EN 100283 P355NL1 STEEL PLATE

UNITEDSTEEL a large range of pressure vessel plate stock certified to both EN 100283 P355NL1 and EN 100283 P355NL2

1. EN 100283

Plates to EN 100283 are widely specified in the manufacturing of pressure vessels throughout Europe and the standard is regularly seen in other parts of the world where equipment has been originally designed by a European company. For these reasons, and in terms of enquiries received by Brown McFarlane Group companies, it is probably the most popular pressure specification after the American standard ASME/ASTM SAA516.

The specification EN 100283 covers a range of weldable fine grain steels supplied in the normalised condition and intended for pressure purposes. It has three steel grades (P275, P355, and P460) which indicate each grade’s minimum yield strength (in MPa) for plates 16 mm thick and below. These are further subdivided on the basis of impact testing (transverse) temperature N and NH indicate impact testing at -20 deg C or above, NL1 at -40 deg C or above, and NL2 at -50 deg C or above.

The designation EN 100283 P355NL1 shows that this is steel for pressure purposes (P) with minimum yield strength of 355 MPa (355) which is impact tested in the transverse direction at -40 deg C (NL1). EN 100283 P355NL2 follows the same pattern but is impact tested at -50 deg C.

2. P355NL1 and P355NL2 compared

The differences between P355NL1 and P355NL2 can be seen in the tables below but are summarised as follows

Chemistry: P355NL2 has a more tightly controlled Phosphorus and Sulphur content

Mechanical Properties: P355NL2 has higher required impact values at all specified temperatures and in both longitudinal and transverse directions. It also specifies requirements for transverse impact testing at -50 deg C

As well as P355NL1 and P355NL2, we are also stockists of plates manufactured and certified to:

EN 100283 P355NH EN 100283 P275NH EN 10028 P460NH

EN 100283 P460NL1 EN 100283 P460NL2

3. Although it is not uncommon to see this on steel company web sites, any suggestion that one steel specification and grade is an equivalent to another should be treated with caution especially because of differences in the methodology and techniques used for testing. However EN 100283 P355NL2 is broadly similar to the following steel specifications:

ASME SA516 Gr. 70 BS 1501 224 490B LT50

Plates certified to these standards are held in stock

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