EKACHAI TANGBOONTINA : INCREASE OF MACHINE AVAILABILITY IN SHOE SOLE FACTORY BY MAINTENANCE SYSTEM IMPROVEMENT. THESIS ADVISER : ASST.PROF. SUTHAS RATANAKORNKANGWAN, 232 PP. ISBN 957-579-641-7.

A Shoe sole manufacturing process is considered as part of shoe industry which is playing the important export good role. Shoe sole production lines are found in form of either mono-product factory or part of large scale shoe factory.

Basically, shoe sole production lines are inefficienly operated. One of the production problems is caused by lacking of well-established maintenance system and organization. Normally, the maintenance tasks are taken place when machines break down. The maintenance operation is done under crafts' experience rather than work standard. Otherwise there is no maintenance master plan and information system. This is the retardment of industrial and information system. This is the retardment of industrial development as well.

The objective of this study is to improve the maintenance system of one sample EVA shoe sole factory by setting up the maintenance department under the organization structure, creating the preventive maintenance (PM) system and maintenance management information system (MMIS). The measures are aiming to increase machine availability under production cost constraint.

After implementation, the machine availability index of a shoe sole sheet production line and group of spliting machines are increased by 10.9 and 6.8 % respectively. The ratio of maintenance cost to factory overhead is reduced by 3.0 % and the maintenance cost per unit of production is reduced by 1.20 baht per batch.