

Sydney Casebolt
Egyptian Brick Breaker

The purpose of this experiment was to determine which of the three types of bricks are stronger and can withstand the elements of the environment in the Egyptian Desert such as sand and water. To conduct this experiment, I made three different types of bricks out of different ingredients; pea gravel, rock and straw. The formula for each type of brick was 1 part concrete, 2 parts sand and 3 parts pea gravel, rock or straw. After these bricks hardened, I tested the bricks for hardness, water and sand durability. To measure the rate of hardness of each type of brick, I used the CDOT break tester machine, which they use to test core samples from newly poured concrete. To measure the durability from water blasting, I blasted them with water for 5 minutes each at 1500 PSI. I then used a sand blaster for 5 minutes each at 90 PSI. I weighed and measured each of these bricks before and after the tests. The results were that the bricks made with the straw were the most durable under the conditions tested. It took more pressure to break down the straw brick in the break test machine than the other two. The brick made with straw also held up better in the power wash and the sand blast test, losing the least amount of its total weight. The results indicate that my hypothesis should be rejected. The bricks made with straw withstood the testing of hardness, water and sand blasting more.