxi Guigang Yongtai Warehouse wharf (Portal Crane 5035)
Rongxin Weiye Port Affairs Co., Ltd (Portal Crane MQ40-33/MQ25-33)
Rongxin Weiye New Material Co., Ltd (Rotary Kiln; Dryer)
Zhongke Yongji Port Affairs Co., Ltd (Portal Crane MQ40-45/MQ25-45)
Zhongke Yongji New Material Co., Ltd (Rotary Kiln; Dryer)
Rongxin Weiye New Material Co., Ltd (Compressing & Tableting Machine)
Xiang River Caijiazhou Navigation-power Junction Gravel Dam (Belt Conveyor; Pipe Conveyor)
Changzhou Luanzhou Yangtze River Dock (Bucket-wheel Stacker-reclaimer DQL4000/3000 45M)
Guizhou Huajin Aluminum (Bridge-type Scraper Reclaimer QG800/40)
Baise Baikuang (Bucket-wheel Stacker-reclaimer DQL800/1000 35M)
Zhejiang Xiehe Dock (Portal Crane MQS2533 (2), MQS4033 (1))
Guangdong Guangxin Shengte Indonesia Guangqing Nickel Co., Ltd 600,000T Nickel-iron Smelting Complete with 2*150MW Thermal Power Generation Project (Bucket-wheel Stacker-reclaimer DQL1000/2400-35M)
Shandong Tonghai Port Industry Co., Ltd (Portal Crane 16T-30M)
Yueyang Antler Dock (Portal Crane 40.5-25 (1), 10-25 (1)); Floating Gantry Crane M10-30 (2); Belt Conveyor B1000)
Luhai Port Affairs (Qinzhou) Gantry Crane Reconstruction Project (Remold the Fixed Crane GQ-4033 into Portal Crane MQ-4033)



Maritime Project, Port and Teminal Achievements

海洋工程、港口码头业绩

泰富重装结合国内外先进设计与制造理念，根据业主需要，为港口水运工程项目提供咨询、设计、勘察、装备供应、施工总承包、监理、项目管理和项目开发的最佳一体化解决方案。

As per the need of clients, Tidfore supplies the port marine traffic engineering works including consultant, design, prospect, equipment providing, construction general contracting, supervising, project management and project development.

主要国外项目

东帝汶民主共和国全国港口规划与帝力（DILI）港新建方案设计
刚果民主共和国马塔迪（MATADI）港口修复与扩建项目设计
菲律宾马新洛克（MASINLOC）港总体设计
缅甸大宇 SHWE 项目设计
阿尔及利亚某海军基地设计
印尼塔里亚布岛码头建设工程
菲律宾矿石码头项目
东帝汶海军基地建设项目一期工程
巴基斯坦某军港项目设计

主要工程总承包项目

中石化青岛大炼油大件码头工程
日照钢铁专用码头工程
莱州市青钢铺陆岛交通码头堆场扩建工程
威海港张家埠新港区一期工程
洙水河改造巨野港码头建设工程
大唐莱州湾海上风电一期工程测风塔基础工程
东营中心渔港工程
山东海事局前海码头维修改造工程
烟台海事局工作船码头及港池航道维修改造工程
山东海事局莱州海事工作船码头工程
中石化青岛大炼油大件码头工程
胶州湾三河入海口岸线保护工程
滨州港液体化工码头工程
印尼加里曼丹 2000KT/ 氧化铝项目

Main Overseas Projects

Democratic Republic of Timor-Leste national port plan and Dili port newly-constructed program design
Democratic Republic of Congo Matadi port restoration and expansion program design
Philippines Masinloc port general design
Myanmar Daewoo SHWE program design
Some Algeria naval base design
Indonesia Talia Island terminal construction engineering
Philippines ore terminal project
Timor-Leste naval base construction project first-stage engineering design
Pakistan military terminal project engineering

Main General Contracting Projects

SINOPEC Qingdao large-scale oil refining heavy goods terminal engineering
Rizhao exclusive-for-steel terminal engineering
Laizhou City Qinglinpu land-island transportation terminal yard expansion engineering
Weihai Port Zhangjiabu New Port Zone Engineering Phase I
Zhushui river transformation Juye port terminal construction engineering
Datang Laizhou bay offshore wind electricity engineering anemometer tower Phase I foundation construction engineering
Dongying centre fishing port engineering
Shandong bureau of maritime affairs fore-sea terminal transformation engineering
Yantai bureau of maritime affairs working ship terminal and harbor basin maintenance and reconstruction engineering
Shandong bureau of maritime affairs Laizhou maritime working ship terminal engineering
CNPC Qingdao large-scale oil refining engineering liquid chemicals terminal transformation engineering
Binzhou Port Liquid Chemical Wharf Project
Indonesia Kalimantan 2000KT Aluminum Oxide Project

菲律宾马新洛克港口通用泊位
Philippines MasinLoc Universal Bert



胶州湾三河入海口岸线保护工程
Kiaochow Bay Three-river Estuary Shoreline Protection Project



广西天盛港港口系统
Guangxi Tiansheng Port Co., Ltd Port System



东帝汶民主共和国国家港口建设项目 HERA 港设计
Democratic Republic of Timor-Leste National Port Construction Project Hera Port Design



山东日照市岚山区多岛海环境改造工程
Shandong Rizhao Lanshan District Archipelago Sea
Reconstruction Project



秦皇岛市莲花岛旅游项目
Qinhuangdao Lotus Island Tourism Project



招远市春雨一级渔港工程
Zhaoyuan Chunyu Fishing Harbor Project Level I



滨州港套尔河港区魏桥工程
Binzhou Port Taoer River District Weiqiao Project



山东日照市港岚山区液体石油化工码头工程
Shandong Rizhao Lanshan District Liquid Petrochemical
Port Project



青岛国际帆船中心
Qingdao International Sailing Center



烟台长岛港区工程
Yantai Changdao Port Project



青岛中科院薛家岛码头工程
Qingdao, Chinese Academy of Sciences Xuejia
Island Port Project



山东龙口市 5 万吨级粮食码头主体工程
Shandong Longkou 50-thousand-ton Grain Dock Project



青岛唐岛湾滨海公园景观工程
Qingdao Tangdao Bay Binhai Park Landscape Project



荣成市苏山岛陆岛交通码头
Rongcheng Sushan Island Traffic Quay



威海港乳山港区工程
Weihai Port Rushan Harbor District Project





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