Flow Coating

Flow coating (sometimes known as float coating) is a method of applying coatings onto larger parts that would be too large to dip coat. It is often used where the coating is only required on one face and it uses a lower volume of coating material compared with dip coating. It can be a manual process or automated. Automotive headlamp lenses and exterior trim components are usually flow coated by choice.

In essence the coating is poured along the top surface of the part to be coated so that the coating can run down the part. Whilst this seems rather crude, coatings which have been designed to be applied in this fashion ensure the surfaces to be coated are fully covered in a uniform coating thickness.

The process does however require careful control of evaporation to obtain uniform coating thicknesses. While the process is surprisingly simple, flexible and easy to maintain, there are considerations in part design, coating and equipment selection which must be addressed to determine whether flow coating is the optimal process for a given application.