

6.2.4 Administration of the Fuel

Administration of the fuel implies planning and execution of procurement, unloading, storing, supplying of the fuel, and maintenance of the fuel handling facilities.

<i>Current Status of TES4</i>	<i>Improvement Plan</i>
<p>(Fuel procurement plan)</p> <ul style="list-style-type: none"> • The procurement plan for coal is determined with concurrence of three companies, i.e. the power plant, coalmine and railroad. From the power plant, the vice president, the fuel section chief, and the railroad engineer participate in the meeting of the three companies. • As for the procurement of heavy oil, the Procurement Department manages planning and execution of procurement and the Operation Department keeps the amount used. • Shortage in quantity of the freight car is resolved by borrowing it from foreign countries (China). 	<ul style="list-style-type: none"> • Stored quantity of coal should be planned strictly based on the operation plan of the power plant and the capability of the coal handling system. • Since the borrowing of a freight car increases business in the cleaning of freight cars, the power plant shall require reservation for the required number from the railroad company.
<p>(Administration of the fuel storage)</p> <ul style="list-style-type: none"> • The fuel section checks the quality of coal (calorie, ash, and water content) at the time of coal acceptance, and reports it to the Operation Department. • Coal pile in the coal storage yard is pressed since it is lignite that is easy to burn out. However, press was not enough and smoke was seen emitting since the fuel cost for a bulldozer was expensive. (Temperature observation of stored coal is not carried out.) • Although stock quantity of coal is recommended by EA for consumption in one month so as not to cause trouble with the heat supply in winter seasons, the quantity of coal stored is equivalent to only about two weeks' consumption due to difficulty of preventing stored coal from burning out. • Heavy oil is imported from Russia, and for security reasons, stock quantity of heavy oil is equivalent to one month's consumption. 	<ul style="list-style-type: none"> • Control of fuel quality is very important for the power plant business. For execution of coal quality control, the latest coal analysis equipment should be introduced. It may be useful for improvement in analysis work. • Press of coal pile should be performed satisfactorily by the bulldozer in order to prevent spontaneous combustion. • Temperature observation of stored coal should be carried out.
<p>(Administration of coal handling facility)</p> <ul style="list-style-type: none"> • Coal crusher fails to accept stone or lump coal. This is a major issue. • Defrosting equipment is used on frozen coal in freight cars. • The amount of coal is measured with the freight car balance. • The conveyer scale is installed only on the discharging conveyer. • Since the meter is not provided in the acceptance system, quantity of stock coal is inferred from the shape of the coal pile. 	<ul style="list-style-type: none"> • Coal washer has been introduced to the coalmine with the aid of Japan, and it is expected that the mixing of stone or lump coal will decrease from now on. • The dewatering equipment has been introduced to the coalmine with the aid of Japan, and it is expected that water content in coal will decrease and it will be difficult for coal to freeze from now on. • The conveyer scale should be installed in the systems for receipt and discharge, and the receipt; consumption and stock amounts should

<i>Current Status of TES4</i>	<i>Improvement Plan</i>
	be managed. (Since a conveyer meter accumulates an error, it should be proofread periodically by the freight car balance or stocktaking.)

6.2.5 Administration of the Inventory

Administration of the inventory implies: (1) Securing the procurement of spare parts for the planned quantity and quality, and (2) Retaining the spare parts without spoiling their function.

Especially in this chapter, the current status and improvement plan for administration of the inventory in TES4 is proposed:

(1) Retaining quantity, such as spare parts, (2) Administration of the procurement.

(1) Retaining Quantity, such as Spare Parts

<i>Current Status of TES4</i>	<i>Improvement Plan</i>
<p>(Retaining quantity of spare parts)</p> <ul style="list-style-type: none"> • There is a plant warehouse that the Procurement Department manages, and spare-parts warehouses that each section manages. • Safety goods, such as safety belts, and maintenance tools, such as welding machines, are kept in the spare-parts warehouse of each section, and it could almost be considered a tool warehouse. 	<ul style="list-style-type: none"> • All spare parts except consumables should be gathered and kept in the plant warehouse. • Only consumables that are used in daily repair work should be kept in the warehouse of each section. • In retaining the quantity of spare parts and consumables, preparation and maintenance of a ledger for the stored goods is essential.
<p>(Inventory management)</p> <ul style="list-style-type: none"> • The tag system for the spare parts warehouse has been introduced through a grant aid from Japan and arrangement of the order of the goods in the plant warehouse is carried out comparatively carefully. The arrangement of spare parts in the plant warehouse is shown in Fig. 6.2-6. • The Procurement Department performs inventory management, and stocktaking is carried out twice a year (June, December) in the presence of the Accounting Department. 	<ul style="list-style-type: none"> • Recognize the purpose of inventory management and put ledger management into practice. • Look over appropriate quantity according to the character of each spare part again, and the quantity of each spare part should be held.



Fig. 6.2-6 Arrangement of Spare Parts in the Plant Warehouse

(2) Administration of the Procurement

<i>Current Status of TES4</i>	<i>Improvement Plan</i>
<p>(Procurement of spare parts)</p> <ul style="list-style-type: none"> • When spare parts are needed, the manager of the Repair Department makes a request to the manager of the Procurement Department. • The Procurement Department examines whether the part should be procured from a domestic or overseas supplier, and performs the procedure required for purchase. • When many spare parts are required, as in the case of a major overhaul, etc., preparation of spare parts is commenced three months in advance. • Spare parts are kept in the plant warehouse and the Procurement Department manages them. • Spare parts are classified into the following three categories and kept. <ol style="list-style-type: none"> 1) Urgent spare parts: The president and a chief engineer determine name and quantity of the spare part so that the power plant operation might be continued even when procurement of spare parts becomes impossible due to civil war, natural disasters, etc. These spare parts are placed under the jurisdiction of the National Security Committee, and audit is sometimes performed. 2) Spare parts for major overhaul and middle overhaul. 3) Spare parts for daily repair work, such as packing, lubricating oil, etc., are included in this category. 	<ul style="list-style-type: none"> • The procurement procedures for spare parts necessary for daily repair work should be simplified. • In order to secure parts procurement, the following procedures are useful: <ol style="list-style-type: none"> 1) Expansion of supply sources: By providing more than one supply source, cost cuts and shorter delivery of spare parts will be enabled. Information about the market should be gathered through the Internet, etc. 2) Establishment of procurement agency: Establishment of a procurement agency in Mongolia or neighboring countries in cooperation with the other plant in Ulaanbaatar will be helpful for stable procurement of spare parts. 3) Accommodation of spare parts between TES4 and the other plants: The lists of the inventory spare parts are shared mutually, and required parts are accommodated between TES4 and the other plant.