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# A Commentary on the Use of Recycled Paper as Reinforcement to be used in Concrete

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**Abstract**

Now-a-days as population is increasing day by day so there is need of more and more infrastructure. So concrete with reinforcement bar is used for this conventional construction as basic material for construction. As simply we cannot use concrete as it is weak in tension. But as now a days as waste containing majority of abandoned waste like mercury, plastic & paper from countries all over the world causes certain serious environmental problems and is increasing day by day which is becoming very hectic for us for disposal. So we can use these waste products as Reinforcement in concrete works. Paper reinforcement is a new construction technology made most often with waste paper, adhesives, Mercury. People can use it to build low cost homes without a clear understanding of its structural properties. The purpose of this study is to obtain some details of paper ore info to be used in construction.

**Keywords:** Recycled Paper • Mercury • Paper ore info advantages

## Introduction

Most of the materials used in this experiment are waste products which are going to be recycled. In traditional construction the dead weight as well as cost of structure increases due to use of normal Reinforcement but due to use of waste paper the dead load on structure as well as cost of structure can be decreased to a very significant extent. As using little amount of mercury layers with paper Reinforcement would give very high strength to concrete & incase if fire catches to structure this Reinforcement would get simply burn but our concrete would not expand as in case of steel Reinforcement in which steel suddenly expands and leads to sudden collapse of our structure. Apart from this entire if at some place the plaster falls or there is any seepage in structure then it leads to corrosion in our Reinforcement. By using paper ore info we don't have problem of corrosion of Reinforcement. Also there is large amount of expenditure for proper storage of Reinforcement at site i.e., we have to take outmost care while storing steel Reinforcement as it catches rusting /corrosion very quickly but our paper ore info does not corrode /rust or have any climate action.

**Paper:** Any kind of waste paper can be taken but it should not be decomposed or degraded by bacterial action. This waste paper should be dried in sun or by any other mechanical means to remove the moisture oven drying method can also be used.

**Plastic:** Waste plastic or recycled plastic can be taken and molded in shape of cylinder for filling of material.

**Mercury:** Little amount of mercury is required to fill in our paper ore info as mercury has very high strength.

**Sealer:** Any type of sealing & sticking compound like Mod podgy can be used for this work.

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## Method Adopted

Collect the waste paper from different sources then dry it in sun for at least for 7 days after this compact the paper in cylindrical shape then apply sealing compound on paper and put this inside cylindrical plastic in layers of 30cm and after each 30 cm fill 1 cm mercury now see that your paper Reinforcement is completely sealed and allow it to dry and become stiff. Now it can be used as Reinforcement in concrete (Figure 1) [1].

Moisture content = (Initial wt-final wt)×100÷final wt

Initial wt=Before oven drying.

Final wt=After oven drying.

Tests that can be performed on paper ore info:

1. Tensile strength test
2. Compressive strength tests
3. Moisture content test.
4. Water proofing test

### Advantages

1. Decrease in cost of structure.
2. Corrosion resistant structure.
3. Decrease in dead load of structure.

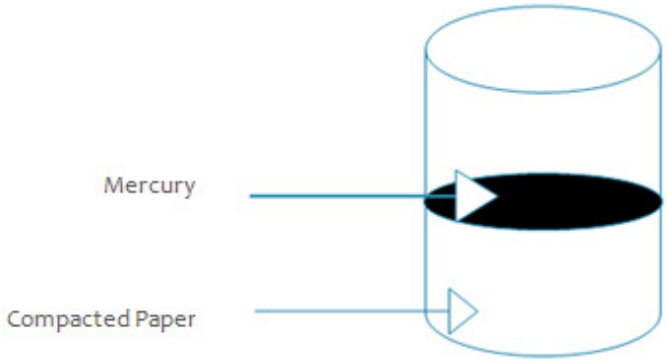


**Figure 1.** Elevation of paper ore info.

## Conclusion

From the above experiments the following conclusions can be drawn:

1) Paper ore info acts as a light weight reinforcement in which waste paper are used.

2) Due to increase in weight of paper to be used the overall weight of concrete goes on decreasing.

3) Strength of paper ore info is very good and is subject to quantity of paper & mercury.

4) Strength of paper ore info increase with amount of mercury.

5) More the percentage of paper is used less is the strength and lighter is the concrete

6) Paper ore info does not expand or contract.

7) As the waste material is used hence it reduces the pollution.

8) The total cost of construction reduces considerably by 20% to 30%

## References

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