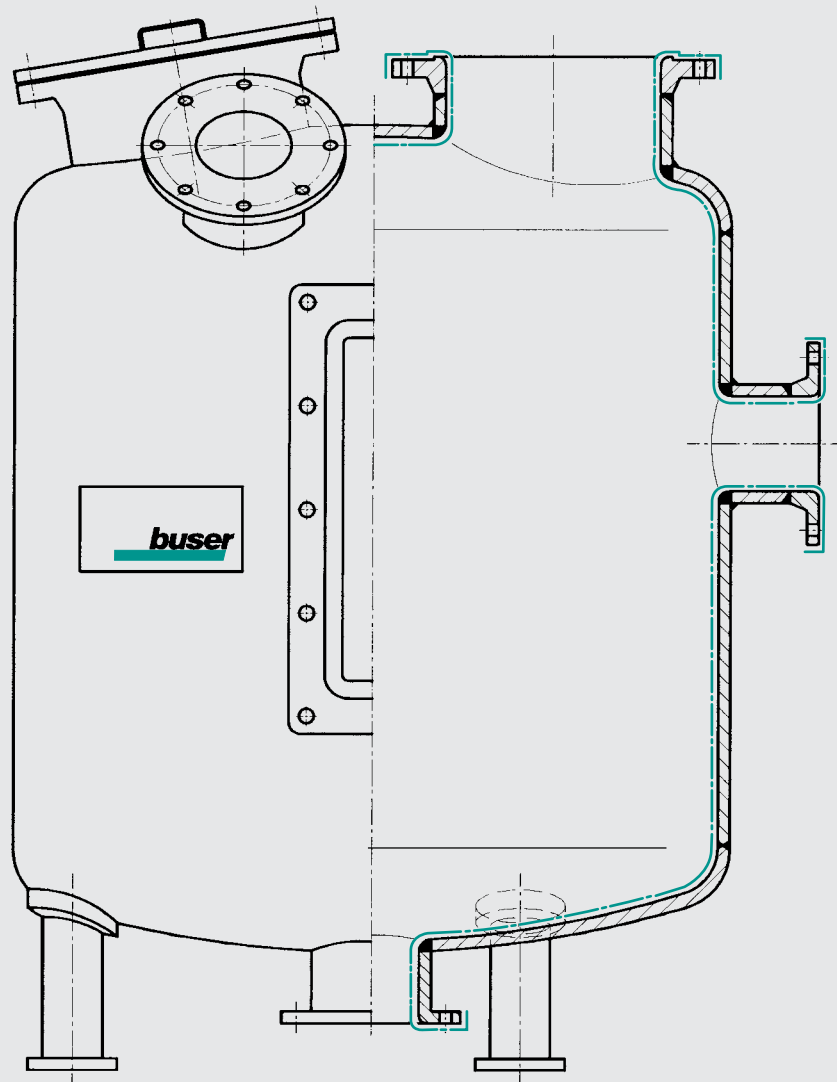


Design guidelines for coating with Halar E-CTFE, ETFE, PFA or PEEK

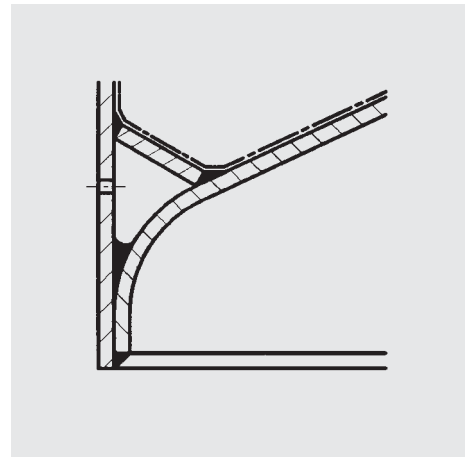
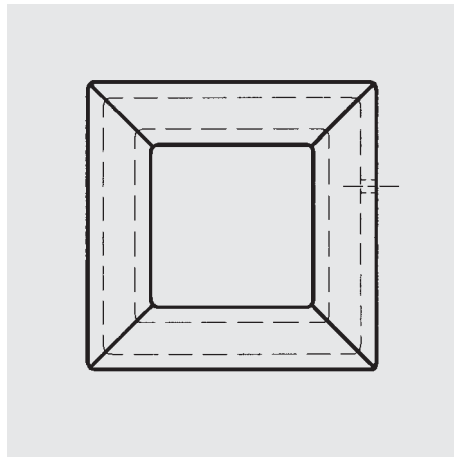


General Notes

The following design guidelines are a summary of the most important points to be considered when manufacturing appliances and containers that to be coated. The aim is to carry out low-cost flawless coating to DIN 28051 while considering these design guidelines.

