



CASCADIA METALS

HOT ROLLED STEEL

Cascadia Metals offers a wide variety of Hot Rolled Steel products. Hot Rolled Steel is manufactured using a mill process which involves rolling the steel at a high temperature (above the steel's recrystallization temperature). While the steel is above the recrystallization temperature, it can be shaped and formed easily. With Hot Rolled Steel, the starting material is usually large pieces of metal such as slabs, blooms and billets. If these products came from a continuous casting operation, the products are usually fed directly into the rolling mills at the proper temperature. In smaller operations, the material starts at room temperature and must be heated. This is done in a gas or oil-fired soaking pit for larger workpieces and for smaller workpieces induction heating is used.

After the grains deform during processing, they recrystallize, which maintains the microstructure and prevents the metal from work hardening. When the steel cools off it will shrink slightly thus giving less control on the size and shape of the finished product when compared to cold rolled.

Product Benefits

Hot Rolled Steel offers a number of benefits as compared to other construction products. These benefits include...

Lower Cost – Hot Rolled Steel is typically cheaper than cold rolled steel due to the manufacturing processes involved.

Malleability – during the cooling process, Hot Rolled Steel re-configures itself, which gives the finished product looser tolerances than the original material. This makes the Hot Rolled Steel more malleable, allowing it to be forced into a variety of different shapes.

Improved Mechanical Properties – by using a hot rolling mill, processing the Hot Rolled Steel can destroy the casting organization of the steel ingot and refine grain, eliminating certain steel defects and making the steel organization more dense, thus improving its mechanical properties.



ASTM Specifications

ASTM Designation A568 outlines the general requirements for Hot Rolled Steel. Included in this specification are steel chemistry requirements and typical mechanical properties of various metallurgical grades.



Surface Treatments

Pickled & Oiled - Hot Rolled Steel is also available with a Pickled & Oiled finish. By being pickled in acid and oiled, the mill scale on the Hot Rolled Steel can be removed which protects it from rusting. Pickling and oiling cost is somewhere in between regular hot rolling and cold rolling.

End-Use Applications

Hot Rolled Steel coil is produced as a feedstock for cold rolled steel coil and metallic-coated coils such as galvanized or galvanized steel. Hot Rolled Steel is also used in a variety of industrial applications including transportation (bridges, support beams, guardrails), shipbuilding, gas containers, pressure vessels and energy pipelines. In addition, Hot Rolled Steel is incorporated in many construction products including everything from fireplaces to furniture to cabinets...in both residential and commercial applications. This product has also caught the eye of architects for applications such as wall panels, decorative railings and more.



Contact your Cascadia Metals Sales Representative today to learn how Hot Rolled Steel can satisfy your material needs.