

GEP PLASTICS WELDING

Introduction:

As with many other facets of plastics, the welding of plastics is also taken to be simple, easy and just something anyone can do. There are however critical practices with even the most basic welding applications and many of these important practices are covered in these guidelines.

1. There are a variety of welding processes used with plastics, but importantly the difference between the two main options of heat welding and solvent welding need to be well understood. This stems from the rates to obtain optimum results. Selected guidelines follow.
2. PVC and ABS piping systems use the solvent-welding technique where the correct solvent causes a chemical bond between the PVC or ABS pipe and fittings. Some chemicals are not compliant with the actual solvent-cement and supplier literature must be carefully researched accordingly. In very corrosive service it is prudent to plastic-weld all joints with rod, after the initial solvent welding has been completed.
3. Most quality suppliers stock shapes and pipes that are only virgin plastic materials. Confirm that the best plastic type and virgin grades are supplied for the welding work. Consult with leading knowledgeable suppliers.
4. Plastics lose heat more slowly than metals, so avoid localized overheating. Follow the cooling and other welding guidelines below on the appropriate critical welding parameters.
5. The various corrosion problems that can arise with poorly welded joints are fairly well-known in industry. Pin holes, crevices and other poor weld finishes can lead to rapid corrosion failure and must be avoided.
6. The memory of plastics materials needs careful consideration. Memory allows recovery to occur both during and after machining. If correct cooling is not employed, the heat generation will result in poor or distorted finishes. For these reasons, correct welding procedures are essential.

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