EN 10025 S690QL STEEL PLATE

1. We often find that steel plate to EN 10025 S690QL is called different things by different engineers. Plate to this specification and grade is variously described as:

High Strength Quenched and Tempered Steel Plate

High Yield Quenched and Tempered Steel Plate

High Strength Structural Steel Plate,

High Yield Structural Steel Plate

High Strength Low Alloy Steel Plate

HSLA

and it is written down in a variety of ways such as:

EN10025 S690QL, EN10025 S690 QL, EN 10025 S690QL, EN 10025 S690 QL

2. Background

It is possible to produce steel plates that have more than twice the strength of those produced from mild steel through a heat treatment process known as quenching and tempering. Steel is heated to a point above its upper critical temperature and is then very quickly cooled in water. This method of cooling, known as quenching, induces a transformation in the crystalline structure of the steel which leaves it much harder. Unfortunately the steel in this condition is also very brittle and it is not possible to use it in many applications. A method of heat treatment for alleviating this problem is called tempering and requires the quenched steel to be re-heated although this time to below the lower critical temperature. The result is to put toughness and ductility back in to the steel and, although some of the yield strength of the quenched steel is lost, the end result of the quenching and tempering process is to produce a strong steel which is also easy to weld, bend, and fabricate generally.

As the process of quenching and tempered has been improved and refined, carbon steel plates produced this way have become stronger and it is not uncommon now to find plates with strengths of more that 1100 MPa which is four times stronger than basic structural steel. Steel with minimum yield strength of 690 MPa has proved very popular with steel users because of its availability, price, and ease of fabrication. It is able to improve the performance, durability, and safety of vehicles, lifting equipment, and steel structures. Due to the steel’s high strength, structures can be designed lighter, payloads increased, and energy used more efficiently

3. Fabrication of EN 10025 S690QL Steel Plate

High strength quenched and tempered steel plate can be easily welded and fabricated but its high yield strength and tensile strength compared with mild steel means that it should be treated with some caution.

4. If you have any other requirement for steel plate, please feel free to contact us.