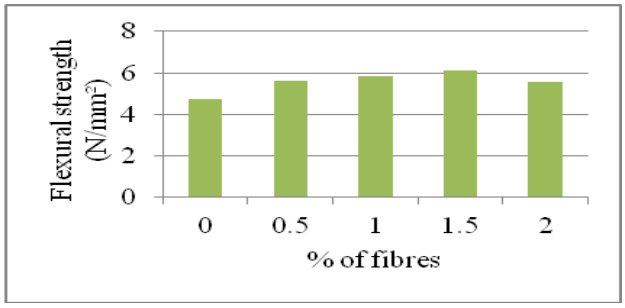

Figure 12: Flexural strength of concrete

The enhancement in flexural strength is achieved due to improvement in mechanical bond between the cement paste and fiber.As amount of fiber increases in mix,it greatly helps to reduce widening of cracks more effectively,thus resulting in increase in flexural strength.

Table 10: Modulus of elasticity of the specimens

S. No	*% of fibers*	*Young's Modulus (GPa)*
1	0	38.6
2	0.5	40.8
3	1	41.6
4	1.5	42.8
5	2	40.4

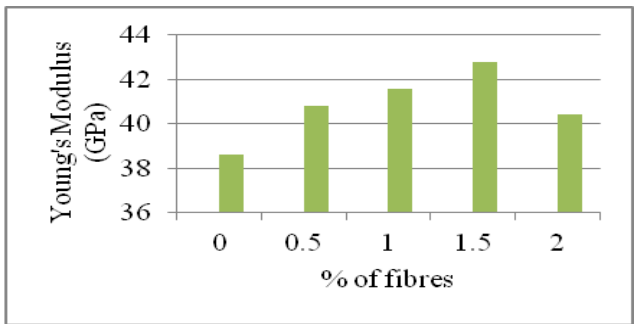

Figure 13: Modulus of elasticity

It is observed that by using 30% of steel slag with 1.5% fiber in concrete yields max. strength.

9. Conclusions

Based on the present study the following conclusions were derived:

Compressive strength of 1.5% of blended length polypropylene fiber reinforced concrete has found to be 21% increase in strength, when compared to that of Conventional concrete. Strength enhancement in split tensile strength is 26%, flexural strength is 29%and modulus of elasticity is 15% compared to that of Conventional concrete. The experimental studies proved to be the best method or way in providing strong and durable concrete. It also gives solution to disposal problem of steel slag. It is observed that by using 30% of steel slag with 1.5% fiber in concrete yields max. strength. The following benefits can also be obtained:

- Cost reduction
- Social benefits
- Mass utilization of waste material

10. Scope of Future Study

Study on higher percentage replacement of steel slag for fine aggregate with blended type polypropylene fiber to achieve a mean target strength or not. Steel slag is available both granular and crystalline forms so it is used to replace both fine and coarse aggregate. In which to investigate the effect of fiber. Investigation on the flexural and shear crack pattern of fiber reinforced concrete with partial replacement of fine aggregate by steel slag.

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