

ABSTRACT

Cracked defects is the most commonly defect found in 7A1 slat products at PT Xylo Indah Pratama. Slat 7A1 is the best grade type slat, meaning that the quality of the slat is flawless. However, inspection data shows that there is still a lot of damage that occurs to the slat which must be scraped and downgraded to another type. The defect is repeated by the work method of the operator not following the slat filling procedure, ie the slat is filled until it spills / falls because there is no reception. Approved, given repair repairs composed alarm. Therefore, it is necessary to design an alarm concept that uses the QFD (Quality Function Deployment) method.

QFD is a structured methodology that is used to translate customer needs into company requirements through the process of planning and product development in determining specifications according to customer requirements. The customer in this study is a cleavage operator who will serve as a warning user guide. The research objective was to provide a conceptual improvement plan to prevent the repetition of defects in the 7A1 Pencil Slat cleavage process at PT Xylo Indah Pratama.

The drafting of a warning alarm design concept using QFD begins with translating customer needs into technical characteristics. Then determined the target alarm specification and supporting components using a morphological chart. Three alternative alarm concepts were obtained that were tailored to the customer needs and then selected by comparing the three alternatives to get the best concept.

Based on the results of the proposed improvement in the form of a warning alarm using the QFD method, concept A was chosen with components in the form of a proximity capacitive sensor, Omron CPlE PLC, 80 dB buzzer, red indicator light, operation button, and alarm body cover. To see how warning alarms work, simulations are performed using ladder diagrams in the CX-Programmer software. It was found that the system will initiate a product that passes the sensor until it reaches the requirement of 300 slats. When it reaches the conditions, the system will activate an alarm by making a sound from the buzzer and the red light from the indicator light. So the operator can find out when the storage box must be replaced so that the defect cracks on the slat can be avoided or minimized.

Keywords: Slat 7A1, Defect, Crack, QFD, Warning Alarm.