

Optimasi jaringan distribusi spare part dengan model uncapacitated facility location problem dan transshipment studi kasus: bisnis telekomunikasi = Optimization distribution network of spare part using uncapacitated facility location problem and transshipment model studi case: telecommunication business / I Dewa Made Wahyu Wiraduta

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Abstrak

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Spare part merupakan komponen yang esensial yang menunjang perangkat utama, ketika perangkat utama mengalami kerusakan, maka ketersediaan spare part merupakan hal yang sangat krusial. Sebagai contoh spare part dalam bisnis telekomunikasi dimana perangkat telekomunikasi memiliki batasan down time yang di hitung dalam jam, sehingga kebutuhan spare part harus di supply dalam waktu jam. Untuk memenuhi kriteria ini dengan biaya yang optimal, optimasi dalam proses distribusinya sangat diperlukan. Telah banyak penelitian yang dilakukan dalam bidang optimasi jaringan distribusi, namun kecenderungan mengarah pada perpindahan materialnya tanpa mempertimbangkan lokasi-lokasi pendukung dari distribusi, atau lebih sering diteliti secara terpisah. Tujuan dari penelitian ini adalah untuk mendesain jaringan distribusi yang optimal dengan mengoptimalkan perpindahan material dan juga mempertimbangkan lokasi-lokasi pendukungnya.

ABSTRACT

Spare part is an essential component that support the main equipment once it down and become an outage once the spare part is not available. With that case the spare part availability become an important point. In some cases of business, the down time of the main equipment is crucial. For example, in the Telecommunication business where the down time tolerance calculated in hours, which is impact in delivery time. To achieve the service level requirement at the appropriate cost, optimization is required. In other research, to achieve the required service level at appropriate cost, optimization mostly considering only material movement cost or transportation cost where building right facility in the location is also very important to ensure the spare parts are delivered on time to the demand location. But building the facility location in demand area will take a huge cost of logistics, without proper planning and understanding demand location. This study aims to design an optimal distribution network by considering not only the material movement cost but also the demand location, facility location, and facility cost