

ABSTRAK

Factor-faktor kenyamanan dari suatu ruangan sangat ditentukan oleh letak, karakteristik dan kegiatan yang ada di dalamnya. Untuk mengatasi hal tersebut diperlukan suatu alat pendingin dengan beban pendinginan yang sesuai dengan kebutuhan ruang tersebut. Ruang training pt kaldu sari nabati indonsia sebagai tempat aktifitas pelatihan dan rekrutmen karyawan, setiap hari selalu ramai dengan kapasitas 30 orang, memerlukan beban pendingin yang memadai. Penelitian ini bertujuan untuk mengetahui beban pendinginan dari alat AC yang diperlukan untuk ruang training tersebut. Metode penelitian yang dilakukan yaitu kajian pustaka dan observasi. Mengamati berbagai kejadian seperti sudut pancaran sinar matahari, mengukur suhu dinding luar, dinding dalam, berbagai aksesoris yang ada dan jenis kegiatan yang dilakukan. Kemudian melakukan perhitungan dengan kajian pustaka. Hasil penelitian yang didapat yaitu beban pendinginan dari seperti dinding bata dengan lapisan plester, kaca, atap *asbes-cement*, lantai dari beton dan keramik, lampu, penghuni, peralatan elektronik dan 30 orang jumlah maksimal yang ada pada ruang training pt kaldu sari nabati maka diperoleh kalor sensibel (Q_s) sebesar 66112,31 btu/h. Kemudian untuk kapasitas AC yang beredar dipasaran, 1 PK kompresor AC diperuntukkan 9000 btu/h (Sabarudin, 2014). Berdasarkan hasil perhitungan dan data tersebut, ruang training PT Kaldu Sari Nabati Indonesia memerlukan ± 1 unit AC 7,5 PK, atau ± 3 unit AC 2,5 PK, agar terciptanya ruang training dengan kondisi nyaman (24°C).

Kata kunci: kenyamanan, beban pendingin, kapasitas ac

ABSTRACT

The comfort factors of a room are determined by the location, characteristics and activities in it. To overcome this, a cooling device with a cooling load that suits the needs of the room is needed. Training room pt kaldu sari nabati indonesia as a place of training activities and employee recruitment, every day always crowded with a capacity of 30 people, requires adequate cooling load. This study aims to determine the pendiginan load of the air conditioning equipment needed for the training room. The research methods used were literature review and observation. Observing various events such as the angle of sunlight, measuring the temperature of the outer wall, inner wall, various accessories and the type of activities carried out. Then perform calculations with literature review. The results obtained are the cooling load of such as brick walls with a layer of plaster, glass, asbestos-cement roof, floors of concrete and ceramics, lights, occupants, electronic equipment and 30 people the maximum number in the training room pt kaldu sari nabati then obtained sensible heat (QS) of 66112.31 btu/h. Then for the air conditioning capacity circulating in the market. Then for the capacity of air conditioners on the market, 1 PK AC compressor is intended for 9000 btu / h (Sabarudin, 2014). Based on the results of these calculations and data, the PT Kaldu Sari Nabati Indonesia training room requires ± 1 unit of 7.5 PK AC, or ± 3 units of 2.5 PK AC, in order to create a training room with comfortable conditions (24°C).

Keywords: comfort, cooling load, air conditioning capacity