

Figure 7-62. Curing the repair.

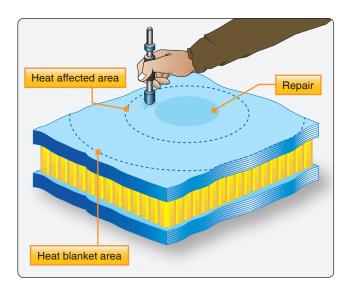


Figure 7-63. Post-repair inspection.

Fourth, the adhesive can run to the bottom of the joint, creating a nonuniform bond line. This can be alleviated by approximating the scarf with a series of small steps. For these

reasons, unless the part is lightly loaded, this type of repair is usually performed at a repair facility where the part can be inserted into the autoclave, which can result in part strength as strong as the original part.

There are several different repair methods for solid laminates. The patch can be precured and then secondarily bonded to the parent material. This procedure most closely approximates the bolted repair. [Figure 7-64] The patch can be made from prepreg and then co-cured at the same time as the adhesive. The patch can also be made using a wet layup repair. The curing cycle can also vary in length of time, cure temperature, and cure pressure, increasing the number of possible repair combinations.

Scarf repairs of composite laminates are performed in the sequence of steps described below.

Step 1: Inspection and Mapping of Damage

The size and depth of damage to be repaired must be accurately surveyed using appropriate nondestructive evaluation (NDE) techniques. A variety of NDE techniques can be used to