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Operation and Maintenance of Coal Handling System in Thermal Power Plant

Lihua ZHAO*, Yin LIN

School of Mechanical Engineering, Northeast Dianli University, Jilin City, Jilin Province Changchun road 169,132012,China

Abstract

Compared with actual situation of the current thermal power plant, this paper studies operation process of coal handling system in thermal power plant. Analyze technical characteristics of coal handling system and operating characteristics of the relevant machinery and equipment. Then, the safe operation of coal handling system and the proper method of the equipment maintenance are summed up.

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* Corresponding author. Tel: +0086-432-64822626; fax: +0086-432-64666020.
Email: zhaoh2008@yahoo.cn

1. Introduction

At present, coal is the preeminent fuel of thermal power plant. Continuing up the large unit, and large capacity, the demand of coal is very large. Coal need to process from loading and unloading to stockpile, this procedure can finish by coal conveying system. This system includes add up to tens mechanical, guarantee the important of these mechanical are normal operation, it is very important for this system stable operation. And it is a key problem of reduce costs, ensure safety in production, improve the efficiency of work.

2. Operation and Maintenance of Coal Handling System

Coal handling system in thermal power plant, usually means the technique procedure that coal from loading and unloading outside the factory to boiler Coal Storage. Because of the large number of mechanical involved, we can sort as we used it, the important part includes unloading coal mechanical, coal yard, transport and accessory equipment, are collectively called coal handling mechanical. Accessory equipment includes crushing and sieving, coal blending and coal supply, Removal Iron, weigh, sample, dust removal equipment.

2.1. Belt Conveyor

Belt conveyor is a commonly used equipment of continuous transport, it have a high efficiency, this system have large conveying capacity, simpler construction, small amount of maintenance. On the same machine, it can move forward and backward, it can work with the single machine, also can work with complicated machine. When transport needs large transportation quant, longer distance, we can use steel rope transport machine. The picture one is structure picture of belt conveyor. Includes: 1 body frame; 2 roller; 3 driver unit; 4 flood-out pattern; 5 discharge funnel; 6 actuation drum; 7 conveyer belt; 8 load bearing roller; 9 change roller; 10 charging hopper; 11 tension roller; 12 tension device. Conveying belt support by rollers on drum frame. The top part of belt is load bearing material, it is load bearing branch, the under part is unload branch. The friction between belt and roller or belt and material can make the machine run continuously.

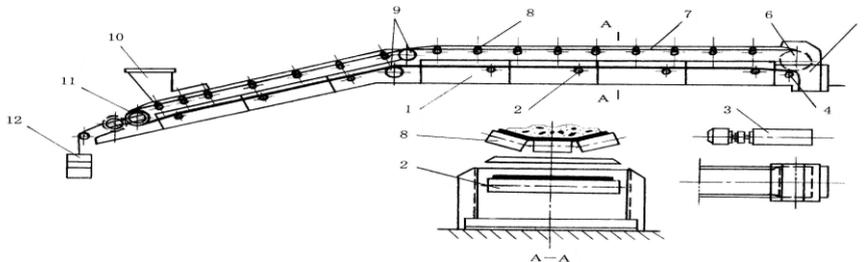


Fig. 1. Belt Conveyor

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