

## VI. HEAT WELDED SEAMS — SPECIFICATIONS AND FOUNDATIONS

In addition to sealing seams with a liquid seam sealer on Specifications and Foundations, heat welding of commercial installations is an alternative method of finishing seams. With heat welding, a vinyl rod and the floor covering material at the seam are heated to a sufficient temperature whereby they are fused together. Due to the nature of this procedure, heat welding should only be done by a trained professional.

**NOTE: The following procedure is based on a 4mm vinyl heat welding rod. Adjust the procedure accordingly if a different size rod is used.**

Follow these procedures for heat welding seams in Specifications and Foundations:

- Cut and adhere the seam using the recess scribe procedure as described earlier in this manual. The seam can be cut with a maximum 1/64" (0.4mm) opening to provide a guide for the grooving tool. Allow the adhesive to set up for 24 to 48 hours before heat welding.
- After the adhesive has set, groove out the seam using a power or hand grooving tool (Figures 43 and 44).



Fig. 43. Power grooving tool.



Fig. 44. Use a straightedge as a guide when using a hand grooving tool.

- Adjust the grooving tool to cut a "U" shaped groove 3mm wide, extending two-thirds into the wearlayer thickness (Figure 45).

- Use a heat welding gun equipped with a standard 5mm, round, speed nozzle (Figure 46) or welding nozzle with integrated welding rod roller (Figure 47). Pre-heat the welding gun to 350°C to 500°C (662°F to 932°F). The temperature will vary depending on the welding speed.

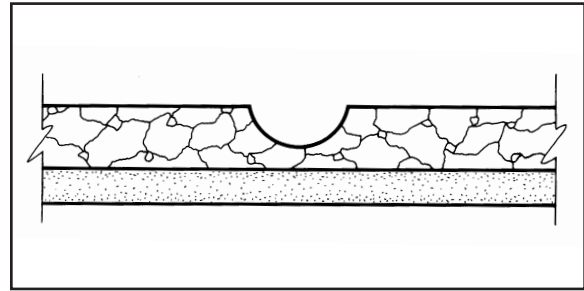


Fig. 45. Do not extend the groove past two-thirds of the wearlayer thickness.

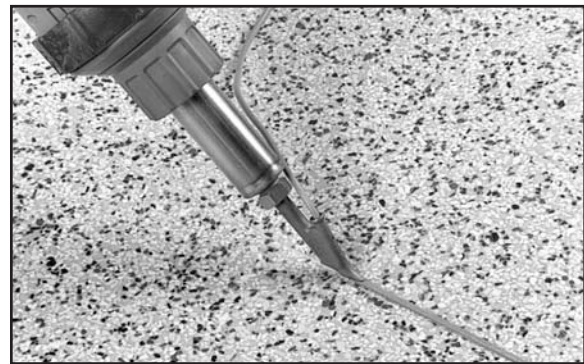


Fig. 46. Heat welding gun equipped with speed nozzle.

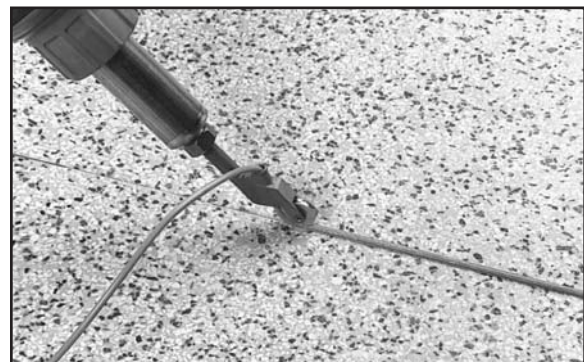
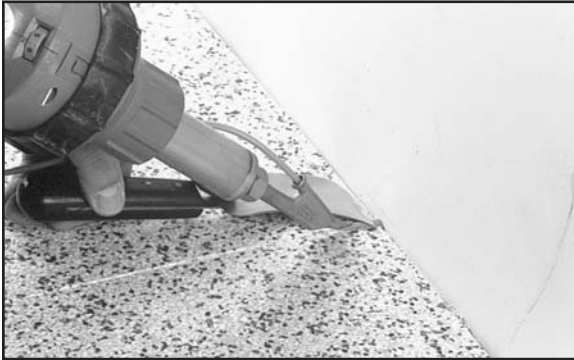


Fig. 47. Heat welding nozzle equipped with an integrated welding rod roller.

### CAUTION

*Heat welding equipment operates at high temperatures and can cause severe burns. Handle equipment carefully and use safety precautions to protect yourself and others on the job site. Keep away from combustible, flammable, and explosive substances. Use adequate ventilation when heat welding. Avoid breathing fumes. Refer to the tool manufacturer's operating manual for additional precautions.*

- Check the heat setting using a scrap piece of Specifications or Foundations. A small ridge will form on the sides of the welding rod along the groove when properly welded. A low temperature setting, or moving too fast will result in a weak bond. A high temperature setting or moving too slowly can scorch the seam edges.
- Position the welding rod along the seam so that it does not interfere with the welding procedure. Starting at one end of the seam, insert the welding rod into the nozzle and force it into the seam groove (Figure 48).



**Fig. 48.** Force the rod into the seam groove.

- Move slowly at a constant speed applying sufficient heat to properly weld the seam (Figure 49). As you approach the end of the seam, it will be necessary to stop and change direction.



**Fig. 49.** Apply firm pressure while moving at constant speed.

- To prepare the joint, cut a tapered groove from the bottom of the rod to the top (will be about 3/8" or 9.5mm long) as shown in Figure 50. Then complete the weld from the wall to the rod in place, starting at the wall and extending to the tapered groove. Overlap the groove and the welding rod in place to join them together.



**Fig. 50.** Cut a tapered groove at the joint of the rods.

- To finish, remove excess welding rod while warm (not hot) with a sharp spatula knife and spatula guide or trim plate (Figure 51). Allow the welding rod to completely cool, then trim the seam weld again without the spatula guide (Figure 52).

**NOTE: If welding rod is not allowed to cool before final trimming, shrinkage can result in a concave joint. Always use a sharp spatula knife held on a slight angle to produce a smooth finished joint.**



**Fig. 51.** Trim the welding rod using a spatula guide.



**Fig. 52.** Use a sharp spatula knife to produce a smooth finish.