

ABSTRAK

CV. Sumber Makmur sebuah perusahaan yang bergerak pada bidang pembuatan *paving* dan *uditch*. Perusahaan ini merupakan salah satu perusahaan *paving* terbesar di Bojonegoro yang memiliki wilayah pemasaran hingga keluar Kabupaten. Berdasarkan hasil penelitian selama pengamatan, diketahui terdapat masalah pada pengendalian kualitas berupa kecacatan produk *paving* dengan jumlah rata-rata yang tinggi sebanyak enam persen. Untuk mengurangi kecacatan produk, dilakukan pengendalian kualitas dengan metode *Statistical Quality Control (SQC)*. Penerapan metode *statistical quality control* dilakukan dengan bantuan *quality tools* seperti *checksheet*, histogram, *pareto diagram*, peta kendali P dan *fishbone diagram*. Setiap tools memiliki fungsi yang berbeda-beda seperti *checksheet* untuk merekap data hasil pengamatan, histogram untuk mengetahui frekuensi kecacatan tertinggi, *pareto diagram* untuk memperoleh kecacatan yang akan diprioritaskan diperbaiki, peta kendali untuk memonitor apakah data pengamatan masih dalam batas kendali secara statistik dan *fishbone diagram* untuk faktor-faktor penyebab kecacatan. Kecacatan paling berpengaruh hasil *output diagram pareto* berupa jenis cacat retak dan sompel. Metode selanjutnya setelah diperoleh faktor penyebab kecacatan pada *fishbone diagram* adalah metode FMEA (*Failure Mode Effect Analysis*). Metode FMEA digunakan perhitungan RPN (*Risk Priority Number*) untuk mencari faktor penyebab kecacatan yang akan diprioritaskan ditangani dahulu berdasarkan RPN yang tertinggi. Berdasarkan penelitian diperoleh nilai RPN tertinggi sebesar 196 pada mode kegagalan berupa standar jumlah pencampuran yang belum ada. Faktor penyebab yang diprioritaskan tersebut diberikan strategi berupa pembuatan SOP produksi *paving block* dan pembuatan standar alat takar komposisi air yang mudah dipahami pekerja.

Kata Kunci : *Statistical Quality Control, Quality Tools, Failure Mode Effect Analysis*

ABSTRACT

CV. Sumber Makmur is a company engaged in the manufacture of paving and uditch. This company is one of the largest paving companies in Bojonegoro which has a marketing area outside the Regency. Based on the results of research during observation, it is known that there are problems in quality control in the form of defects in paving products with a high average number of six percent. To reduce product defects, quality control is carried out using the Statistical Quality Control (SQC) method. The application of statistical quality control methods is carried out with the help of quality tools such as checksheets, histograms, Pareto diagrams, P control charts and fishbone diagrams. Each tool has different functions such as a checksheet to recap observation data, a histogram to determine the highest frequency of defects, a Pareto diagram to obtain defects that will be prioritized to be repaired, a control chart to monitor whether the observation data is still within statistical control limits and a fishbone diagram to causes of disability. The most influential defects in the output of the Pareto diagram are the types of crack and sample defects. The next method after obtaining the causes of disability in the fishbone diagram is the FMEA (Failure Mode Effect Analysis) method. The FMEA method is used to calculate the RPN (Risk Priority Number) to find the factors that cause disability which will be prioritized to be handled first based on the highest RPN. Based on the research, the highest RPN value is 196 in the failure mode in the form of a standard amount of mixing that does not yet exist. The prioritized causal factors were given a strategy in the form of making SOPs for paving block production and making standards for measuring water composition tools that were easy for workers to understand.

Keywords : Statistical Quality Control, Quality Tools, Failure Mode Effect Analysis