

ABSTRAK

PT XYZ adalah perusahaan manufaktur yang memproduksi keramik dengan berbagai motif dan ukuran. Proses pengeringan *body* keramik, perusahaan mengalami jumlah produk *reject* sebesar 4%, sehingga menimbulkan kerugian produksi dan tidak tercapainya target yang telah ditetapkan. Penelitian ini dilakukan untuk mencari tahu apa saja penyebab terjadinya produk *reject* serta merancang strategi perbaikan guna menekan jumlah kegagalan produk tersebut. Metode yang digunakan dalam penelitian ini adalah FMEA (*Failure Mode and Effect Analysis*) dan RCA (*Root Cause Analysis*), yang dilengkapi dengan pengumpulan data melalui observasi langsung serta data historis dari mesin *Horizontal Dryer* selama enam bulan. Hasil penelitian menunjukkan bahwa permasalahan utama berasal dari mesin, khususnya pada bagian *roll* pinion yang mengalami kemacetan dan keausan komponen. Permasalahan ini memiliki nilai RPN tertinggi, yaitu sebesar 280. Sebagai tindak lanjut, dilakukan penggantian komponen yang rusak dan evaluasi berkala, kerugian akibat perawatan mesin tercatat mencapai Rp 405.244.735 dalam waktu enam bulan. Setelah perbaikan diterapkan, jumlah produk *reject* mengalami penurunan sehingga hampir mencapai kapasitas yang ditetapkan, dan proses produksi menjadi lebih stabil. Perbaikan ini turut berdampak positif terhadap peningkatan efisiensi serta menurunkan potensi kerugian.

Kata Kunci: *Failure Mode and Effect Analysis, Root Cause Analysis, Reject, Horizontal Dryer*

ABSTRACT

PT XYZ is a manufacturing company that produces ceramic tiles in various patterns and sizes. During the drying process of ceramic bodies, the company experienced a high number of rejected rate of 4%, leading to production losses and failure to meet set targets. This study was conducted to identify the causes of product rejection and to design improvement strategies to reduce the number of product failures. The methods used in this research are Failure Mode and Effect Analysis (FMEA) and Root Cause Analysis (RCA), supported by data collection through direct observation and historical data from the Horizontal Dryer machine over a six-month period. The research findings indicate that the main issue originated from the machine, particularly in the roll pinion section, which experienced jamming and component wear. This issue had the highest RPN value, amounting to 280. As a follow-up, damaged components were replaced and periodic evaluations were carried out after repairs. Previously, the company recorded machine maintenance losses of up to IDR 405,244,735 within six months. After the improvements were implemented, the number of rejected products decreased significantly, and the production process became more stable. These improvements also had a positive impact on increasing efficiency and reducing potential losses.

Keywords:*Failure Mode and Effect Analysis, Root Cause Analysis, Reject, Horizontal Dryer.*