ABSTRAK

Pembangunan Tempat Pengelolaan Sampah Terpadu (TPST) di kawasan Pelabuhan Patimban, Kabupaten Subang, menjadi solusi strategis dalam menangani permasalahan sampah akibat meningkatnya aktivitas logistik dan kepadatan lingkungan. Penelitian ini bertujuan mengevaluasi konstruksi TPST dari aspek desain, struktur bangunan, pemilihan material, serta ketahanan terhadap kondisi lingkungan pesisir. Metode yang digunakan adalah pendekatan deskriptif evaluatif, dengan pengumpulan data melalui observasi lapangan, studi dokumen perencanaan, serta analisis teknis. Penilaian dilakukan terhadap *Detail Engineering Design* (DED), sistem struktur, jenis pembebanan, dan pemilihan material utama. Hasil evaluasi menunjukkan bahwa desain TPST telah memperhatikan efisiensi operasional, ventilasi silang, dan sistem drainase untuk mencegah banjir rob. Struktur bangunan menggunakan baja berlapis epoxy dan beton mutu K-250 yang tahan terhadap korosi. Lokasi TPST yang berada ±365 meter dari garis pantai menuntut perlindungan khusus seperti peninggian elevasi lantai dan sistem pelapisan material tahan garam. Dari hasil analisis, konstruksi TPST di Pelabuhan Patimban dinilai layak secara struktural dan fungsional untuk diterapkan di wilayah pesisir. Rekomendasi mencakup peningkatan sistem pemeliharaan dan penguatan struktur pondasi untuk mendukung operasional jangka panjang.

Kata kunci: TPST, konstruksi pesisir, evaluasi struktur, pengelolaan sampah, Patimban

ABSTRACT

The development of an Integrated Waste Management Facility (TPST) in the Patimban Port area, Subang Regency, serves as a strategic solution to address waste management issues arising from increasing logistics activities and environmental density. This study aims to evaluate the TPST construction in terms of design, structural aspects, material selection, and resilience to coastal environmental conditions. The research method employed is a descriptive evaluative approach, with data collected through field observations, review of planning documents, and technical analysis. The assessment focused on the Detail Engineering Design (DED), structural system, loading types, and selection of primary materials. The evaluation results indicate that the TPST design has considered operational efficiency, cross-ventilation, and a drainage system to mitigate tidal flooding. The building structure utilizes epoxy coated steel and K-250 grade concrete, both resistant to corrosion. The TPST location, approximately 365 meters from the shoreline, requires specific protection measures such as elevated floor levels and salt-resistant material coating. Based on the analysis, the TPST construction at Patimban Port is deemed structurally and functionally feasible for application in coastal areas. Recommendations include strengthening foundation structures and enhancing maintenance systems to support long-term operations.

Keywords: Integrated Waste Management Facility (TPST), coastal construction, structural evaluation, waste management, Patimban