

ABSTRAK

UMKM Kampung Jahit Nusantara mengalami permasalahan kualitas pada produk seragam olahraga seperti jahitan tidak rapi, jahitan berlubang dan noda pada kain yang melebihi toleransi cacat 2%. Penelitian ini bertujuan untuk menganalisis pengendalian kualitas menggunakan metode *Statistical Process Control* (SPC) dan memberikan usulan perbaikan menggunakan metode *Failure Mode and Effect Analysis* (FMEA) dan 5W + 1H. Metode SPC digunakan untuk memantau kestabilan proses produksi melalui tools seperti diagram pareto, *fishbone* dan peta kendali, FMEA dipakai untuk menilai risiko dan prioritas mode kegagalan berdasarkan nilai RPN, sedangkan 5W + 1H untuk menganalisis usulan perbaikan. Hasil penelitian menunjukkan bahwa cacat yang diprioritaskan yakni jahitan tidak rapi dan jahitan berlubang. Nilai RPN tertinggi pada jahitan tidak rapi yakni 294 di mode kegagalan mesin sering macet dan jahitan berlubang yakni 175 di mode kegagalan jarum tumpul. Kesimpulan dari penelitian ini menyarankan untuk memberikan pemeliharaan mesin harian, mingguan, bulanan, perbaikan darurat dan kalibrasi serta membuat jadwal penggantian jarum setiap ± 100 pcs hingga 150 pcs.

Kata Kunci: Pengendalian kualitas, *Statistical Process Control* (SPC), *Failure Mode and Effect Analysis* (FMEA), 5W + 1H.

ABSTRACT

UMKM Kampung Jahit Nusantara experiences quality problems in sports uniform products such as untidy stitches, perforated stitches and stains on fabrics that exceed the 2% defect tolerance. This study aims to analyze quality control using the Statistical Process Control (SPC) method and provide improvement proposals using the Failure Mode and Effect Analysis (FMEA) and 5W + 1H methods. The SPC method is used to monitor the stability of the production process through tools such as pareto diagrams, fishbone and control maps, FMEA is used to assess the risk and priority of failure modes based on RPN values, while 5W + 1H is to analyze the proposed improvements. The results showed that the prioritized defects were sloppy stitching and perforated stitching. The highest RPN value on untidy stitches is 294 in the failure mode of machines often jamming and perforated stitches is 175 in the failure mode of blunt needles. The conclusion of this study suggests providing daily, weekly, monthly machine maintenance, emergency repairs and calibration and making a needle replacement schedule every ± 100 pcs to 150 pcs.

Keywords: Quality control, Statistical Process Control (SPC), Failure Mode and Effect Analysis (FMEA), 5W + 1H.