NEWS CRANE PTFI

SWF Krantechnik is one of the world's leading Manufacture Company for electric travelling cranes and hoists. Worldwide sales and maintenance of our partner organizations as well as extensive production resources guarantee professional customer service and the most advanced crane techniques. Over the past decades we have delivered material handling solutions to virtually any application to all industries. This experience combined with a wide range of components enables us to produce optimised customer- engineered solutions with computer aided component selection and design.

SWF Krantechnik design, material and final products are certified and inspected by most worldwide standards. All the strategic components of our crane such as motors, gears and drums are specially designed for crane applications, ISO 9001 certified component factories, ensuring the highest quality, compatibility and availability.

We trust that this offer meets with your present requirements; however, should you require further information, please do not hesitate to contact the undersigned, where we will be pleased to be of further assistance.

We are PT. Lintech Pratama Duta has awarded a major capital project for PT. Freeport Indonesia heavy duty underground application (DLMZ expansion project), to provide design, fabrication and supply, delivery and site commissioning for several crane unit as below:

No	Description	Q'ty	Due date
1	Single Girder Electric Suspension Traveling Bridge Crane, 5 MT Hoist, 8.5 Meter Span and 10 Meter Hookpath. Crane shall be Complete with Crab, Hoist, L/T End Carriage and Drive Unit, Electric Contractor for main power	2	26/0811
	Secondary Disc Brake for 5 MT Hoist	2	
	Power Conductor Bar, Enclosed Type : VAHLE Power Conductor Type KBH Runway Length : 16 Meter	40	
	Amole Monorail Hoist, Electric Wire-Rope Hoist Motor-Driven Trolley, 5 MT Capacity, 12 Meter Hookpath 3 Phase, 460 Volt, 60 Hz.	1	
	Secondary Disc Brake for 5 MT Hoist	1	
	Amole Hoist Festoon System 14 meters	1	
2	Conveyor 26-BC-0513 Tail area Bridge Crane Double Girder Electric Overhead traveling Bridge Crane for outdoor duty, 30 MT Main Hoist and 5 MT Auxiliary Hoist	1	30/09/11
	Wire Rope Drum Brake for 30 MT Main Hoist and Second Disc Brake for 5 MT auxiliary Hoist for use with item 1	1	

Wireless Remote Control to Operate All Bridge Crane Function such as Hoist and travel speeds for use with item 1	1
Power conductor bar, enclosed type : VAHLE power conductor, type KBH runaway length 92.00 meter for use with item 1	1
Conveyor 26-BC-0513 Drive area Bridge Crane Double Girder Electric Overhead traveling Bridge Crane for outdoor duty, 35 MT Main Hoist and 5 MT Auxiliary Hoist	1
Wire rope drum brake for 35 MT Main Hoist and second disc brake for 5 MT auxiliary hoist for use with item 5	1
Power conductor bar, enclosed type : VAHLE power conductor, type KBH runaway length 30.00 meter for use with item 5	1
Conveyor 26-BC-0513 Head area Bridge Crane Double Girder Electric Overhead traveling Bridge Crane for outdoor duty, 40 MT Main Hoist and 5 MT Auxiliary Hoist	1
Wire rope drum brake for 40 MT Main Hoist and second disc brake for 5 MT auxiliary hoist for use with item 9	1
Wireless Remote Control to Operate All Bridge Crane Function such as Hoist and travel speeds for use with item 9	1
Power conductor bar, enclosed type : VAHLE power conductor, type KBH runaway length 39.00 meter for use with item 9	1

The picture of previous crane project:

1. STANDARD FEATURES OF SWF KRANTECHNIK- CRANES

SWF Krantechnik overhead travelling cranes combine lightweight construction with heavyweight strength, power and durability. Their superb handling characteristics together a with wide range of standard and optional features make them an automatic first choice for application requiring optimal lifting equipment with long term reliability.

1.1. Standards

Design, dimensioning and calculations of SWF Krantechnik cranes are based on BS and FEM standard (Section IX). Manufacturing of steel construction is based on AWS D14.1 Code for welding, DIN 18800, Blatt 7 Constructions for quality of welding, DIN 15018, Blatt 2 for Crane Design and Constructions and DIN 8563, Blatt 3 for welding classes standards. The manufacturing of hooks is based on DIN 15401 for Single Hooks, DIN 15402 for Double Hooks and DIN 15404 for Certification of Hooks. The electrical equipment of the crane follows: IEC 60204-32, VDE 0113, VDE 0100 and CEE standards. Electric motors are manufactured according to IEC Recommendations 24-1, 34-5 and 72-1. Motor selection is based on the Swedish Crane Norm IKH 6.30.01. All motors are approved by the CSA (Canadian Standard Association). Gear design is based ISO/DIS 6336/II-6336/V (DIN 51150) standards. All component manufacturing of SWF Krantechnik comply with ISO 9001 standards. In defining the final design criteria and parameters, SWF Krantechnik meets all local requirements and safety regulations so that they can be met by using the above norms.

