



LIFTING MAGNET REPAIR

***Over 115
Years of***

**Lifting Magnet
Repair/Service
Experience**

Walker National

O.S. Walker

**National
Electric Coil**

Square D

Bux Schrader

Cutler Hammer

EC & M



“The Walker Difference”

Walker Magnetics

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Walker continues to be the industry leader in Lifting Magnet Repairs using state of the art materials & technology. The Walker repair process not only repairs your magnet; it also meets or exceeds its original specs. Through the acquisition of such magnet companies as **Square D**, **EC&M**, **National Electric Coil**, **Cutler & Hammer**, and **Bux Schrader**, Walker has enhanced and grown its expertise. With these acquisitions comes the collection of vast amounts of magnet data, technical drawings, and resources furthering Walker's ability to provide only the highest engineered and quality new and repaired magnets to its customers.

REPAIR PROCESS

The repair of a lifting magnet, either circular or specialized material handling magnet is a complicated task. It requires specialized equipment and more importantly an experienced magnet repair facility. In addition to a facility Walker Magnetix provides an engineering staff to properly evaluate the cause of failure and find ways to improve both the magnet performance and reduce or eliminate magnet failure in the future. Money spent today can reduce your operating and maintenance costs in the future.

STEP 1



The first step in the repair process is a complete incoming inspection. This inspection process includes both a mechanical and electrical evaluation. The magnet is assigned a job number and a "Magnet Service Report" is initiated.

The magnet is disassembled by machining or by a controlled arc process. The parts are then inspected noting those needing reconditioning or replacement. At this point a quotation is prepared and sent to the customer.

STEP 2



STEP 3



After the quotation has been approved by the customer, mechanical parts are cleaned and sand blasted in preparation for assembly.

The copper or aluminum conductor is cleaned and inspected, noting any that is out of specification or needing replacement. Failure to replace conductor with the proper width and thickness leads to premature failure.

STEP 4



STEP 5



Engineering creates a CAD drawing for the production department along with a detailed bill of materials for the store room.

STEP 6



Coils are wound turn by turn with Nomex Insulation in between each turn. When winding aluminum, **the last three turns are wound with copper conductor.**

STEP 7



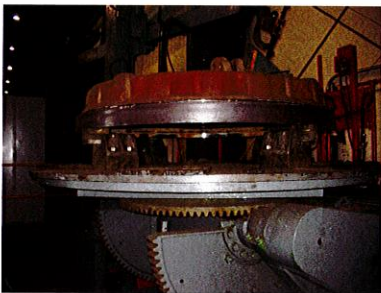
After winding, the coil is tied off with vertical straps of copper. Alcuplate is used to join the aluminum conductor to the last two turns of the copper conductor. **This is one of the crucial steps that differentiates Walker Magnetics from other repair facilities.** Alcuplate prevents galvanic corrosion and we are the only manufacturer to use this quality material.

Components are inspected against OEM drawings and remanufactured to the latest revision. Following a machining process, the magnet is ready for reassembly.

STEP 8



STEP 9



After the coil is installed in the case and properly insulated, the bottom plate is inserted and pressed to 4000 psi and tack welded. The magnet is then semi-automatically welded using stainless steel weld to permanently create a water tight seal.

The magnet is vacuum impregnated with a **specially formulated insulating potting compound**. It is then baked to over 350 degrees F to produce a water tight fit and cure the potting compound.

STEP 10



STEP 11



In this final stage, all magnets are electrically tested. The values are recorded to create a historical record in the customer's individual folder.

STEP 12



Prior to shipment, the magnet is painted and the chains and pins are attached. The completed magnet is ready for shipment or to be put in a customer's individual Magnet Exchange Program Inventory.

STEP 13



Whether on a contract carrier or on our own trucks, Walker Magnetism delivers the highest quality New or Remanufactured magnet to your facility.

At Walker Magnetism we strive to return every magnet we repair to its original or upgraded specifications. We will also analyze the cause of failure and evaluate possible design changes to the magnet to meet or exceed application requirements. One important thing to consider when evaluating magnet repairs is: has the application changed since the magnet was purchased? If so, pass that information to us at the time that the magnet is sent back for repair. There may be modifications that we can make to help increase the life of the magnet in its new application.

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