

ANALISIS PEMILIHAN VENDOR MAINTENANCE BOILER TANK STORAGE MENGGUNAKAN METODE AHP DAN TOPSIS (STUDI KASUS PT. LINC TERMINAL)

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ABSTRAK

PT. Linc Terminal mengoperasikan 20 tangki penyimpanan mulai dari karbon baja hingga tangki baja tahan karat. Penelitian ini dilakukan terkait permasalahan yang telah terjadi berupa keterlambatan dalam pengiriman dan kesalahan pengerjaan sampai terjadinya tragedi yang menimpa tangki penyimpanannya. Perusahaan bekerja sama dengan vendor untuk *maintenance tank storage*. Dalam penelitian ini menggunakan metode *Analytical Hierarchy Process* (AHP) yang digunakan sebagai pembobotan kriteria dan sub kriteria yang telah ditentukan dengan metode *Cut Off Point*, sedangkan untuk menentukan peringkat *partner* yang berdasarkan dari kriteria dan sub kriteria terbobot menggunakan metode *Technique for Order Preference by Similarity to Ideal Solution* (TOPSIS). Berdasarkan hasil perhitungan metode *cut off point*, didapat 6 kriteria dan 12 subkriteria. Dari hasil pengolahan metode AHP, didapat urutan hasil bobot kriteria dari yang tertinggi sampai terendah yaitu *service* (S), *quality* (Q), *technical capability* (TC), *price* (P), *performance history* (PH), dan *warranties & claim policies* (WC). Untuk urutan hasil bobot subkriteria yang tertinggi sampai terendah yaitu Q2, WC2, PH2, S1, P2, TC1, TC2, P1, S4, PH1, WC1, dan Q3. Untuk hasil perhitungan metode TOPSIS, didapat urutan pemeringkatan vendor dari yang tertinggi sampai terendah yaitu PT. Multi Makmur Teknikatama (1,039), PT. Waltes Energy (1,036), PT. Kencana Makmur Indonesia (1,032), dan PT. Heksa Aditama (1,030). Bisa disimpulkan bahwa vendor PT. Multi Makmur Teknikatama adalah yang paling optimal dan unggul dibanding yang lain.

Kata Kunci: *Vendor, Maintenance, Cut Off Point, Analytical Hierarchy Process, Technique for Order Preference by Similarity to Ideal Solution.*

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ABSTRACT

PT. Linc Terminal operates 20 storage tanks ranging from carbon steel to stainless steel tanks. This research was carried out regarding problems that had occurred in the form of delays in delivery and workmanship errors leading to tragedies that befell the storage tanks. The company collaborates with vendors for storage tank maintenance. In this research, the Analytical Hierarchy Process (AHP) method is used to weight the criteria and sub-criteria which have been determined using the Cut Off Point method, while to determine partner rankings based on the weighted criteria and sub-criteria using the Technique for Order Preference by Similarity to Ideal Solution method (TOPSIS). Based on the results of the cut off point calculation method, 6 criteria and 12 sub-criteria were obtained. From the results of processing the AHP method, the order of criteria weighting results from highest to lowest is obtained, namely service (S), quality (Q), technical capability (TC), price (P), performance history (PH), and warranties & claim policies (WC). The order of sub-criteria weight results from highest to lowest is Q2, WC2, PH2, S1, P2, TC1, TC2, P1, S4, PH1, WC1, and Q3. For the TOPSIS method calculation results, the vendor ranking order is obtained from highest to lowest, namely PT. Multi Makmur Teknikatama (1,039), PT. Waltes Energy (1,036), PT. Kencana Makmur Indonesia (1,032), and PT. Heksa Aditama (1.030). It can be concluded that the vendor PT. Multi Makmur Teknikatama is the most optimal and superior to the others.

Kata Kunci: *Vendor, Maintenance, Cut Off Point, Analytical Hierarchy Process, Technique for Order Preference by Similarity to Ideal Solution.*