

CHAPTER 7
**BUILDING
MATERIALS**



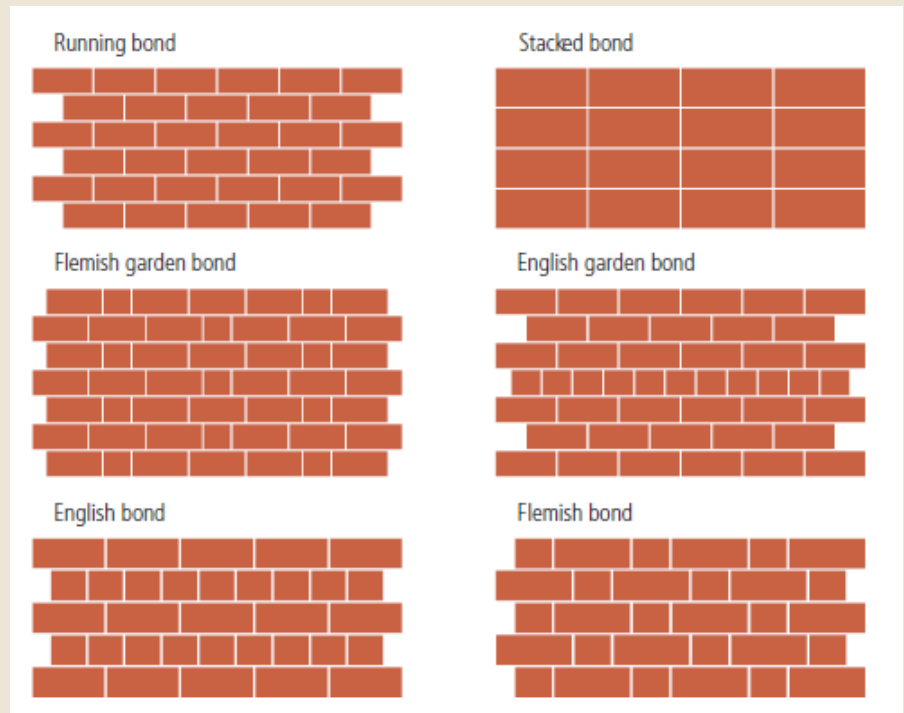
Building Material: Stone

- Granite
- Limestone
- Sandstone
- Marble
- Slate

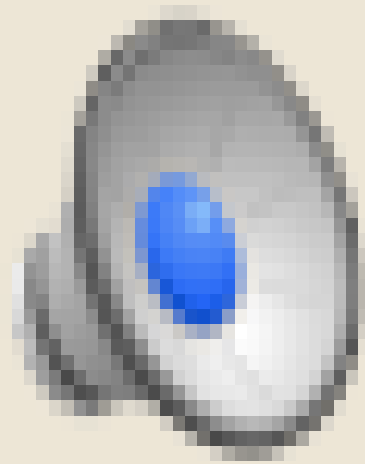


Building Material: Brick

- Made of clay
- Uses bonding to reinforce strength



Building Material: Cement



Building Material: Concrete

- Cement, sand and gravel
 - Ratio 1:2:3
- Workability
 - Slump test



Building Material: Reinforced Concrete

- Needed for:
 - Larger loads
 - Wider spans
 - Materials to be connected together
- Pre-tensioning
- Post-tensioning



Building Material: Timber

- Classification
- Timber conversion
- Timber defects
 - Check
 - Shake
 - Twist
 - Bowing
 - Splitting
 - Knots
- Classification of structural timber



Building Material: Timber

- Moisture content
- Rot in timber
 - Wet rot
 - Dry rot
- Preserving timber
- Manufactured boards
 - Plywood
 - Oriented strand board (OSB)
 - Chipboard
 - Medium-density fibreboard (MDF)



Building Material: Metals

Main uses:

- Structural
- Lintel
- Fittings
- Reinforcement of concrete



Building Material: Plastics

- Reasons for use:
 - Easy to manufacture
 - Easy to install
 - Resistant to water
 - Resistant to rot
 - Resistant to rust
- Polymers
 - Thermosetting polymers
 - Thermoplastic polymers
 - Thermally insulating
 - Electrically insulating
 - Rigid or flexible
 - Opaque or transparent
 - Recyclable

