Presentation of Michoacana student chapter
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ABOUT US

• We are a student chapter located on Morelia Michoacan Mexico and we belong to the Michoacan university.

• We have 1 year but in that year we are learn a lot of things relational of concrete.

• We are excited for contribute to the development of the infrastructure in our country and why not? On the world too.
Concrete is one of the most construction materials.

In our country the infrastructure that seems to have reached the limit state of service.

Maintenance cost high.
SOME ACTIVITIES...
The last year we visit a different kind of constructions, for example, the new avenue "Ramal Camelinas" these are important and relevant infrastructure for the development of our town.
We participated in the national competition of concrete cubes and we obtained the first place in the XXXIV OlimpiANEIC. The event was in Obregon city.
CONCRETE AND CONSTRUCTION CONFERENCES

We will keep work...
We try to learn and share information with our partners in the faculty, for this reason, we searched experts and we offer refresher courses, for example, modeling and design of buildings of concrete and things like that.
NOWADAYS...

- We work with natural additives for the concrete, for example:
- Natural organic polymers like starch and nopal
- Industry residues
- And others
- The goal is improve the behavior of the infrastructure with ecologic additions and we will work with this...
CONCRETE WITH A POLYMER ORGANIC ADDED

- Two components: aggregates and cementitious matrix.
- Usually the aggregates are divided into groups: thin and thick

Components of concrete: cement, water, thin aggregates, thick aggregates
Rigids Pavements in bad state in Michoacán. Source J. A. Guzmán
THE AGGREGATES

Sand of Joyitas bank
Thin aggregates

Bank of Tarímbaro
Thick aggregates

Fuente: Google Maps
We talk about 3 mixtures:

- Mixture 1. Conventional concrete
- Mixture 2. Concrete with a fluidizing added
- Mixture 3. Concrete with a fluidizing and organic polymer added
• The specimens were produced and tested under controlled conditions.
• Displacement can’t be easily measured
CONCLUSIONS

• The mixture with the organic polymer showed the best performance.
• The rupture modulus of the mixture with polymer has higher displacement and this supports more load in comparison with the others mixtures.
• The calculated solution has the same trend that the tests in the laboratory, and we can say that is a right approximation.
ACKNOWLEDGMENT

UMICH

“Ing. Luis Silva Ruelas” Laboratory

ACI

Resistance of materials department
THANKS FOR YOUR ATTENTION