Iron beams

Combinations of wooden and iron beams in storey partitions occur roughly in the period 1900–1950.

Joist layers of wooden floors and pugged and plastered ceilings, where all of the beams are of iron, rarely occur. Examples may be found, however, especially in buildings of the 1930s.

On the other hand, iron beams often appear in timber frameworks where there is a need for increased load-bearing capacity.

This is typically the case for bay windows and sometimes for balconies, but also for different room depths inside either the same building section or a different one, and where there is a simultaneous requirement for the uniform thickness of storey partitions in all rooms.

The partial use of iron beams in timber framework is otherwise found in bathrooms with watertight floors. In this case, the foundation for the commonly used terrazzo coating is formed from concrete cast between iron beams.

For cases such as these, iron beams are generally treated in the same manner as those made from wood. Differences can be found in the various materials used for iron beams and their I-shaped cross-sections, and thus the necessary use of “flanged wood” of varying design for supporting floors, pugging and formwork.

Other differences concern the fire and moisture properties of iron and wood, the methods that are used to place them in load-bearing walls and the design of trimming around chimneys.