

Tips of achieve the goal of sustainability

- Reduce buildings size
- Less material waste
- Some material using raw materials to have the best effect
- Reuse material
- Recycle old produce

12.04

Concrete - mixing cement and ^{various} mineral ^{aggregates} with sufficient water

It able to form into any shape with a variety of surface finishes and texture

Aggregate - inert mineral materials like sand and gravel. ~~It is~~
Has properties to strength, weigh and fire resistance

Portland cement - made by burning a mixture of clay and limestone

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Water Cement - ratio of mixing water to cement and it controls strength, durability and watertightness of hardened concrete.

Slump test - determine the consistency and workability of freshly mixed concrete

Compression test - determine the compressive strength of concrete

Fabric - provide temperature reinforcement for slabs

Concrete is weak in tension, reinforcement that ~~is~~ consist of steel bars, strands, or wires

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Steel - having a carbon content that less than cast iron. It's use for any weight of structural framing. Combines high strength and stiffness with elasticity.

- It need to be paint or treat in a chemical way for protection against oxidation.
- Steel has W, L, WT, S and C shape. ~~It is~~
- Carbon steel has reduced its ductility and weldability while its strength and hardness increase.