

## **MOMENT REDISTRIBUTION IN TWO SPAN CONTINUOUS HIGH STRENGTH CONCRETE BEAMS**

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### **Abstract**

Moment redistribution in a statically indeterminate beam is the transfer of moment between high moment regions to the lower moment regions in the member, while maintaining overall strength. At the initial stages of loading the span moment and support moment will increase proportional to the increase in applied load. Eventually, the ultimate strength will be reached at the maximum moment sections upon further increase in the applied moment. Now as the load is increased further, moment will redistribute from the maximum moment sections to other parts of the beam, such that the total static moment in the beam remains unchanged [6] Moment redistribution provides extra strength to the structures beyond the elastic range and degree of moment redistribution in a structure depends on the ductility of the critical sections in the structure The section ductility is related to several factors such as amount of tension steel, amount of compression steel, concrete strength and amount of transverse reinforcement etc. It has been observed from the literature that very little research has been done on redistribution of 2 span continuous beams made with HSC. Hence six HSC beams were tested in laboratory for present investigation to understand the strength and deformation behavior of the reinforced concrete beams. The span to depth ratio was maintained constant with a value of 26, the total depth of the beam was 125 mm with effective depth being 100 mm. The breadth of the beam was

also kept constant with 100mm. Cracking load, load deflection behavior, ductility index, cracking width and ultimate flexural strength using codal provisions for continuous beams were studied.

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