

“Rancang Bangun *Body* Perahu Nelayan *Fiberglass* Alternatif Sebagai Pengganti Perahu Kayu di Sungai Siak Desa Seliau”

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ABSTRAK

Penelitian ini membahas rancang bangun *body* perahu nelayan berbahan *fiberglass* sebagai solusi pengganti perahu kayu yang digunakan di Sungai Siak, Desa Seliau. Perahu kayu dinilai kurang tahan terhadap cuaca, mudah rusak, serta membutuhkan biaya perawatan tinggi, sehingga diperlukan material alternatif yang lebih kuat dan efisien. Melalui observasi lapangan dan pengambilan data perahu pembanding, ukuran utama perahu ditentukan menggunakan metode regresi linier. Perancangan dilakukan dengan menyusun rencana garis, rencana umum, serta menghitung hambatan menggunakan metode *Van Ootmerssen*. Proses pembuatan dilakukan dengan metode *hand lay-up* hingga menghasilkan *body* perahu *fiberglass* yang kuat, ringan, dan lebih tahan lama. Hasil penelitian menunjukkan bahwa perahu *fiberglass* lebih efisien, aman, dan sesuai untuk kebutuhan nelayan di Desa Seliau.

Kata kunci: Perahu nelayan; Fiberglass; Rancang bangun; Hambatan kapal; Sungai Siak.

"Design and Construction of an Alternative Fiberglass Fisherman Boat Hull as a Replacement for Wooden Boats in the Siak River, Seliau Village."

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ABSTRACT

This study presents the design and construction of a fiberglass fishing boat hull as an alternative to traditional wooden boats used by fishermen in the Siak River, Seliau Village. Wooden boats are prone to weather-related damage, have low durability, and require high maintenance costs, creating the need for a stronger and more efficient material. Field observations and comparison vessel data were used to determine the main dimensions of the boat through a linear regression method. The design process included developing the lines plan, general arrangement, and calculating resistance using the Van Ootmerssen method. The hull construction was carried out using the hand lay-up method, resulting in a lightweight, durable, and strong fiberglass structure. The findings show that fiberglass boats offer better efficiency, safety, and suitability for the operational needs of fishermen in Seliau Village.

Keywords: Fishingboat; Fiberglass; Boat Design; Ship Resistance; Siak River.