

ABSTRACT

PTP Nusantara VII Betung business unit is one of seven business units that are in the working area Banyuasin District, engaged in the process industry. Often the buildup of raw materials, causing queues of vehicles, which is caused by a screw press machine often damaged and the decrease of the production capacity of the machine. In addition, the damage also causes the cost incurred by the company be increased due to the cost of repair or replacement of engine components and slowing new production process that led to the buildup of raw materials. Thus the calculation using the TPM in order to determine the value of the effectiveness of the machine, and know the value of Overall Equipment Effectiveness (OEE) is 51.23% - 73.43% within 1 year. Addressing that OEE value substandard Japan Institute of Plant Maintenance (JIPM) with the default value of 85%. Do replacement of damaged components are also only able to survive for a while, because the old machine no longer able to operate properly. In the calculation of the percentage of the six big losses addressing any damage to the engine parts were damaged average 1.17% above average in every month.

The best decision in the operation of the machine by converting the new machine, with the same capacity, the investment cost of purchasing a machine with a price of USD 5.55 billion with a payback period for 6.2 years, with a value of 1.50 above the index average probability specified > 1. When you retain the old machine will cause frequent occurrence of damage, can slow down production, and accumulation of raw materials, so that production can run smoothly, and not be a queue of vehicles carrying raw materials, so that the production process can run smoothly is necessary to turn a new machine .

Keywords : *Machine Screw Press, Overall Equipment Effectiveness (OEE), Six Big Losses, Investment.*