

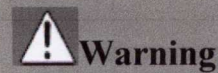
## Operation and Safety

### 1. Safety Inspection before Operation

The hoist operation personnel shall be duly trained, has obtained the operation qualification certificate, and are familiar with the performance and operation skills of every component.

Before the operation, please carry out the routine inspection for construction hoist;

- (1) Carry out the specified routine inspection and lubrication in accordance with the requirements of the *Maintenance Manual*;
- (2) Inspect the position of baffle plate and stopper of every limit switch on mast section, and make sure that they are sensitive, reliable, safe and effective;
- (3) Inspect whether the electro-mechanic interlock device of base enclosure and cage door is in good conditions;
- (4) Stop the cage in the ground station, and open and close the external base enclosure door, cage door and roof respectively. Check if these components are in good conditions and the cage can't be started when checking the cage;
- (5) Move the cage upwards and stop it at the height of about 3m. At this time, the incoming door and external base enclosure shall be locked up and can't be opened;
- (6) Inspect the functions of terminal stopping switches, up/down deceleration limit switch and power limit switch: if the upper terminal stopping switch, lower terminal stopping switch or power limit switch is cut off, the cage shall be unable to be started; if the deceleration limit switch is cut off, the cage shall be in the deceleration state;
- (7) As for the construction hoist equipped with counterweight, it is also necessary to inspect the function of rope limit switch on eccentric rope on the cage roof. If this switch is cut off, the cage shall be unable to be started;
- (8) Ensure that there is no obstacle in passages of cage and counterweight, and carry out monitoring from time to time;
- (9) The installation jib on cage shall be removed, and it is prohibited to get the installation job loaded;
- (10) Under the installation conditions, the cage roof operation shall be adopted;
- (11) Before starting the cage, be sure to remind all personnel; in the course of operation, if any abnormal situation is found, please immediately press down the emergency stop button;
- (12) If the hoist is involved in any abnormal situation, be sure to inform the relevant repair personnel in time, and it is prohibited to get the hoist repaired by any person other than repair personnel;
- (13) As for inspection or repair of circuit, please cut off the main power supply, wait for 10 minutes and then carry out inspection or repair;
- (14) Neither person nor article in cage may lean against the cage door;
- (15) After the construction hoist is exposed to heavy rain or strong typhoon, it is key components shall be inspected by professional technical personnel;
- (16) Carry out the inspection, maintenance and drop test on a regular basis in accordance with the requirements;



- (1) **When there is any person working in prohibited area of base frame and base enclosure, mast, mast tie**

or cage roof, it is prohibited to operate the construction hoist;

- (2) It is absolutely prohibited to get the hoist overloaded, and it is absolutely prohibited to extend goods, hand or head out from the cage;
- (3) It is absolutely prohibited to carry any person other than the operator or any goods in the cab;
- (4) When the wind velocity exceeds 20m/s, it is prohibited to operate the construction hoist;
- (5) When the guide mast and cable are frozen, don't start the construction hoist!



## 2. Operation and Use

Before operating the construction hoist, the operation personnel shall carry out the inspection in accordance with the provisions in “1. Safety Inspection before Operation”, and the construction hoist may be put into normal use only after it is confirmed as qualified through inspection. The preparatory work before operation is detailed as follows:

- (1) Turn on the power supply;
- (2) Place the goods or personnel into the cage;
- (3) Properly close all doors, including the incoming door, outgoing door, roof door and external base enclosure, and ensure that the incoming door is properly locked.

### 2.1 Operation Method

- (1) Confirm that the emergency stop buttons on operating console and cage roof operation box have been released, the key switch on operating console have been turned on, and the changeover switch of cage roof operation box has been turned to the position for in-cage operation;
- (2) Sound the electrical bell firstly, and then pull the control handle in the direction desired, so as to start the cage (As for the large control handle equipped with zero position protection function, please press down the inching switch for control handle, so as to ensure that the inching switch is in active state during the operation). When the cage reaches the desired height, set the control handle at the zero position, so as to stop the cage;
- (3) When working on cage roof, be sure to take the cage roof operation box to the cage roof for operation;
- (4) If any abnormal situation occurs during the operation, please immediately press down the emergency stop button, and don't release it before the trouble is eliminated.

**The operation procedure of BWM-3S (super version) construction hoist is indicated in Figure 2.1-1.**

### 2.2 Trouble Inspection

If the cage can't be started, please carry out the following inspection:

- (1) The ground power switch shall be at the position “ON”. The electrical circuit of cage shall have been energized;
- (2) The emergency stop button shall have been released or the electrical lock has been unlocked;
- (3) The power limit switch shall be at the position “ON”;
- (4) The external base enclosure, cage door and roof door shall have been properly closed;
- (5) As for the hoist equipped with counterweight, please also inspect whether the position of rope limit switch on eccentric rope is correct;
- (6) The fuse shall be in good conditions (or the circuit breaker shall be closed);

If the cage still can't be started after the above inspection is carried out and the corresponding measures are taken, please refer to the relevant contents of *Repair & Operation Manual*.