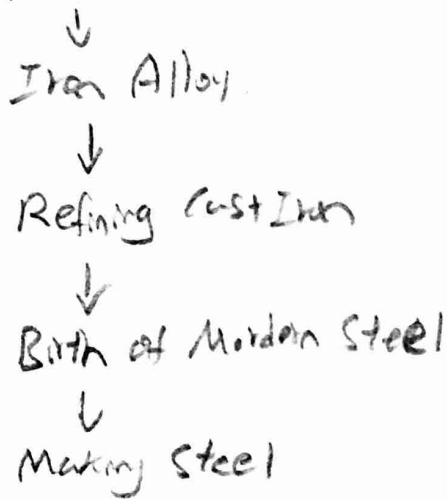


# Steel

- 24000 - 43000 Psi in tension
- Strong enough to support and create opening space that creates transparency
- Melt from Iron
- Cast Iron - Hard Iron for construction
- Wrought Iron - Iron used for weapons and armor.
- Can be used to build big opening space
- Used in masonry to strengthen tension to prevent earthquake
- Iron Ore



Wrought Iron

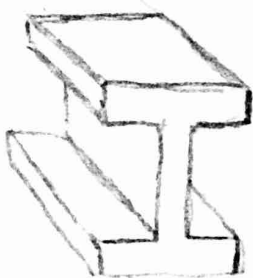
Very low  
Carbon

Steel

Less than  
2% Carbon

Cast Iron

3% - 4%  
Carbon



W → Wide Flange



Flanges



"T" shape  
"Tee"



"C" shape  
"channel"



## L Shape (Angle L)

### - Connections

- Rivet

- High-strength bolt

- Slip-critical connections

- Friction connections

- Weld (Stronger than steel but cost more, and weather impact)

- Weld Symbols

- Shear connection

- Movement connection

### Frame

- Brace Frame

- Shear Frame

- Moment Frame

3 strategies focus on wind load