ABSTRACT

This project concentrates on the design and implementation of preventive maintenance program for assisting manufacturer in improving the performance of plant maintenance system and also reducing maintenance cost simultaneously.

The mechanical seal is the equipment that’s considered to be the main part of this program. Thai Kraft Industry Co., Ltd. (TKIC), one of the major companies in pulp and paper industry of Thailand, decided to implement the preventive maintenance instead of the traditional one for mechanical seal repairing. Sealing Technology Co., Ltd. (STC), the reliable mechanical seal supplier of TKIC, proposed the 3-year preventive maintenance contract to TKIC. Before signing the contract, plant survey has been done by the project team of STC. By information from plant survey record, retrofit technique and John Crane mechanical seal specification, the quotation can be developed. After several negotiations, the mechanical seal preventive maintenance program is implemented. In order to develop this program, the maintenance document such as Tag No., mechanical seal history card, and maintenance schedule must be designed.

The evaluation of the STC maintenance service was done by the customer. TKIC monitors the project by considering monthly report from STC project team. Besides, Mean Time Between Failure (MTBF) has been calculated and compared with the traditional one. This index can help TKIC to decide to continue implementing preventive maintenance program after the existing contract was expired. Considering STC side, the payback period, yearly cash flow, process time of bidding and resigning the optional additional 2-year contract have been developed so as to track the project cost and prepare the project life extension proposal for the customer.