



**IS 6240:2008-Hot Rolled Steel Plate(Up To 6mm), Sheet
and Strip for the manufacture of Low Pressure Liquefiable
Gas Cylinders — Specification(ISS)**

Liquefiable gases are gases that can be turned into liquid form by applying pressure and low temperature. Gases with critical temperatures above -10°C are considered liquefiable. **Liquefied petroleum gas (LPG), propane, butane and liquefied natural gas (LNG)** are commonly carried liquefied gases. In most of our homes, LPG comes stored in liquid form in Steel Cylinders. It is a live bomb which is kept in our house due to flammable nature of LPG. But still we do use it daily **without any hesitation** even though it is brought mis-handled by the delivery guy at our homes. **Why? Lets understand the material from which it is made.**

Indian Standard **6240 : 2008**, specifies requirements for **deep drawn quality hot rolled steel plate, sheet and strip** used for the manufacture of **Low Pressure Liquefiable Gas Cylinders** i.e. our LPG Cylinder. **Hot rolled steel** is carbon steel that has been heated to a high temperature, flattened, and then worked into a desired shape. **Chemical Composition and mechanical properties of this hot rolled steel is specified in this standard.** Steel is an alloy of Iron and Carbon. The ISS specifies only one type of **chemical composition and important mechanical properties** like **Yield Stress, Tensile Strength, % elongation, bend test, strainage embrittlement test and Erichsen Cupping test.** The Chemical Composition as specified ensures the desired **minimum yield stress i.e. 240MPa** with requisite **minimum elongation of 25%**. The range of tensile strength is restricted between **350-450MPa** to ensure the desired malleability of the product as made.

We all have seen LPG cylinder at our home and don't you wonder how a flat sheet or plate or strip is converted to form a cylinder. I mean why does not it break. Well, this can be answered with the other mechanical properties as specified in this standard i.e. **bend test, strainage embrittlement test and Erichsen Cupping test** which enables the sheet to be deformed and reshaped to make cylinder of desired shape, thereby, ensuring the proper malleability of the product.

The **Ministry of Steel Quality Control Order** mandates that this product is sold, manufactured, or imported in India comply with IS 6240 and display the **BIS Standard Mark**, ensuring high-quality and safety for growing Indian households.