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**MATERIAL MANAGEMENT IN
MAINTAINING UNIT PRODUCTION
AND AVAILABILITY**

BY

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ABSTRACT

Sultan Salahuddin Abdul Aziz Power Station is the biggest generating station in the country. Currently providing the largest revenue to TNB.

In order for the generating machine to be efficient and reliable, good preventive maintenance programmes needs to be implemented. Good maintenance requires good support of spare parts.

As spare parts represent the main component of inventory, this could lead to conflict between keeping optimum inventory level and good preventive maintenance programme that required good support on spares. Reliable and efficient machine brings extra revenue to organization. Reliability or availability and efficiency are the two important performance indicators for thermal power plants. The generating units at SSAAPS are more efficient than the units in other thermal power stations. This is because the units are new and using latest technology. Unavailability of the units at SSAAPS inevitably results in financial penalty to TNB due to less efficient units have to be operated to meet the energy requirement of the system. Cost implication of efficiency is directly evaluated from the fuel cost. For the same energy sent out to the system, a decrease in efficiency would increase the fuel consumption (1% decrease in efficiency would increase fuel cost by 2.6% for big units at SSAAPS. The fuel bills is exceeding RM 200 millions per year). Machine breakdown is unpredictable. Spare requirements depends on machine condition. Machine is taken out for details

inspection after many years in operation. Spares should be available so that machine downtime can be minimized. Lack of spares could have serious effect on inspection programme.

Slow moving spares do not means spare are not needed. Good maintenance programme delays the need for spares replacement. During major inspection many items are subjected to detail inspection. Thus, spares are critical during this inspection

period. Spares takes long lead time to purchase from the supplier / manufacturer. This-could have impact of over stocking spares in order to ensure good preventive programme.

This study will focus on the specific components of the inventory and identified critical area where inventory can be optimised. Machine reliability and performance with good inventory support activities could take precedence over optimizing inventory control.

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