Optimizing Coal Yard Management Using Discrete Event Simulation

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Abstract : A Coal-Fired Power Plant has some integrated facilities to handle coal from three separated coal yards to eight units power plant's bunker. But nowadays the facilities are not reliable enough for supporting the system. Management planned to invest some facilities to increase the reliability. They also had a plan to make single spesification of coal used all of the units, called Single Quality Coal (SQC). This simulation would compare before and after improvement with two scenarios i.e First In First Out (FIFO) and Last In First Out (LIFO). Some parameters like stay time, reorder point and safety stock is determined by the simulation. Discrete event simulation based software, Flexsim 5.0, is used to help the simulation. Based on the simulation, Single Quality Coal with FIFO scenario has the shortest staytime with 8.38 days.

Keywords : Coal Yard Management, Discrete event simulation First In First Out, Last In First Out.