

# 长形侧式刮板取料机产品介绍

Introduction of longitudinal side  
type scraper reclaimer

## 一、概述Summary

长形料场侧式刮板取料机主要用于水利、钢铁、焦化、水泥等大型企业的储料场，进行刮取砂岩、矿石、砂石、焦炭等散状物料。

The longitudinal stockyard side scraper reclaimer is mainly used for scraping sandstone, ore, sandstone, coke and other bulk materials in the stockyard of large enterprises such as water conservancy companies, steel companies, coal coking companies and cement companies.

该设备可在一个料场中布置多种物料，并且可以跨料堆取料。其采用侧面取的取料工艺。侧式刮板取料机结构简单、性能可靠、操作容易，维修方便，使用安全等优点。

The side scraper reclaimer can reclaim operation to different material pile, and to reclaim bulk materials from material pile side. The side scraper reclaimer has the advantages of simple structure, reliable performance, easy operation, convenient maintenance and safe operation.

## 二、整机结构形式及工作原理 composition and working principle

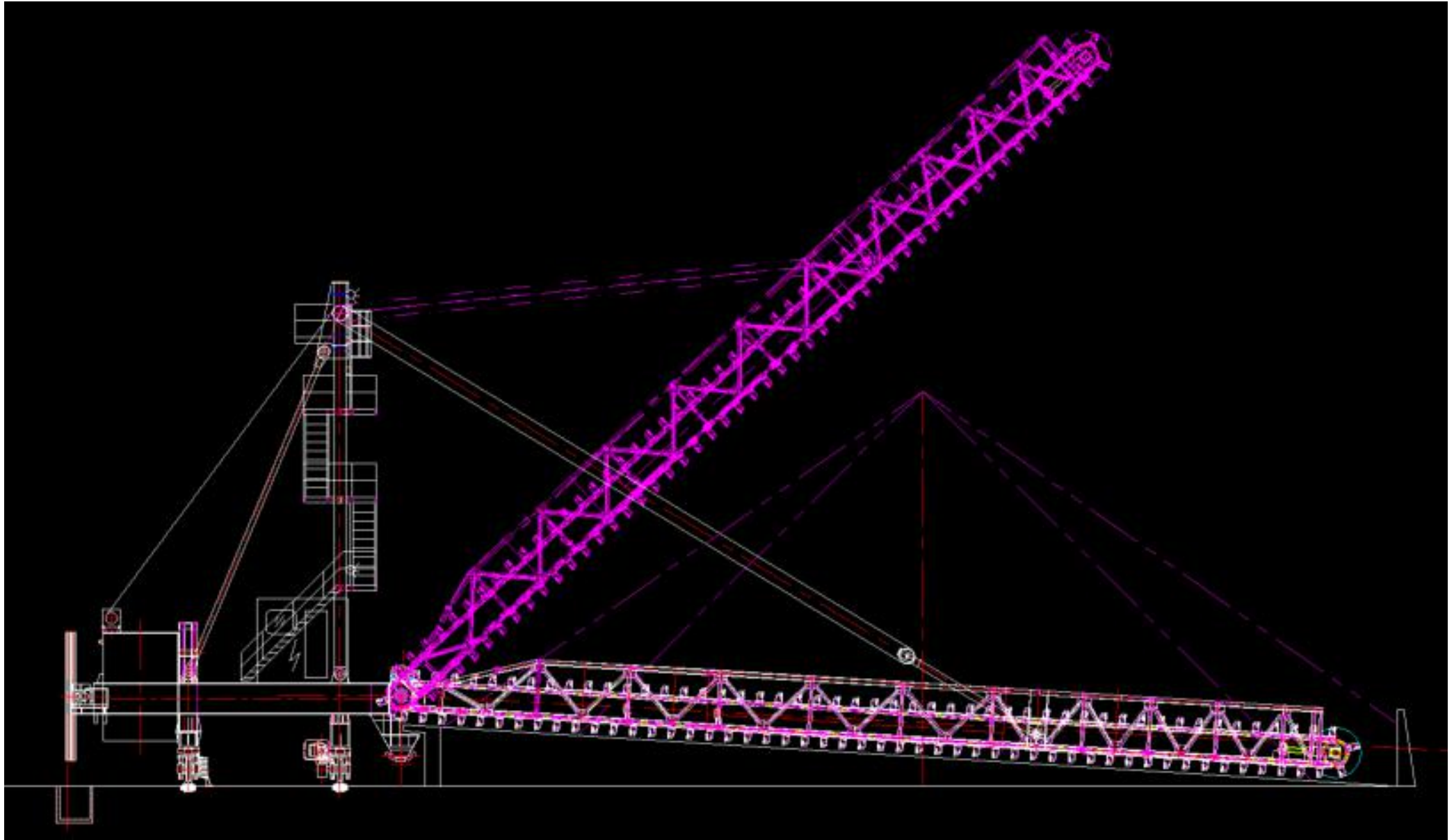
侧式刮板取料机主要由行走机构、刮板输送系统、卷扬机构、电气控制室等部分组成。

The side scraper reclaimer is mainly composed of traveling mechanism, scrap conveying system, luffing system, and electrical control system and other components

取料机在堆场中与堆料机配合使用，堆料机在料仓的一侧堆积的物料，由取料机在料仓的另一侧的轨道上往复运动，通过刮板取料系统把物料卸到导料槽内，通过导料槽送到出料胶带上运出。取料臂每取完一层物料后，按预置的指令下降相应的高度，并在相应的取料运行速度下，将料堆逐层取出，直至该料仓的物料全部取净。这种取料过程使堆料机按一定方式堆积起的物料再次得到均化。

