

KONCHA SANITNARATHORN : ANALYSIS OF MAINTENANCE EXPENSE IN NATURAL GAS SUB-PIPELINE SYSTEM. THESIS ADVISOR : ASST. SUTHAS RATANAKUAKANG-WAN, 212 PP. ISBN 974-578-953-4

The investment of natural gas pipeline system is very expensive and must be used at least 20 years. Natural gas pipeline is always buried under the ground. So if we operate it without maintenance, pipeline will be corroded and get damage. Thus, it's necessary to protect it by pipeline coating and installing cathodic protection system. And, also, it's necessary to patrol along the pipeline's route so as to prevent it from any persons or incidents which will cause damage to the pipeline. But if any pipeline's damage occurred, it needs repairing. So, maintenance expense can classify into 3 categories as, preventive expense, patrolling expense and repairing expense.

From the analysis of maintenance expense in natural gas sub-pipeline system, certain maintenance expense per annum was about 3.03% of pipeline's investment. In the 3.03% are preventive expense, 2.53% of pipeline's investment, and patrolling expense, 0.50% of pipeline's investment. For repairing expense, it was found that expense depend on the following factors; these are : 1. soil settlement 2. depth of soil cover and traffic 3. population density 4. construction nearby pipeline route