

ABSTRACT

Motorboats on Lake Toba use wood as the main material. The construction of boats is used to be done traditionally using the hand lay-up method by the people around the lake. The lack of awareness of ship safety causes there are still ship safety problems on Lake Toba which are often neglected including construction conditions, dimensions, main stability of the ship, and the unavailability of safety equipment on board. The absence of shipbuilding documents causes ship construction not to comply with the measurement rules. The research is aimed at implementing the dimensions and construction according to the rules of the Indonesian Classification Bureau, determining the stability criteria for small ships against the rolling period test, compliance with safety equipment and shipworthiness, and is required to have a ship's national certificate and sign. This research uses literature and analysis based on primary data, including dimensions and construction of the ship, loading, testing the ship's tilt or tilt in an oscillating state and not operating, and ship safety equipment. This research uses the method of measuring and shaking test based on the regulations of the Indonesian Classification Bureau, and the Regulations of the Director General on Land Transportation to determine the existing size of the regulations and determine the main stability characteristics of the ship. The results of the analysis carried out show that there is a difference in the main size of the ship that does not meet the regulations of the Indonesian Classification Bureau and the results of the feasibility analysis that have not been fulfilled on board the ship in accordance with the safety regulations.

Keywords: *Motor Shipworthiness, Small Ship Stability, Ship Safety Equipment.*

ABSTRAK

Kapal Motor di Danau Toba menggunakan material utama kayu. Pembangunan kapal selama ini terbiasa dilakukan secara tradisional menggunakan metode *hand lay-up* oleh masyarakat di sekitar danau. Minimnya kesadaran terhadap keselamatan kapal menyebabkan masih terdapat permasalahan keselamatan kapal di Danau Toba yang sering terabaikan meliputi kondisi konstruksi, dimensi, stabilitas utama kapal, serta belum terpenuhinya alat keselamatan di atas kapal. Tidak adanya dokumen pembangunan kapal menyebabkan konstruksi kapal tidak sesuai aturan pengukuran. Penelitian ditujukan untuk mengimplementasi dimensi dan konstruksi sesuai aturan Biro Klasifikasi Indonesia, menentukan kriteria stabilitas kapal kecil terhadap uji oleng, pemenuhan alat keselamatan dan kelaikan kapal, serta wajib memiliki surat dan tanda kebangsaan kapal. Penelitian menggunakan literatur dan analisis berdasarkan data primer, meliputi dimensi dan konstruksi kapal, pemuatan, uji coba oleng atau kemiringan kapal dalam keadaan osilasi dan tidak beroperasi, dan alat keselamatan kapal. Penelitian menggunakan metode pengukuran dan uji oleng berdasarkan peraturan Biro Klasifikasi Indonesia dan Peraturan Direktur Jenderal Perhubungan Darat untuk mengetahui besaran ukuran eksisting terhadap peraturan dan menentukan karakteristik stabilitas utama kapal. Hasil analisis yang dilakukan menunjukkan terdapat selisih ukuran utama kapal yang belum memenuhi peraturan Biro Klasifikasi Indonesia serta hasil analisis kelaikan yang belum terpenuhi di atas kapal sesuai dengan peraturan keselamatan.

Kata Kunci: Kelaikan Kapal Motor, Stabilitas Kapal Kecil, Alat Keselamatan Kapal.