THE IMPLEMENTATION OF FUZZY RULES FOR PRIORITIZING PRODUCTION EQUIPMENTS MAINTENANCE IN PDAM SURABAYA

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Abstract
Maintenance is one of support functions in business and have an important role in the operational strategy. Maintenance required to maximize the reliability of the equipment and existing systems. PDAM Kota Surabaya as the provider of drinking water services to the community has a vital production facilities to support its activities. The production facility consists of a wide range of equipment which of course is likely to fail or malfunction. In order to run with optimal production equipment, PDAM does one type of maintenance that is known as preventive maintenance (PM) which aims to avoid unwanted damage during use of these tools. Therefore, in order to avoid the damage that resulted in losses, we did PM at Water Treatment Plant (WTP) PDAM Surabaya.

This final project creates a prioritizing maintenance of production equipment in PDAM Surabaya city by implementing the method of fuzzy rules. This method allows the experts to interpret their knowledge to obtain an order of priority of maintenance equipment. With this method, verbal expression that is usually not
easy to be quantified explicitly can be defined and used in
decision making.

From this research, the method of fuzzy rules has been proven that it can be applied as problem solving of planning and prioritizing maintenance of production equipment. In addition, it was concluded that the method of fuzzy rules is able to translate expert’s knowledge into system well. With the existence of this prioritizing, it is expected to give the executives of the production a suggestion about things related to production equipment maintenance.

Keywords: preventive maintenance, prioritizing, fuzzy, fuzzy rules