

**PEMODELAN DAN SIMULASI SISTEM PENDINGIN UDARA PADA
RUANG PENUMPANG, KRU, DAN ANJUNGAN KAPAL PENUMPANG
SABUK NUSANTARA**

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ABSTRAK

Suhu ruangan didalam kapal mempengaruhi tingkat kenyamanan penumpang, kru, serta peralatan didalam kapal, maka suhu didalam kapal diatur dalam ISO 7547 yaitu maksimal sebesar 27°C. Maka perlu diketahui beban-beban pendinginan dalam setiap ruangan tersebut, beban pendinginan tersebut mencakup ukuran ruangan tersebut, koefisien transmisi panas, suhu diruang sebelah, luasan yang terkena panas, koefisien sumber panas, jumlah manusia didalam ruangan, jumlah peralatan yang menghasilkan panas, serta jumlah penerangan didalam ruangan tersebut. Pada penelitian ini menggunakan software CoolPack untuk menghitung jumlah beban pendinginan yang dibutuhkan, serta menggunakan ADF BAS System untuk mensimulasikan model pengkondisian udara yang sudah dimodelkan.

Kata Kunci : ISO 7547, *CoolPack*, *ADF BAS System*

**MODELLING AND SIMULATING AIR CONDITIONING SYSTEM IN
PASSENGER ROOM, CREW ROOM AND WHEEL HOUSE ON
PASSENGER SHIP**

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ABSTRACT

The room temperature inside the ship affects the comfort level of passengers, crew, and equipment on board, so the temperature inside the vessel is set in ISO 7547, which is a maximum of 27°C. So it is necessary to know each room's cooling loads. The cooling load includes; the size of the room, the coefficient of heat transmission, the temperature in the next room, the area exposed to heat, the coefficient of the heat source, the number of people in the room, the number of equipment that generates heat, and the number of people in the room, lighting in the room. In this study, CoolPack software is used to calculate the required cooling load, and the ADF BAS System is used to simulate the air conditioning model that has been modeled.

Keywords: ISO 7547, CoolPack, ADF BAS System