

ABSTRAK

ANALISIS PENGARUH SUHU *COOLBOX* NELAYAN UNTUK MENJAGA KUALITAS IKAN BERBASIS GSM

(2026: xiv + 51 Halaman + 29 Daftar Gambar + 3 Daftar Tabel + Lampiran)

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Sistem *coolbox* nelayan berbasis GSM yang dirancang berhasil menurunkan suhu di dalam *coolbox* dari 30,5°C menjadi 10,2°C dalam waktu 90 menit. Penurunan suhu sebesar 20,3°C menunjukkan bahwa sistem mampu menciptakan kondisi penyimpanan yang lebih baik untuk menjaga kesegaran ikan. Konsumsi daya sistem selama pengujian berada pada rentang 48,39 Watt hingga 53,55 Watt dengan rata-rata penggunaan daya sekitar 50,89 Watt. Sistem *coolbox* yang dirancang mampu mempertahankan suhu penyimpanan pada kisaran 10–15°C sehingga dapat memperlambat proses pembusukan dan mempertahankan kesegaran ikan selama proses penyimpanan. Berdasarkan hasil analisis, terdapat hubungan antara suhu dan daya yang digunakan sistem, dimana semakin rendah suhu yang dicapai maka konsumsi daya cenderung semakin stabil. Kondisi ini menunjukkan bahwa sistem pendingin bekerja dengan optimal selama proses

berlangsung.

Kata kunci: *coolbox* nelayan, GSM, suhu, konsumsi daya, kualitas ikan.

ABSTRACT

ANALYSIS OF THE EFFECT TEMPERATURE ON A GSM-BASED FISHERMAN COOLBOX ON MAINTAINING FISH QUALITY

(2026: xiv + 51 Pages + 29 List of Pictures + 3 List of Tabels + Attachments)

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The designed GSM-based fisherman coolbox system successfully reduced the temperature inside the coolbox from 30.5°C to 10.2°C within 90 minutes. A temperature reduction of 20.3°C indicates that the system is capable of creating better storage conditions to maintain fish freshness. During the testing, the system's power consumption ranged from 48.39 Watts to 53.55 Watts, with an average power consumption of approximately 50.89 Watts. The designed coolbox system was able to maintain the storage temperature within the range of 10–15°C, thereby slowing the spoilage process and maintaining fish freshness during storage. Based on the analysis, there is a relationship between temperature and the power consumed by the system, where lower temperatures tend to result in more stable power consumption. This condition indicates that the cooling system operated optimally throughout the cooling process.

Keywords: *fisherman coolbox, GSM, temperature, power consumption, fish quality.*