PREMIARC™ DW-308LP

AWS A5.22 E308LT1-1/-4

DW-308LP also represents a new generation of stainless flux cored wires, but in a different way than DW-308L. As easy to use as a mild-steel flux cored wire, DW-308LP can easily be used in all positions including vertical, horizontal, and overhead.

Basic characteristics of DW-308LP

As seen in the AWS classification designations shown above, DW-308LP is suitable for welding in all positions, with both CO_2 gas and 75-80%Ar + balanced CO_2 mixed gas shielding. DW-308LP can be used in welding both 304L and 304 stainless steel.

What makes DW-308LP a new generation wire?

Like DW-308L, the sophisticated chemical composition of DW-308LP weld metal provides superior mechanical properties and corrosion resistibility. In addition, DW-308LP offers unsurpassed welding performance in all positions and over a wide range of welding parameters.

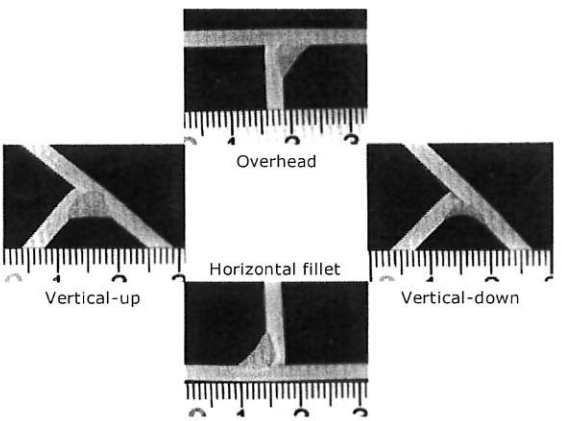

Figure 1: Cross-sectional weld profiles of DW-308LP (Wire size: 1.2 mmØ) with 304-type base metal (Plate thickness: 3 mm).

As shown in Figure 1, DW-308LP provides superior weld profiles with smooth fusion to the base metals and good penetration in such various welding positions as horizontal fillet, vertical-up, vertical-down and overhead.

It has generally been believed that welding stainless steel in vertical and overhead positions was more difficult than mild steel because molten metal was more likely to drop. This difficulty was assumed because of the differences in the physical properties of stainless steel: it has a lower melting point (1400-1427°C) than mild steel (1500-1527°C), and less thermal conductivity (0.04 cal/cm/sec/°C in the 0-100°C range as opposed to 0.11 cal/cm/sec/°C in the 0-100°C range).

However, DW-308LP has jumped over these hurdles to become a superior flux cored wire suitable for welding in all positions. Figure 2 shows an application for DW-308LP: a curved, large-diameter water pipe that, because of the inherent difficulty in positioning the work, requires all-position welding. DW-308LP is suitable for welding fixed pipes, storage tanks and rolling stock, which are all difficult to position during welding.

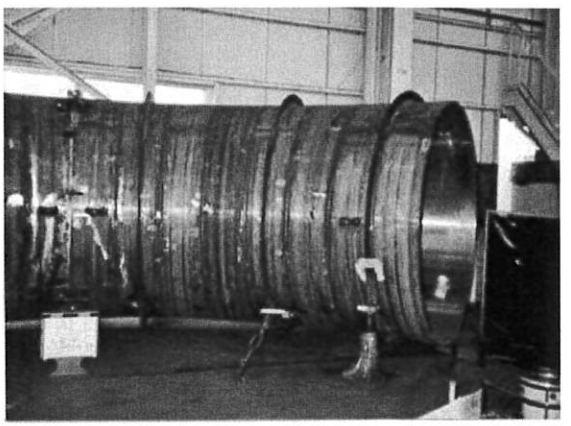

Figure 2: A water pipe for the water gate equipment under fabrication by using DW-308LP in all positions.

Finally, DW-308LP offers very good re-arc-starting capability—almost no miss in re-arc-starting within 5, 10, and 30 seconds respectively after extinguishing the arc in 50-time re-arc-starting tests in the use of either inverter-type power sources or thyristor-type power sources. This excellent performance can be more beneficial in tack welding, automatic welding and robotic welding, eliminating the downtime for re-arc-starting.