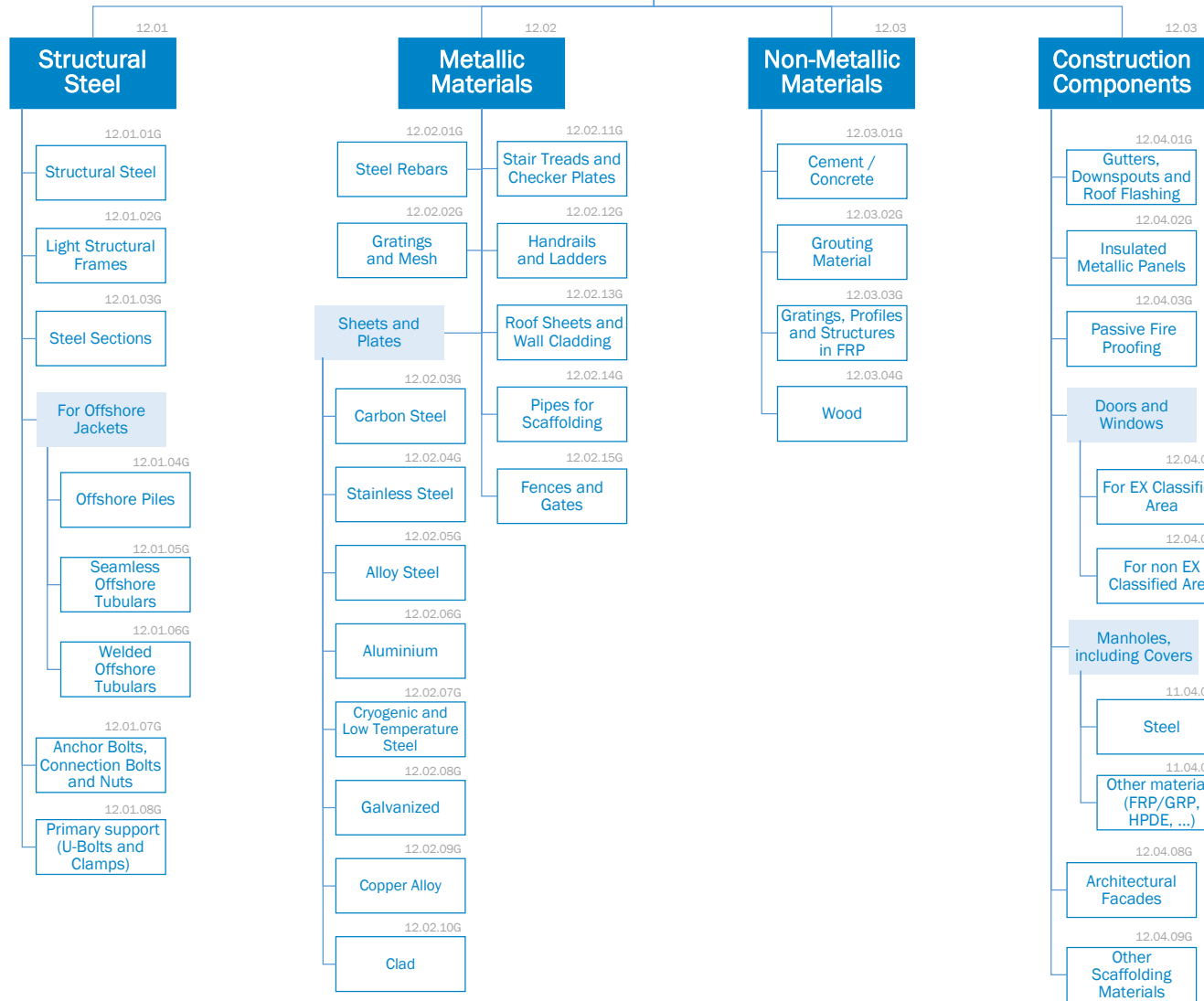


Civil and Structural Materials



Civil and Structural Materials

Dealing with large industrial buildings, bridges, pipelines and similar structures require specific knowledge of materials and their properties, in order to understand how different materials support and resist loads (both static and dynamic loading).

MAIN RATIONALES BEHIND THE STANDARD CATEGORIZATION

Structural Steel

- The category Steel frame structures refers to the “skeleton” of the building, made by of vertical steel columns and horizontal I-beams connected with flanges, bolts and threaded fasteners.
- This technique is often used for High rise buildings, Industrial buildings and Temporary Structures.
- For Light Structural Frames refers to light steel components, that can potentially be carried by hand, without heavy tools or equipment
- Steel sections includes any steel shapes for Frames structures. This category mainly refers, but not limited to, beams, columns, channels and angles, and for hollow sections.

Metallic Materials

- A Rebar, also known as reinforcement steel, is a steel bar or mesh of steel wires used as a tension device in reinforced concrete and reinforced masonry structures to strengthen and hold the concrete in tension.
- Plate and sheet are words used to describe the classification of metal depending upon its thickness. While sheet metal is less than 3 mm thick, plate metal is obviously thicker than 3 mm
- Steel for Cryogenic applications, such as special 9 % nickel steel, is excellently suited dealing with extremely low temperatures (e.g. Cryogenic steel sheets are used for the transport of LNG and LPG).

Non-Metallic Materials

- Precast concrete is a construction product produced by casting concrete in a reusable mold which is then cured in a controlled environment, transported to the construction site and lifted into place. In contrast, standard concrete is poured into site-specific forms and cured on site.

Construction Components

- Doors and Windows for EX Classified Areas refer to Blast resistant and fire resistant systems, specifically required for buildings such as petrochemical plants, where is essential to protect life, infrastructure and assets.
- Architectural facade are pre-fabricated exterior faces or walls of a building.