ABSTRAK

Berdasarkan SNI 03-4061-1996, ubin granito adalah ubin lantai keramik yang tidak berglasir dengan badan jenis porselin. Dari proses produksinya, ada dua tipe ubin granit, yaitu *polished* dan *unpolished*. Dengan adanya perbedaan perlakuan yang diterima oleh kedua granit tersebut, maka perlu dilakukan pengujian untuk membandingkan kekuatan lentur granit *polished* dan *unpolished*.

Pengujian dilakukan menggunakan metode uji lentur tiga titik dengan alat *Universal Testing Machine* (UTM). Hasil pengujian granit kemudian dibandingkan kembali dengan standar yang berlaku, yaitu SNI 03-4061-1996.

Berdasarkan SNI 03-4061-1996, kuat lentur dinyatakan lolos apabila tidak kurang dari 27 MPa. Dari hasil perhitungan kuat lentur, didapatkan rata-rata nilai kuat lentur granit *polished* dan *unpolished* berturut-turut sebesar 41,25 MPa dan 38,24 MPa, yang mana kedua angka tersebut lebih besar daripada 27 MPa. Maka kuat lentur kedua granit tersebut telah sesuai dengan standar yang ditetapkan. Nilai rata-rata kuat lentur granit *polished* lebih besar dibandingkan dengan nilai rata-rata kuat lentur granit *unpolished*. Dari penelitian ini didapatkan bahwa kuat lentur granit dengan permukaan yang telah dipoles lebih tinggi dibandingkan dengan kuat lentur granit dengan permukaan belum dipoles.

Kata Kunci: Kuat Lentur, Uji Kuat Lentur, Granit, Ubin Granit, Granit *Polished*, Granit *Unpolished*

ABSTRACT

Granite tiles are unglazed ceramic floor tiles with a porcelain-like body, according to SNI 03-4061-1996. There are two varieties of granite tiles based on the production process: polished and unpolished. It is required to run a test to compare the flexural strength of polished and unpolished granite given the variations in treatment the two granites received.

The test was carried out using the three-point flexural test method with the Universal Testing Machine (UTM). The results of the granite test were then once more compared to the applicable standard, SNI 03-4061-1996.

Flexural strength was deemed to pass according to SNI 03-4061-1996 if it was not less than 27 MPa. Flexural strength calculations revealed that polished and unpolished granite had average flexural strengths of 41.25 MPa and 38.24 MPa, respectively. Both values were higher than 27 MPa. Therefore, the two granites' flexural strength met the set norms. The average value of polished granite's flexural strength was higher than the average value of unpolished granite's flexural strength. This study revealed that granite with a polished surface had a higher flexural strength than that of an unpolished surface.

Keywords: flexural strength, flexural strength test, granite, granite tiles, polished granite, unpolished granite