



# dahl-beck electric

## Metal Spray Services

**dahl-beck electric** is a third generation family owned and operated electric motor repair facility that prides itself on our business ethics, technical knowledge and customer satisfaction. We have been in continuous operation by the Beck family since 1933 and this experience is what separates us from other motor repair facilities. Our 70+ years of practicing this craft has undeniably qualified us as experts.

Your equipment never seems to break down during normal business hours but more likely in the middle of the night, weekends or holidays. We understand how vital this equipment is to your operation and have dedicated ourselves to getting your facility back online ASAP. The **dahl-beck electric** service staff is available 24 hours a day, 7 days a week, 365 days a year. Help is just a phone call away. **510-237-2325 day or night.**

Our fully-equipped, EASA (Electrical Apparatus Service Association) certified motor repair facility is housed in 54,000 square feet of building space on over 3 acres of land. This space enables us to take a systematic approach to shop set-up, equipment placement and job staging in an effort to more efficiently move jobs through the repair processes.

We are pleased to offer our customers the following services:

◆ **Metal Spraying/Metalizing** — We utilize the Sulzer Metco 5P Powder System at our facility. In the metal spraying process, the raw material in the form of powder is melted in an oxygen-fuel gas flame inside the spray gun. This molten material is atomized by a cone of compressed air and propelled toward the work piece. The molten spray solidifies on the component surface to form a dense, strongly adherent coating suitable for machining. This procedure is used to build-up specific motor or pump fits that are damaged, worn or out of tolerance. We most often use this process to build-up bearing housings, journals and seal areas before machining them to specified dimensions. With the aid of photographs we have attempted to depict a typical metal spraying job —

1. Before repairs can begin the motor rotor is placed into a lathe and run-outs are "dialed in". In this case there was a catastrophic bearing failure on the coupling side and the rotor dropped into the stator laminations.
2. Application of the Sulzer Metco Anti-Bond protects these surfaces from being coated with the powder.
3. Heating of the Anti-Bond cures it and keeps it in place.
4. Machining of the bearing journal area to be metal sprayed ensures a true surface.
5. Spray application of the composite powder is used to build up the damaged bearing journal.
6. This is what the bearing journal looks like after the powder has been applied.
7. Cleaning of adjacent areas with emery cloth.
8. Spray painting of the rotor using red insulating enamel.
9. Initial machining of the bearing journal and a true surface for the balance machine rollers are cut at this time.
10. Final cleaning of all areas with emery cloth before the rotor is sent to be balanced.

