EFFECTS OF COMPOSITES DUE TO EXTERNAL FIELDS

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ORGANISATION OF PRESENTATION

- BACKGROUND FOR STUDY
- CURRENT OUTLOOK FOR SUSTAINABLITY
- PRESENT DAY NEEDS
- ENERGY AND ENVIRONMENT
- FEATURES OF STUDY
- CONCLUSIONS
- FUTURE POSSIBILITIES

BACKGROUND FOR STUDY

- Effects of composites due to external fields such as pH, temperature and light.
- Composites in this paper are FRP and PC.
- Fiber reinforced concrete and polymer concrete saves embodied energy.
- Testing FRP & PC with external fields.

CURRENT OUTLOOK FOR SUSTAINABLITY

- Using Energy saving materials
- Reuse
- Recycle (polyethylene, LDPE & HDPE)
- Reduce (fly ash, silica fumes)

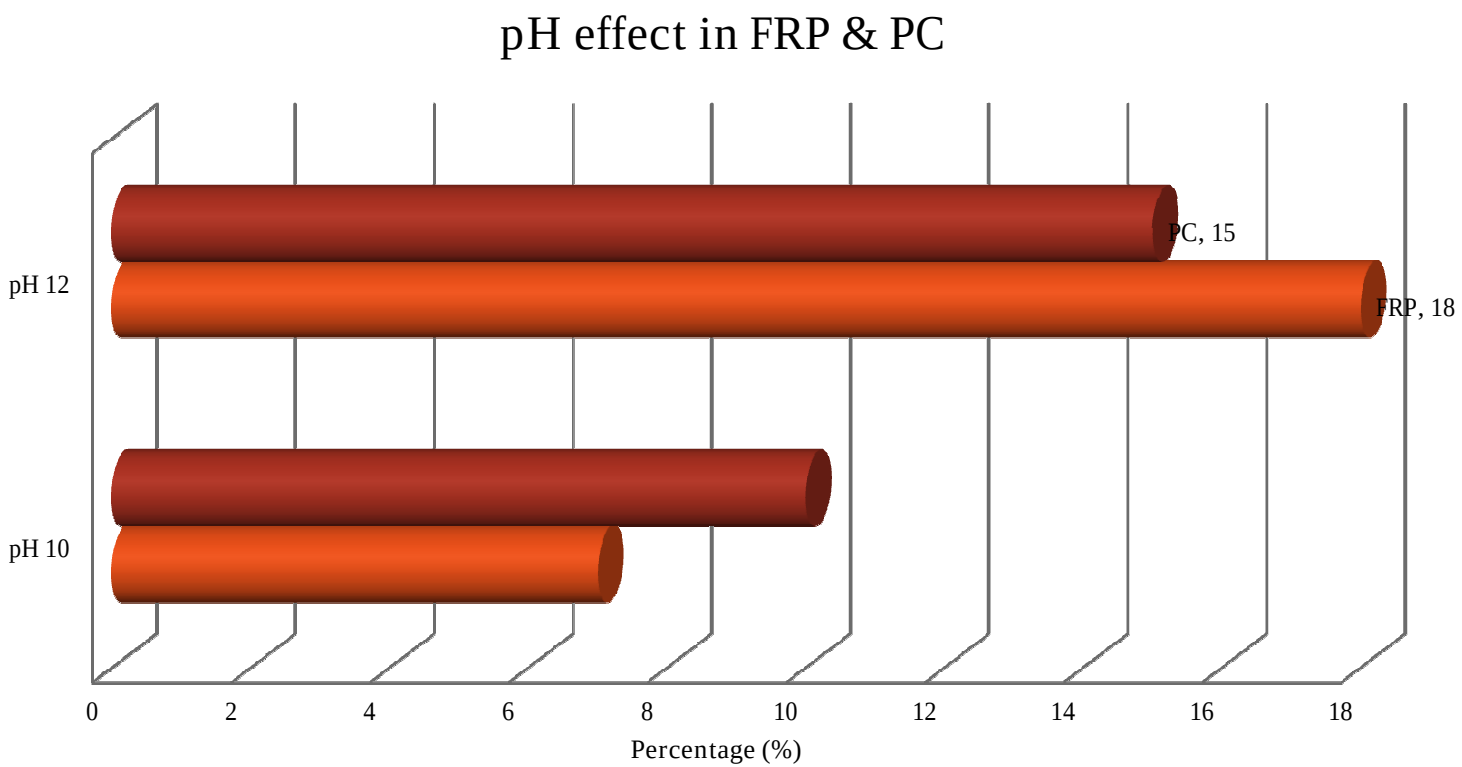
PRESENT DAY NEEDS

- Energy saving materials
- Nano materials
- Cheap rate
- Good quality
- High performance
- Ultimate strength

