

## ***ABSTRACT***

CV. XYZ is a company engaged in the garment industry (making apparel) with one of the products that is routinely produced, namely PDL (Field Service Clothing) shirts. Based on data on the amount of production in the period August 2020-December 2021, the average defect product produced is 3.21%. This value shows that the average defect product produced still exceeds the predetermined tolerance limit of 2%. There are 9 stages of the production process in producing PDL shirt products and one of the problematic processes in the production of PDL shirts is the cutting process. Cutting process in CV. XYZ is the process with the highest number of defective product emergence 2 during the period August 2020-December 2021, namely 177 products or 36.4% and the type of defect produced is inappropriate size and unbalanced product length. The emergence of repeated types of defects in the cutting process is due to the requirements or CTQ of the process that are not met. To improve the cutting process, an autolamp proposal tool is designed that is integrated with the cutting machine. Designing the proposed tool using the Quality Function Deployment (QFD) method. QFD is a product development tool that focuses on designing the quality of a product and service based on customer needs. The components of the autolamp design are 2 white LED lamps with a power of 3-5 W, a power module with a voltage of 5V and a PIR (passive infrared) sensor as the motion sensor used. The results of the autolamp design integrated with the cutting machine are expected to minimize the number of defect products produced in the PDL shirt production cutting process by 25%, so that the process capability can increase by 0.012 sigma from 4,533 sigma to 4,545 sigma

***Keywords — Cutting Process, Critical to Quality, Quality Function Deployment.***