
Chapter 5

Conclusions and Recommendations

5.1 Conclusion:

- ❖ The Compressive strength of the five samples not change, and remains constant equal to 5323 psi.
- ❖ By easy Scan results it has been found that the distance between particles constant and it is equal to 23.12 μm .
- ❖ Ultra sonic results showed that sample NO. (3) had a longest micro-crack length; it is equal to 28 mm.
- ❖ By inspection radiographic it has been found that the samples NO. (2) and NO. (3) Contain the largest number of micro-cracks, and it is 5 micro-cracks.

After the previous tests, we found the mesquite wood powder don't effect in compressive strength and distance between particles. But it decreases the lengths and number of cement micro-cracks after sample NO. (3), although there is increasing in number and length of cement micro-cracks from sample No (1) to No (3).

5.2. Recommendations

- ❖ Using percentage above 0.44% from mesquite wood powder to evaluate its effect.
- ❖ Preparing samples and procedure in to actual or similar field condition.
- ❖ Using sieve less than 90 μm for sieving mesquite wood powder.
- ❖ More studies using X-ray Diffraction (XRD) test to determine the change in chemical composition.
- ❖ Also using the Nano Electronic microscope to determine the change in shape and fabric structure and to give accurate interpretation for samples.
- ❖ It is prefer to go farther on Nano diffraction of material studies.