Penerapan Metode FMEA dan RCA untuk Mengurangi *Reject* pada Proses Pengemasan Mesin *Single Line* (*Application of FMEA and RCA Methods To Reduce Reject in the Single Line Machine Packaging Process)*

Dr. Ir. Budi Hariono, M.Si

Rizky Zaki Mubarok
Study Program of Food Engineering Technology
Majoring of Agriculture Technology
Program Studi Teknologi Rekayasa Pangan
Jurusan Teknologi Pertanian

ABSTRACT

One of the causes of industrial development in recent years is the development of advanced science and technology. Industrial development will increase competition with other companies. In the industrial world, product quality is one of the factors that consumers consider in buying a product. An example is instant powder drinks. The production process that occurs at PT Marimas Putera Kencana includes the sugar transfer process, then the raw material mixing process is carried out, after all the raw materials are mixed, the powder filling process is carried out into the moving hopper, and at the final stage the product packaging process is carried out. The process that occurs when the packaging using single line machine is that the processed products collected in the processed funnel will be channelled to the processed disc. On the disc there are 6 dosing holes of the same size and the preparations dropped by the dosing will be directly channelled to the etiquette contained in the processed funnel. Etiquette or packaging that was originally in the form of a roll is arranged in such a way as to wrap the outside of the processed funnel and then filled with powder and seal the process. In the product packaging process using a single line machine, problems often occur. Among them the seal is not right on the eyemark, the etiquette is not precise, the etiquette does not open, there is no production code, and production leaks. Therefore, identification and risk analysis of failures that occur during the production process takes place to prevent failure by looking for the source of the failure to the root. The methods used are Failure Mode and Effect (FMEA) and Root Cause Analysis (RCA). The results of this study indicate that there is a type of reject that has the highest Risk Priority Number in the potential failure mode 'Uneven pressure sealer' with a value of 560. In the RCA analysis, improvement proposals are obtained to reduce the number of rejects that occur in the packaging process, namely checking components regularly, supervision by the head of the room regarding the accuracy and expertise of the operator and the cleanliness of the sealer, adjusting the temperature according to the type of etiquette supplier, and checking the condition of the sealer and cutter.

Keywords : Etiquette, *Failure Mode and Effect Analysis*, *Single Line Machine*, *Moving Hopper, Packaging procces, reject, Risk Priority Number*, *Root Cause Analysis*, *Sealer.*