

**Penerapan Metode *Failure Mode Effect Analysis* dan *Seven Tools*
Pada Proses Sortasi Ikan Teri Nasi
(*Implementation of Failure Mode Effect Analysis and Seven Tools
in the Sorting Process of Anchovy*)**
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ABSTRACT

The intense industrial competition demands companies to continuously maintain and improve product quality. PT Marinal Indoprima, a seafood processing company, faces product defect issues during the sorting process of dried anchovy (teri nasi), which affects both quality and market value. This study aims to identify the main types and causes of product defects and provide improvement recommendations using the Seven Tools and Failure Mode and Effect Analysis (FMEA) methods. The method used in this study is a quantitative descriptive approach utilizing primary data (observation, interviews, and questionnaires) and secondary data (production and defect records). The data were analyzed using Microsoft Excel 2021 with the Seven Tools and FMEA methods, based on three parameters: severity, occurrence, and detection. An analysis of 25 batches (21,319 kg) revealed a defect rate of 5%, predominantly coarse local defects (71%). Control chart analysis indicated five out-of-control points caused by input overload. FMEA identified the vibrating motor (RPN 226), electrical panel (RPN 79), and color sorter software (RPN 74) as the primary risk sources. The causes of defects were categorized into five main factors: machine, human, method, material, and environment. Improvement recommendations focused on high-RPN components to significantly reduce defect rates and stabilize the production process.

Keywords: *quality control, FMEA, product defect, seven tools*