The reclaimer is used with the stacker in the stockyard. The materials stacked by the stacker on one side of the silo move back and forth on the rail on the other side of the silo by the reclaimer. The materials are discharged into the chute through the scraper reclaiming system, and sent to the discharge belt conveyor through the chute for transportation. After each layer of material is taken by the reclaiming arm, the corresponding height shall be lowered according to the preset command, and the material stack shall be taken out layer by layer at the corresponding reclaiming operation speed until all the materials in the silo are taken out. This reclaiming process makes the materials stacked by the stacker to blend again

# General arrangement



### 三、主要结构特点及介绍 Main features and introduction

#### 1. 刮板取料系统 scraper reclaiming system

(1) 刮板取料系统是本机实现取料功能的主要部件。驱动装置通过锁紧盘联接在驱动轴上，驱动轴上的链轮带动链条及固定在链条上的刮板在悬臂架的支承下循环运转，将物料刮取到料仓一侧；

The scraper reclaiming system is the main part to reclaiming material. The drive device is connected to the drive shaft through the locking disc. The sprocket on the drive shaft drives the chain and the scraper fixed on the chain to circulate under the support of the cantilever frame to scrape the materials to one side of the hopper.

(2) 驱动装置由电机、偶合器和减速器组成，减速器为直交轴全硬齿面空心轴减速器；

The driving device is composed of motor, coupling and reducer. The reducer is a straight axis hollow shaft reducer with heat treatment tooth.

(3) 臂架为双工字形板梁结构或桁架结构，梁的上、下分别布置有支承链条的轨道导槽； The boom is a double I shaped beam structure or lattice structure, and the upper and lower parts of the beam are respectively arranged with track guide grooves supporting chains

(4) 在改向链轮一端设有张紧装置，可调节链条的松紧； A tensioning device with a composite spring is arranged at one end of the reversing sprocket to adjust the tightness of the chain

(5) 根据物料的不同特性，在每个刮板的取料面上均安装有耐磨衬板及松动物料的耐磨刮齿。 Wear-resistant loose materials are installed on each scraper.



## 2. 机架及行走端梁 gantry and traveling beam

(1) 机架和行走端梁的作用是支承整机重量并驱动取料机在料场内的轨道上往复运行，机架采用箱形结构的刚性平台；

The gantry and traveling beam is to support the whole machine and drive the reclaimer to travel on the rail in the stockyard. The gantry is a rigid box structure

(2) 行走端梁由车轮组、驱动装置和支承的结构梁组成，其下部可在轨道上行走，上部与机架平台一侧用螺栓刚性连接，另一侧铰接。

The traveling beam is composed of wheels, driving device and supporting structural beam. Its lower part can travel on the rail, and its upper part is rigidly connected with one side of the gantry by bolts and hinged on the other side



### 3. 卷扬提升系统 luffing mechanism

(1) 该系统是完成刮板取料系统变幅的机构；Luffing mechanism is for scraper reclaiming system to luffing

(2) 由支承架和电动葫芦、滑轮等组成。It`s composition of support frame, electric winch, and pulley etc.



#### 4. 润滑系统 lubrication system

(1) 在机架的一侧设有稀油润滑站，通过油管和给油指示器将润滑油滴在链条上；

A gear oil lubrication station is set on one side of the fixed end beam to lubricate the chain

(2) 在固定端梁和摆动端梁各设置一套干油润滑系统，用来润滑车轮轴承和链轮组轴承。

A grease lubrication system is set on the fixed end beam and swing end beam respectively to lubricate the wheel bearing and sprocket group bearing.



## 5. 安全保护措施 safety protection measures

- (1) 大车运行的行程终点设二级限位装置; Secondary limit device shall be set at the end of the rail.
- (2) 断链监测; Monitoring chain broken.
- (3) 电缆扯断保护装置; Power cable broken protection device.
- (4) 行走警告用声光信号; Warning signal for traveling.
- (5) 钢丝绳防松弛保护装置; Steel wire rope anti loose protection device.
- (6) 电气保护装置按系统设置需要, 配置完善的各级安全保护; The electrical protection device shall be equipped with complete safety protection at all levels according to the needs of system setting
- (7) 司机室和配电室自动火灾报警及相应的灭火工具; Automatic fire alarm and corresponding fire extinguishing in the cab and power distribution room.
- (8) 电气设备的短路, 过载, 过热, 漏电保护; Short circuit, overload, overheating and leakage protection of electrical equipment.
- (9) 联锁保护功能等。Interlock protection etc.

## 6. 供电系统 Power supply system

供电采用高压上机或低压上机；采用电缆卷盘或电缆拖链供电。

High voltage or low voltage power supply is adopted; Power is supplied by cable reel or cable drag chain

## 7. 控制系统 Control system

控制系统普遍采用PLC控制，运行方式为手动控制和自动控制。操作方式更多地依靠可编程终端上的人机界面进行设定、记录及观察。 The control system is generally controlled by PLC, and the operation mode is manual control and automatic control. The operation mode depends more on the man-machine interface on the programmable terminal for setting, recording and observation

#### 四、选型参数表specification

刮板臂头尾轮 中心距 (m) Tail wheel distance	取料能力(t/h) Reclaiming capacity(t/h)	物料种类 material	物料比重 (t/m <sup>3</sup> ) Density (t/m <sup>3</sup> )	物料粒度 (mm) granularity	物料水分 (%) moisture
18~32	50~600	原煤、砂岩、石灰石等 Raw coal, sandstone, limestone etc	0.8~1.5	<70	<2