Corrugated Web Beam (CWB)

The Corrugated web beam stands for the structural beam. The production process is exclusive designed by Sugam Engineer's .It is built up girder with thin corrugated web and two “C” channel flanges. For the larger span, we use two webs. Corrugation in webs enormously increases their stability against buckling and can result in very economical designs.

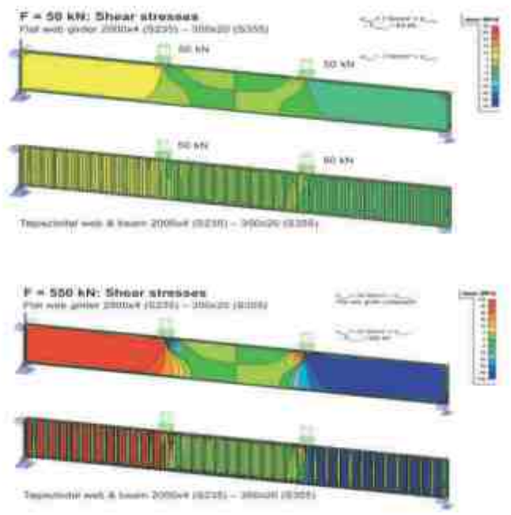
Because of the high strength to weight ratio, the span lengths could be wider, so a less number of columns are needed. Further there are costs saving possible at the weight, concrete, transport, and erection comparing a standard I-girder. Since the corrugation of the web provides higher resistance against bending about the weak axis, none of auxiliary lifting equipment normally required. Due to weight advantages with the same per running meter corrugated we beam enables significantly greater clear span of 30meter for multi floor building and 60meter of single span for PEB.

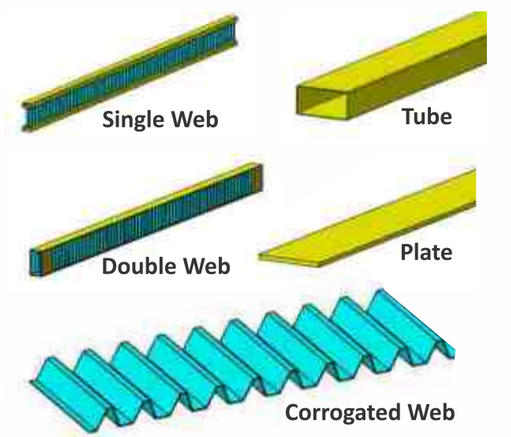
The advantages of corrugated web beam

- Thinner web
- Span 30meter for multi floor building 75 meter for PEB that to 4column spacing.
- The flexibility of CWB allows for beam depth of 200mm to 2000 mm.
- Lower dead weight.
- Better buckling behavior.
- Due to lower weight, the erection and transport cost reduce.
- To reduce the height of the beam we can design double corrugated web beam.

- Engineers have realized that corrugation in webs increase their stability against buckling and can result in very economical designs.

  Less cost and higher load carrying Capacity.
- Corrugated web beam provide a high strength-to-weight ratio.
- Furthermore, erection cost is reduced, since the corrugation in the web provides a higher resistance against bending about the weak axis.
- Corrugated steel web beam introduces the use of thin plates without stiffeners to improve both aesthetics and the economy of the buildings and bridges. Research has shown that corrugated web beam have improved shear stability and better fatigue resistance than conventional I-beam with flat webs. It can eliminate the use of larger thickness stiffeners plate that allow the reduction in beam weight and result in economic design. When the corrugated webs are compared with stiffened flats webs, it can be found that the corrugated steel web beam enables the use of thinner webs. It was found that corrugated steel web beam have 9 to 13 % less weight than current traditionally stiffened girders with flat webs.
- Corrugated web steel beam is build up of two steel flanges welded to a corrugated web .The web and flanges can be made from different type of steel grade depending on design requirement. The trapezoidal profile used in structures that has special requirement to avoid fatigue failure.
- In construction application, the corrugated web beam is usually carry most of the compressive stress and transmits shear in the beam while flanges support the major external loads.
- The corrugated web beam is usually investigated by comparing the thickness and the shape. It can decrease the cost and materials without weakening the load-carrying capability of the beam.



Conclusion

Maximum capacity trapeziodal web & beam 550 / 50 = 11...!
Maximum capacity flat web girder