SCIENCEDOMAIN *international*
www.sciencedomain.org

SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	**Physical Science International Journal**
Manuscript Number:	**Ms_PSIJ_50570**
Title of the Manuscript:	**EFFECTS OF THICKNESS OF A MINERAL LAYER OF GRANITE AND MARBLE ON THE MECHANICAL PROPERTIES OF A BILAYER MATERIAL: CASE OF GRANITES**
Type of Article:	**Original Research Articles**

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	**Authors' response to final evaluator's comments**
I HAVE SPENT TIME TO LIST DOWN SOME OF THE PROBLEMS IN THE WORK. AUTHORS SHOULD TAKE TIME AND RE-WRITE THE MANUSCRIPT VERY WELL. I WOULD BE BUSY IN THE DAYS AHEAD AND THEREFORE WILL NOT HAVE TIME TO LOOK AT THIS WORK AGAIN. Please check the line numbers well because some do not correspond with the printing I made. The authors should consider the following corrections and suggestions and several others in the work. Abstract Should be rewritten to make clear. Some suggestions: **INSTEAD OF** The present work is dedicated to the study of the mechanical properties of a bilayer material. This material consists of a substrate in mortar and a mineral layer in granite and marble. The mixture of these two constituents of different characteristics gives a material whose properties will vary depending on the density of each constituent. The standardized testing on the sand and the bend tests three points and compression are among other methods used for the evaluation of the mechanical characteristics of the specimens of 4 × 4 × 16 cm dimensions. The results of these tests show that samples of the mineral layer in granite with a thickness of 1.7 and that of 1.4 cm in marble get good bending resistance three points respectively equal to 10.63 and 10.3 MPa. As for the compression tests, it appears that the compressive resistance increases with the thickness of the mineral layer but evolves in reverse with the rate of water absorption of these materials. The best resistance in compression obtained with the samples having the thickness of 2 cm of the granite and marble mineral layers are respectively 24.47 and 24.07 MPa. In addition, for this same thickness, the Bilayers offer a better rate of water absorption. **TRY THIS**: The present work is dedicated to the study of the mechanical properties of a bilayer material. This material consists of a mortar substrate and a mineral layer of granite or marble. The mixture of these two constituents of different characteristics gives a material whose properties will vary depending on the density of each constituent. The standardized testing on sand and the three point bending and compression tests are among other methods used for the evaluation of the mechanical characteristics of the specimens of 4 cm × 4 cm × 16 cm dimensions. The results of these tests show that samples of the mineral layer in granite with a thickness of 1.7 and that of 1.4 cm in marble get good bending resistance in three point respectively equal to 10.63 and 10.3 MPa. As for the compression tests, it appears that the compressive resistance increases with the thickness of the mineral layer but evolves in reverse with the rate of water absorption of these	

materials. The best resistance in compression obtained with the samples having the thickness of 2 cm of the granite or marble mineral layers are respectively 24.47 and 24.07 MPa. In addition, for this same thickness, the Bilayers offer a better rate of water absorption.

Line 10: Check the italic words

Line 29: The mass of saturated the sample water……..change to…… The mass of saturated water sample

Line 31:.. flexion or compressive in…change to…. flexion or compression in

Introduction

Lines 44-45: . They are mainly used in the building for non-structural applications, as interior and exterior coatings, light partitions, tiles, square tiles, pavers, screeds, noise and fire barriers (Moslemi, 1999). These materials offer a good lightness, a good behavior with humidity, good resistance to fire and shocks with interesting mechanical and thermal performances....

Change to…….. They are mainly used in building for non-structural applications, as interior and exterior coatings, light partitions, tiles, square tiles, pavers, screeds, noise and fire barriers (Moslemi, 1999). These materials offer good lightness, humidity, resistance to fire and shocks with interesting mechanical and thermal performances.

Compare Lines 53-54 and Lines 71-72: Is it not a repetition?

Line 58: BRAULT…….change to……Brault…….

Please do these changes for all the references in the work!!

Line 68: have carried out their works …….change to …… have carried out works

Line 85: tap water, is dried in an…….change to…… tap water, was dried in an…

Line 121: Buulk density…….change to ……. Bulk density……

Line123: **Samples making …….change to…….Sample preparation**

Line 125: What is the sample? What is the meaning of DOSAGE? How many samples were prepared?

Lines 128-132: After this step, the granite coating is placed so as to have a final bilayer sample of 4 cm thick (fig. 2). Once the bilayer was obtained, we immersed it in water for 28 days. The 28 days reached, the surface of the sample out of the water is sanded (fig. 3). The bilayers then obtained, the step of the tests of three-point bending and compression at 28 days on the test tubes is carried out.

Consider

After this step, the granite coating was placed so as to have a final bilayer sample of 4 cm thick (fig. 2). Once the bilayer was obtained, it was immersed in water for 28 days. After 28 days, the sample was taken out of water and was sanded (fig. 3). The 3 point bending and compression tests were carried out after 28 days.

LINE 134: FIG. 2 Coatings laying FIG. 3 Sanding operation

CHANGE TO…. FIG. 2: Coatings laying FIG. 3: Sanding operation

Do this for all the figures.

Line 138: The press used for our tests is a hydraulic press with digital display (Fig. 4).

Consider

A hydraulic press with a digital display was used to do the tests (fig. 4).

Line 141-142: The flexural strength of the specimens was determined by the relationship established by……..change to…….. The flexural strength of the specimens was determined using equation 3 established by……

Line 152: The procedure adopted is the compression…….change to….. The procedure adopted was the compression……

Line 154: The compressive strength is obtained by the formula: ..change to……..

The compressive strength was obtained using equation 4:

Line 159: … immersed in water and then left after 24 hours of total immersion.

Change to …. immersed in water for 24 hours.

Lines 160-161: The rate of water absorption is determined by the following formula:
Change to

The rate of water absorption was determined using equation 5:
Line 166: The standard deviation is determined from the following formula:

Change to

The standard deviation was determined using equation 6:

The uncertainty is deduced from the following relation:

Change to

The uncertainty was deduced using equation 6:

DEFINE ALL THE TERMS IN THE EQUATION

Line 177: These are the average values [How many tests were performed that you found the average?]

Line 180: Be consistent. Are authors using fig. or figure in the work?

Line 189: Check references [Small letters]

Line 201: **FIG. 6 The influence of granite layer and marble thickness on the bending strength at 28 days…….change to …….. FIG. 6 The influence of granite layer and marble thickness on the bending strength after 28 days**

Line 208: Figure

Line 228: **The influence of the of the granite and marble layer thickness……** change to…… **The influence of the granite and marble layer thickness……..**

Line 231: Fig 8……OR Figure 8?

Lines 233-235: These curves are obtained from the results synthesized in Tables 5 and 6. It can be seen that the water absorption rate of the various samples decreases as the thickness of the mineral layer increases and varies between 3.09% and 5, 25%.

Consider

These curves were obtained from the results in Tables 5 and 6. It can be seen that the water absorption rate of the various samples decreases as the thickness of the mineral layer increases and varies between 3.09% and 5.25%.

Line 257: Fig. 9

Line 260: …mineral granite and marble….change to…… mineral granite or marble….

CONCLUSIONS

Line 272: … work whose objective is the valorization…..change to…… work whose objective was the valorization….

Font sizes are not the same

Line 275: …. bilayers……change to…… bilayer……

Line 278: …. the granite and marble mineral……..change to……. the granite or

SDI FINAL EVALUATION FORM 1.1

marble mineral…….	

Reviewer Details:

Name:	***George Amoako***
Department, University & Country	***University of Cape Coast, Ghana***