1.2. Steel structure

Crane girders are manufactured from hot rolled wide flange profile sections or welded from certified steel plates to form a BOX type girder. The vertical deflection due to maximum load (SWL) is guaranteed to be better than stated by national standards and/or customer requirement unless specified otherwise in this crane offer. Before welding, all material is carefully inspected and cleaned. Welding (mostly MIG and submerged) is done with automatic or semi-automatic welding machines. The cranes are assembled in special assembly jigs, which ensure the proper alignment of the crane. For double girder cranes an optional full-length service platform along the crane bridge can be supplied, where it is equipped with protective hand railing and toe strips according to applicable laws and standards. This allows safe access to the hoist and trolley, crane travelling machinery and electric panels for ease of maintenance.

1.3. Nova – Hoist & trolley

Hoisting machinery

Hoisting motor, gearbox and drum form a revolutionary compact and sturdy package and it offers efficient use of floor space under the crane and increased lifting heights. Machinery has smooth and silent operation that extends the lifetime of the hoist. Hoisting motor is located inside the oversized drum to minimize the hoists outside dimensions and to increase the cooling effect of the hoisting motor. An enclosed hoist housing protects the rope drum, rope guide and limit switch equipment from dirt and climatic conditions. The hoist and trolley frame is painted with epoxy paint for maximum resistance against climatic conditions, extending the hoist's working life.

Gearing

SWF Krantechnik manufactures all gearboxes and gears. Sealed gearbox housings are made of aluminum. Gears (hoist and travel gearboxes) run in totally enclosed semi-fluid or oil bath lubrication, designed for the lifetime of the crane. There are **NO** open gears to lubricate. The hoist gearing is helical type and all gearwheels are hardened and ground

Motors

Hoisting motors are 2-speed pole changing (or frequency converter motors for stepless speed control) squirrel cage motors that are specially designed and manufactured by SWF Krantechnik for hoist duty. All motors incorporate a cylindrical rotor, class F insulation and are rated for minimum 60% ED duty. Motors are totally enclosed to IP55 degree of protection as standard. The stator frame is made of extruded aluminum to maximize the dissipation of heat together with the fan mounted on the back of the motor. All hoisting motors are equipped with imbedded bi-metallic thermal switch (or thermistors) in the windings to protect against overheating.

Trolley motors are frequency converter squirrel cage motors and controlled by MicroMove. The traveling speed motion can be 2-speed control with changeable speed ratio or full stepless speed control.

Brakes

All hoisting motors are equipped with DC magnetic disk brakes. The hoist motion brakes are adjustment free. The hoist motor and brake are designed and manufactured to work together so that the load will not slip at any point of starting or stopping of the hoist or lower motions. In event of a power failure the brake will fall safe ON. The brake torque is at least 1.8 times higher than the nominal torque of the motor. Brake linings are asbestos-free and the brakes are fully covered and dust proof.

Travel motors are equipped with Compact brake. The stator winding opens the brake instead of DC coil and brake rectifier. The travel motor brake is adjustment free.

Rope drum, rope guide and pulleys

Large diameter rope drum and rope pulleys extend the rope's lifetime. With large diameter rope drum the hook's horizontal movement and rope's fleet angle is minimized. This True Lift feature ensures accurate load positioning.

Rope drum is turned from high quality steel tubing and has precision machined grooves for rope, preventing rope overlap. The rope drum is supported at both ends on bearings and the rope is fixed to the drum with rope clamps. The drum has a minimum of two dead turns of rope with the hook in the lowest position. Ropes are manufactured from high tensile steel and galvanized as standard. Rope guide is wear resistant, heavy-duty, made of spheroidal graphite cast iron, maintaining the rope into the grooves. A spring operated guide roll in the rope guide prevents slack in rope. The rope pulleys are made from spheroidal cast iron and the construction of large diameter pulleys ensures that the rope is retained in the pulley.

Limit switches & buffers

Adjustable, 4-step, geared, self re-setting hoist and lower limit switches are provided as standard to prevent over travel of hook. The up direction limit switch has 3 steps. First step switches the speed from fast to slow and the second step from slow to stop. The third step cuts the hoisting movement in case of phase mismatch.

Energy-absorbing rubber buffers are provided for cross and long travel motions and together with the fixed end stops on the runway (by others) and girder, limit the trolley and crane travel. As an option both cross and long travel motions can be equipped with electrical limit switches.

Overload protection

Each hoist is equipped with overload protector, which will prevent the lifting of loads beyond the capacity of each hoist on the crane. The overload protector is self re-setting and the hoist motion is stopped if overloading occurs, but lowering is permitted, making the crane safe.

Hook blocks

Easy to handle hook blocks are closed and rotate freely 360 degrees. Hooks are supported on anti-friction lifetime lubricated bearings and are made from quenched and tempered 34CrMoV steel. Each Hook is fitted with spring loaded sturdy safety latch, ensuring that slings cannot accidentally release from the hook. Hook forging is ergonomically designed and most hooks have a "grip point" for easy handling.

1.4 End carriages

End carriages are manufactured from rectangular hollow sections (RHS) or welded from high tensile steel plates. After welding, the wheel housings are machined with NC-machines to exact tolerances. Each end carriage is equipped with double flanged wheels, cellular buffers, and derailment protectors keeping the crane on the track in case of wheel or axle damage. Crane wheels are turned and they run on anti-friction bearings.

