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Pengendalian Persediaan Material Baterai Asam Timbal dengan Pendekatan Metode Continuous Review = Lead Acid Battery Material Inventory Control with a Continuous Review Method Approach.

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Abstrak

ABSTRAK
Pada perusahaan baterai asam timbal, material utama dari bahan timbal memiliki masa simpan yang terbatas. Penelitian ini menggunakan kasus pada perusahaan baterai asam timbal di Indonesia, peramalan jaringan saraf tiruan digunakan untuk mengakomodir permintaan yang tidak menentu pada perusahaan baterai asam timbal XYZ. Model continuous review digunakan untuk menentukan persediaan minimum dan waktu antar pesanan. Model continuous review yang digunakan diharapkan dapat menghemat total biaya persediaan dibandingkan dengan model kebijakan perusahaan. Ada banyak penelitian mengenai pengendalian persediaan dalam rantai pasokan, tetapi hampir semua penelitian mengasumsikan produk tahan lama. Penelitian ini menggunakan metode jaringan saraf tiruan untuk meminimalkan kesalahan peramalan permintaan dan kemudian pendekatan continuous review digunakan untuk meminimalkan total biaya persediaan dengan mempertimbangkan masa pakai material karena pertimbangan kualitas. Hasil dari penelitian yang telah dilakukan didapatkan hasil peramalan terbaik pada baterai tipe N50ZL dengan MAPE 5,44%. Pendekatan dengan metode continuous review dapat menekan total biaya persediaan sebesar 12,76%.
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ABSTRACT
At lead acid battery companies, the main material from lead has a limited shelf life. This study uses a case in the lead acid battery company in Indonesia, artificial neural networks forecasting is used to accommodate erratic demand for XYZ lead acid battery companies. The continuous review model is used to determine the minimum inventory and time between orders. The continuous review model is expected to have less total inventory costs compared to the company policy model. There is a lot of research on inventory control in the supply chain, but almost all research assumes durable products. This study uses an artificial neural network method to minimize demand forecasting errors and then the continuous review approach is used to minimize the total inventory cost by considering material life due to quality considerations. The results of the research that has been done obtained the best forecasting results on N50ZL type batteries with MAPE 5.44%. The approach with the continuous review method can reduce the total inventory cost by 12.76%.