Temperatures

Coatings are applied at temperatures up to 420 °C. So it is essential that the workpieces to be treated do not exhibit any elements that cannot withstand the treatment temperature. Sealed cavities must be vented.



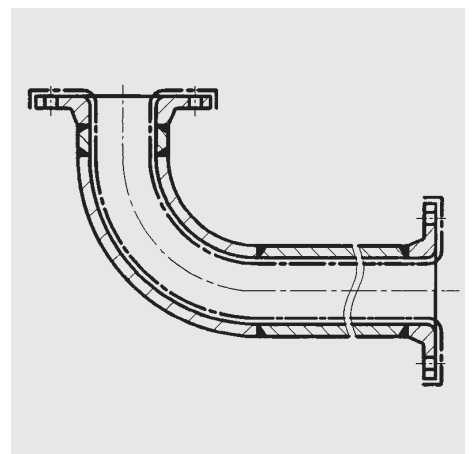
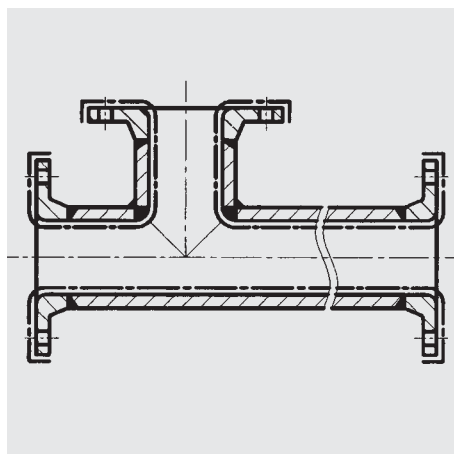
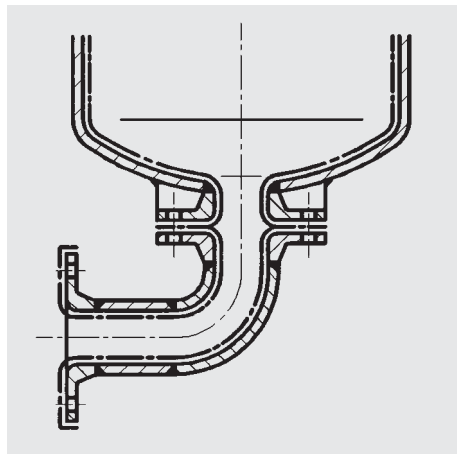
Dimensions

The size of the workpieces to be treated is currently limited to 4m x 4m x 8m due to the size of the heat-processing chamber available.

Access

with Halar ECTFE, ETFE

All surfaces that are to be coated must be well accessible. If this is not possible, subdivisions, flange connections etc. must be correspondingly provided for.



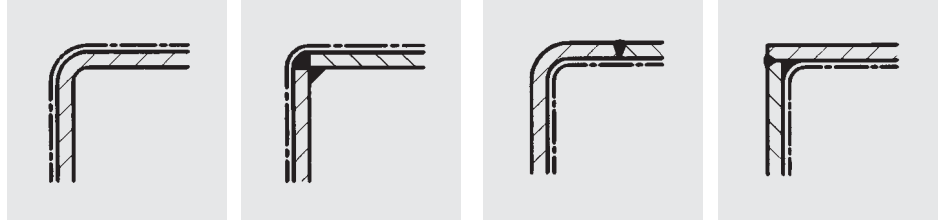
With PFA, PEEK

Accessibility must be ideal, depending on the heat capacity of the substrate. Supports should have a min. dia. 50 and max. length 100mm (ratio 1:2) or even better should be replaced by loose flanges.

Corners and edges, thickness of coating

with Halar ECTFE, ETFE

The minimum radius is R2; please contact us to discuss any exceptions. These will depend on the thickness of coating required.