1.5 Electrification and outfitting

Main Circuit

Power for the crane is taken through a down-shop power supply line where the current is fed through the manual Main Disconnect switch (located at the bridge control panel). With this, the entire crane can conveniently de-energize for maintenance/service or longer periods.

After the Main Switch, current is taken through main fuses to a main contractor, which is controlled from an emergency stop push button on the pendant. After the main contactor the current goes through a protection switch (short circuit protection with automatic trip or fuses), and further to overload switches and thermal protection system for the hoisting motor.

Power Distribution

The power supply system is equipped with a phase control guard that opens the main contractor in case of phase failure. The control voltage is taken to the control circuitry through isolating transformer. All hoist and crane movements are independent and can be run simultaneously. Contactors are magnetic type and designed for crane applications, rated for severe vibration. Mechanical interlocking is used in contactors that control movements in opposite directions, preventing accidental, simultaneous contacting.

Electrical Panels

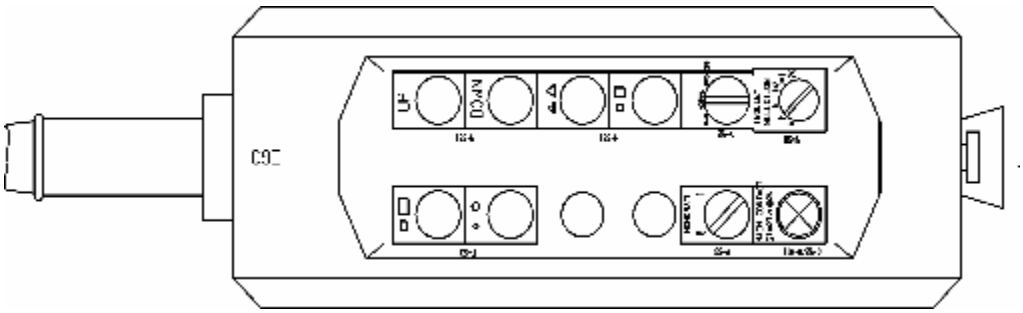
The electrical equipment of the crane is located in the bridge and hoist control panels. The control panels are manufactured of steel plates and finished to withstand corrosion. The components are positioned in a maintenance friendly way, and the whole layout provides good protection against accidental contact. The color of the bridge cubicle is grey.

Cabling

The multi-wire type fixed cables with plastic insulation are intended for crane usage. Cables are coded either with numbers, colors or tags for easy identification. The cables used for festoons are PVC insulated flexible flat cables rated for 450/750V, specially designed for cranes, hoists and monorail systems. Festoon cables are suspended on cable saddles, fixed to cable trolleys, running in a galvanized C-track, which is connected to the main girder with bolted or welded support brackets

Pendant Controller

The cranes feature a emergency control via a pendant control on the service platform along the crane girder – or to fixed place for cranes having no platforms. During normal service with radio the cable for the pendant control is rolled on a small bracket at the hand railing.



1.6. Surface Treatment

Pre-treatment
Steel plates are thoroughly wire brush in order to clean all metallic surfaces before welding and painting.

Steel Structures
The painting system of steel structures is A70, having a total dry film thickness of minimum 70 microns. The system takes the following coatings :-

Primary, 30 Microns, 1 coat

TOPCOAT (Melon Yellow RAL 1028), 70 Microns, 1 coat

A standard top coat colour of the steel structures is melon yellow (RAL 1028). Other colors can be used optionally and information must be given prior to painting.

Components
The painting system for components (gearboxes, electric motors, hooks, brakes, trolleys, etc) is normally E150. Standard top coat colors are :

- Hoisting units RAL 1028 (melon yellow) / RAL 7021 (dark grey)
- Motors, Gears RAL 7021 (dark grey) / 9006 (silver)

The material that is purchased, will be delivered with the original painting. Electrical cubicles have standard top coat RAL 7032 (grey). The inside is painted, too.

During the transportation, all metallic surfaces are protected against weather and humidity during transportation.

Supply of touch up paint is included in Lintech's scope

2 OTHER ITEMS

2.1 Maintenance and training

Our maintenance services will be pleased to offer a preventive maintenance program, on call service and training for your SWF Krantechnik Overhead Travelling Crane. Please contact our Service Supervisor at our nearest service branch.

The contact details of our nearest service branch are as follows:

PT. LINTECH DUTA PRATAMA

"We Offer Integrated Engineering, Procurement, Construction (EPC) and fi Fabrication (ONSHORE & SEASIDE facilities) for Industry, Mining and Oil &Gas"

Office/Workshop: Graha Lintech – Wira Jatim Industrial Estate – Mastrip70 – Surabaya- Indonesia
Seaside Facility: Daendels Street - Paciran Cape Lamongan - 60km from Surabaya - Indonesia
Phone: +62-31-7666891 (Hunting 6 lines) Fax: +62-31-7664604
E-MAIL : admin@lintech.co.id HOMEPAGE: http://www.Lintech.co.id ; http://www.LSF.CO.ID