PREMIARC™ DW-316LP

AWS A5.22 E316LT1-1/-4

DW-316LP is an advanced stainless flux cored wire that offers unsurpassed usability in all positions including flat, horizontal, vertical-up, vertical-down, and overhead.

Basic characteristics of DW-316LP

DW-316LP is classified as AWS A5.22 E316LT1-1 and E316LT1-4, suitable for welding in all positions with either CO_2 gas or 75-80%Ar + balanced CO_2 gas mixture shielding. DW-316LP can be used for welding both 316L and 316 stainless steel.

What makes DW-316LP an advanced wire?

Like DW-316L, the elaborate chemical composition of the DW-316LP weld metal containing a low amount of carbon (typically 0.028%) provides superior mechanical properties and corrosion resistibility particularly against diluted sulfuric acids. Its intergranular corrosion resistibility is proved to be excellent through Strauss testing.

DW-316LP also offers excellent welding performance in all positions and over a wide range of welding parameters. Figure 1 shows an example of proper welding parameters (welding current and arc voltage) in the vertical-up position. Once you adjust the welding current to 160-170A for example, you can properly weld a 6-mm-thick stainless plate in any of the flat, horizontal, vertical, and overhead positions without any current readjustment.

Because of the superior corrosion resistibility, mechanical properties and out-of-position welding usability, DW-316LP is often used for welding storage tanks of chemical tankers (Figure 2). Figure 3 shows an example of the welding procedures for the butt joints of a chemical tanker storage tank, which is one-sided welding procedure using a FB-B3 backing material for the root pass.

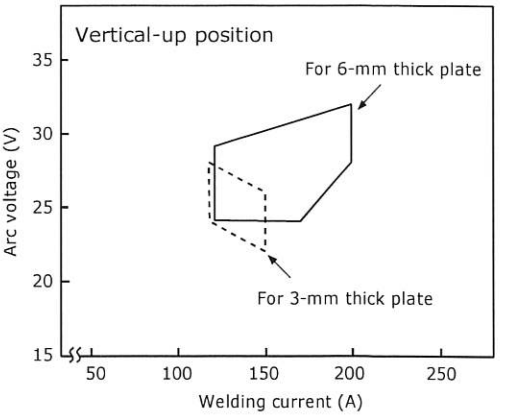

Figure 1: The proper range of welding currents and arc voltages in the vertical-up position using a 1.2-mmØ DW stainless wire for welding 6- and 3-mm thick stainless steel plates.

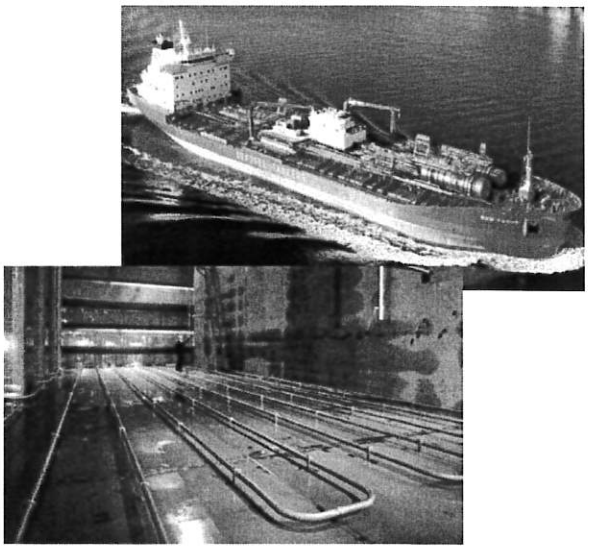

Figure 2: An application of DW-316LP: welding a storage tank (bottom) of a chemical tanker (top) with full penetration in all positions.

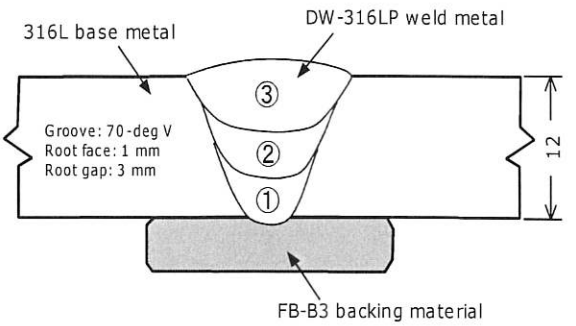

Figure 3: An example of the welding procedure with DW-316LP for the storage tank of a chemical tanker, a one-sided welding procedure using a FB-B3 refractory backing for the root pass in vertical-up position.