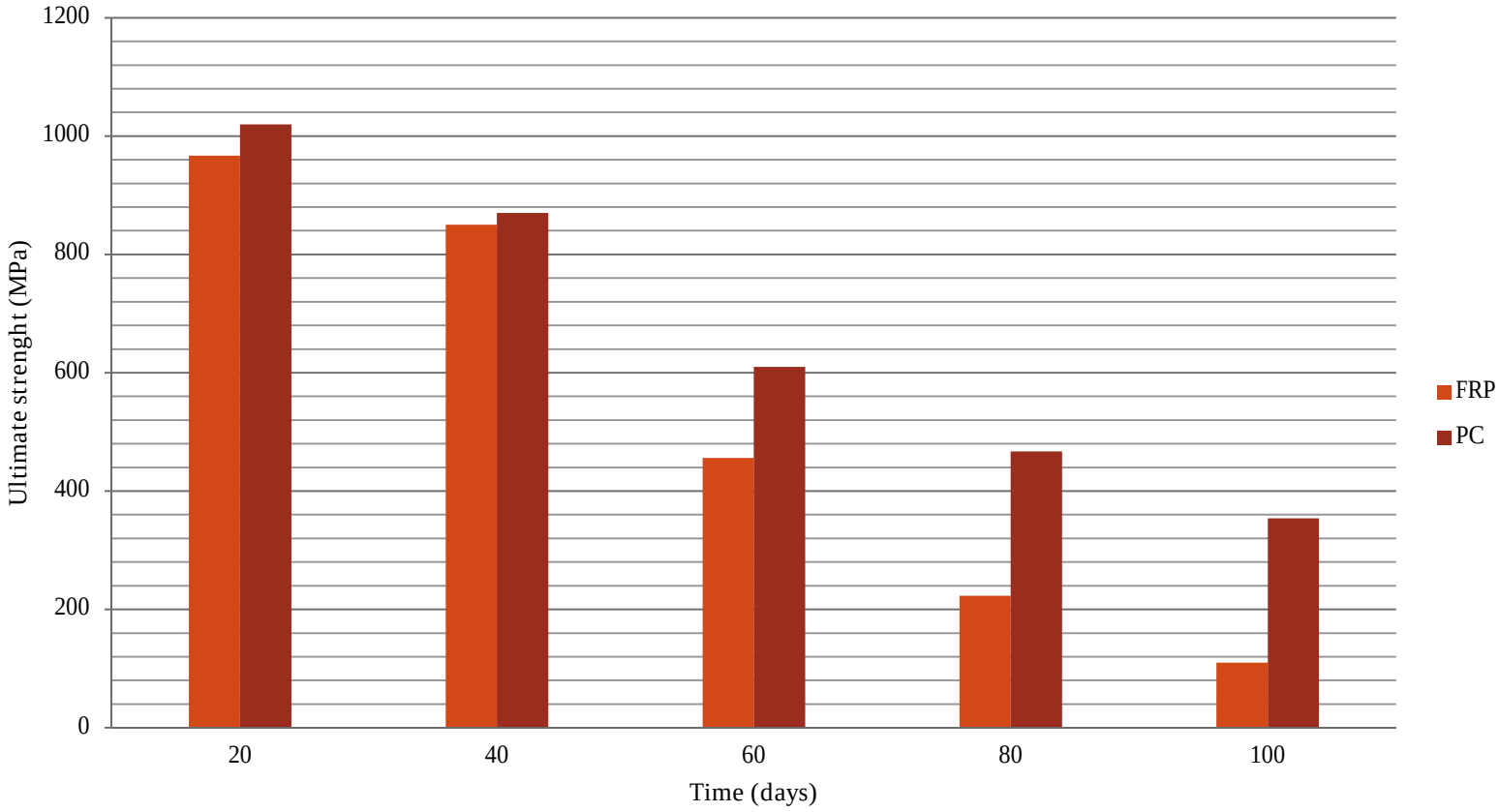
ENERGY AND ENVIRONMENT

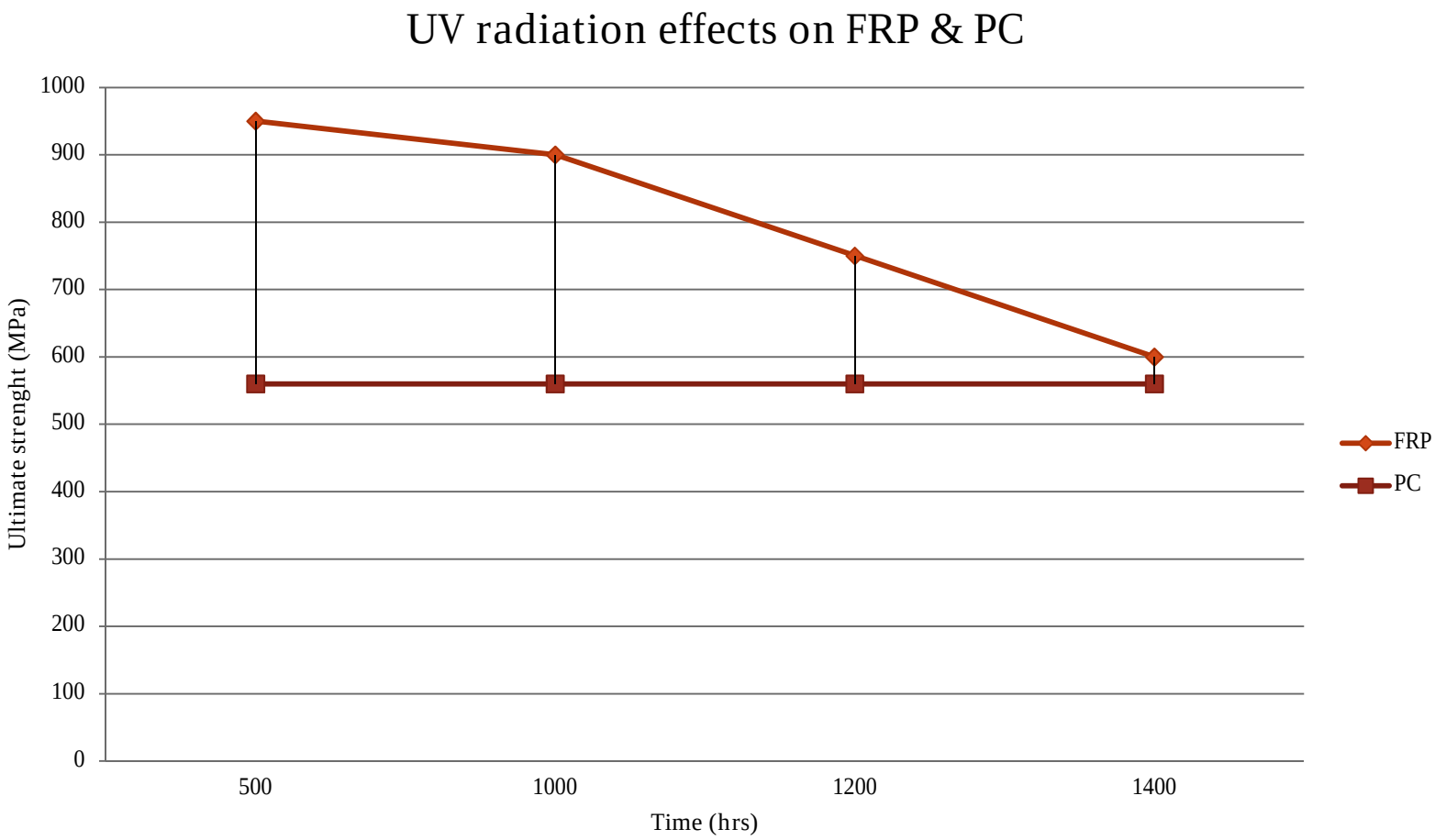
- FRP is nothing but polymers which are reinforced with fiber.
- Polymer concrete is made up of silica fumes which is a waste outlet from the industries.
- Hence these waste are added to the raw materials for the sake of adding strength to the composites.
- FRP and PC is useful to the environment.

FEATURES OF STUDY



Temperature effect in FRP & PC




UV radiation effects on FRP & PC
Ultimate strenght (MPa)
1000
900
800
700
600
500
400
300
200
100
0
500
1000
1200
1400
Time (hrs)
FRP
PC

CONCLUSIONS

- FRP and PC is the energy saving material.
- The effect of composites leads to deformation.
- High Ultimate strength.

FUTURE POSSIBILITIES

- The polymerization techniques must be used widely for introducing new polymers.
- Polymer should be eco-friendly.