INTISARI

Pada aktifitas pemboran sumur, material *oil country tubular goods* (OCTG) menjadi material yang sangat penting karena mempunyai nilai paling dominan yaitu 41% dari keseluruhan nilai material. Ketersediaan material tersebut dengan pengiriman tepat waktu (*on-time delivery*) akan mempengaruhi keberhasilan pemboran sumur. Namun proses pengadaan material OCTG mulai dari pemesanan (*order*) sampai dengan pengiriman (*delivery*) memerlukan rantai yang panjang sehingga menyebabkan permasalahan yang sering terjadi yaitu keterlambatan pengiriman material. Keterlambatan pengiriman tersebut akan mengganggu operasional pemboran, meningkatkan stock dan meningkatkan biaya pengiriman material pengganti.

Penelitian ini bertujuan untuk mengidentifikasi faktor penyebab keterlambatan dan menganalisis faktor penyebab dan dampak keterlambatan masing-masing tahapan proses *order-to-delivery* material OCTG. Hasil analisis tersebut digunakan untuk menentukan prioritas perbaikan sehingga keterlambatan pengiriman OCTG dapat diminimalisir. Identifikasi dan analisis menggunakan dua alat yaitu *Caused Effect Diagram* (CED) dan *Failure Modes and Effects Analysis* (FMEA).

Hasil penelitian menyimpulkan bahwa pada analisis menggunakan CED terdapat 8 (delapan) faktor yang menjadi penyebab utama keterlambatan pengirima material, sedangkan analisis menggunakan FMEA ada 8 (delapan) moda kegagalan yang mempunyai nilai *Risk Priority Number* (RPN) tinggi yang menjadi prioritas perbaikan. Berdasarkan analisis tersebut para ahli melalui proses *focus group discussion* (FGD) memberikan beberapa rekomendasi untuk memperbaiki kinerja *delivery* dari *supplier* dalam meminimalisir keterlambatan pengiriman material.

Kata kunci: *Oil Country Tubular Goods (OCTG), Caused Effect Diagram (CED), Failure Modes and Effects Analysis (FMEA), Risk Priority Number (RPN), order-to-delivery, on-time delivery, keterlambatan*

ABSTRACT

In well drilling activities, oil country tubular goods (OCTG) material is a very important material because it has the most dominant value that is 41% of the total value of the well drilling material. The availability of these materials with timely delivery (on-time delivery) will affect the success of the well drilling. However OCTG material procurement process, as the most dominant material, it is often experienced problems of the delay in delivery. One cause of these problems is the procurement process of material starting from order to delivery process has a long supply chain. The delivery delay will interfere with drilling operations, increase the stock and increase the cost of shipping replacement material.

This study aims to identify the factors causing delays, analyze the causes of delays and analyze the impact of delays in each stage of the process of order-to-delivery OCTG material. The results of this analysis are used to determine the priority of improvement so that delays in order-to-delivery OCTG can be minimized. Identification and analysis using two tools which Caused Effect Diagram (CED) and Failure Modes and Effects Analysis (FMEA).

The study concluded that the analysis using a CED obtained 8 (eight) main factors that cause delays in delivery of materials, while analysis using FMEA acquired eight (8) modes of failure with the value of the Risk Priority Number (RPN) that require high-priority repairs. Based on this analysis, the experts through focus group discussion (FGD) gave some recommendations for improving delivery performance of suppliers to minimize OCTG material delivery delays.

Keywords: Oil Country Tubular Goods (OCTG), Caused Effect Diagram (CED), Failure Modes and Effects Analysis (FMEA), Risk Priority Number (RPN), order-to-delivery, on-time delivery, delays