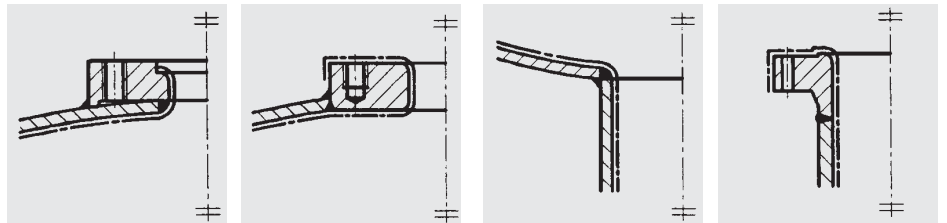


with PFA, PEEK

Depending on the thickness of coating required, convexes R must be min. R5 and concaves R must be min. R6.

Pipe sockets and manholes

These must be welded to DIN 28051.

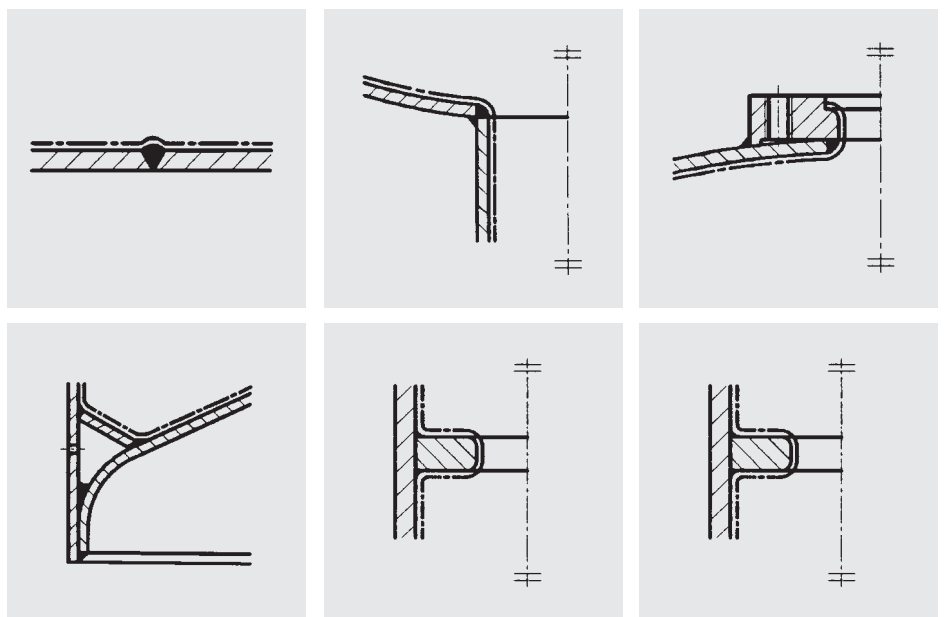


Heating equipment

The steam supply on heating devices with direct steam supply must be arranged to ensure that the steam flow is not aimed directly against the coating.

Welding seams

These must be continuous and non-porous. Welding beads, sputters and transitions must be clean, ground smooth and non-porous.



Wall thickness

with Halar ECTFE, ETFE

The wall thickness of workpieces should be as even as possible. Large differences in thickness should be avoided.

with PFA, PEEK

The substrate thickness must be min. 4mm.

Surface flaws

Containers, apparatus and pipes made of iron or sheet steel with surface flaws, in particular overrolling, scars etc. are not suitable for thermal coating. All surfaces to be treated must be sealed and non-porous. Grey cast iron and cast steel must be checked to ensure they are flaw-free and non-porous.

Subsequent reworks

Subsequent reworks of grey coated surfaces and O-ring grooves are possible. The thickness required for the remaining coating must be considered when defining the processing matter.

Transport and assembly

Due care must be taken to avoid damage to the coated surfaces on the coated workpieces. Components may only be transported in clean plastic. Coated surfaces may only be walked on using clean rubber soles or suitable protective covers.

Reinforcements, repairs

with Halar ECTFE, ETFE

Reinforcements and repairs to damaged coatings are fundamentally possible, but they can only be carried out by specially trained personal and after previous clarification regarding position and size of the point to be repaired.

with PFA, PEEK

Reinforcements and repairs can only be carried out with special tools and by our specialist staff (depending on position, accessibility and size of the damage).

**Tricky coating tasks are our challenge –
give us a call!**

