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The beam that is longitudinally reinforced only in tension zone, it is known as singly reinforced beam.

In such beams the ultimate bending moment and the tension due to bending are carried by the reinforcement, while the compression is carried by the concrete.

Particularly, it is not possible to provide reinforcement only in the tension zone, because we need to tie the stirrups therefore two rebars are utilized in the compression zone.

Strain Distribution Diagram