

Design of metal components to be protected by coating with organic materials

Basis	DIN EN 14879-1
Surface and stability	Surface shall be dense as well as smooth. Cutting edges and welding. Cutting edges and welding beads have to be removed and rough parts grinded. Each item to be coated must be still enough to resist coating-temperatures of various degrees and sandblasting. All areas of an item to be coated must be visible and accessible to touch by hand.
Edges, flutes and corners	Edges, flutes and corners have to be smooth neat and clean cut. The minimum radius of an edge to be powder-coated must be at least 2 mm and within flute. All edges to be spray-coated must have a radius of 3 mm and within flutes 6 mm.
Welding beads	Spot-welding is not acceptable; welding must be no pores, gnarled, smooth welding, abrasive seams, free of slag, no gaps in welding beads.
Connection pieces, flanges, manholes	Connections are possible by means of insertions, detached, apparatus and necking-out. Welding upside coating surface. Inside-corners must be filled radius welding. Edges and welding beads are rounded off and grinded. Manholes min. Ø 600. No inside threads. Length of connection pieces ≤ NW + 100 mm.
Container parting wall	Connection of bumped boiler end outside (convex surface) at container shot with corner iron ring or similar. The resulting cavity must be secured by dense welding beads. Concave part has to be welded with hugh rounded neat.
Pipe work	Straight pipe work min. NW 80 mm, max. length 4000 mm. Shaped pipes must be accessible from all sides. Length of connection piece ≤ NW + 100 mm, quarter bends > 90°C are to subdivide. Connections are only possible with the help of flanges. § 3 applies to welding.
Container and fittings	All fittings must be removable in case of being a handicap during pparatus coating process or when influencing test results. Regarding connection elements non-rusting screws with plastic plain washers are used. Profiles have to be connected by impregnated welding beads, even if it means only for stiffing purposes.

