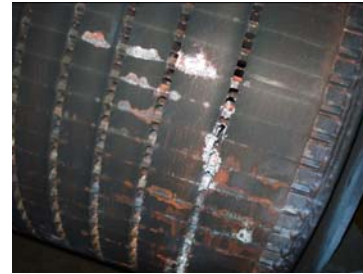


Despite your best efforts, there are applications and environments that tax your equipment beyond the original design intent. When this happens, what does your repair shop do? Smile every time they see you coming! Not if you partner with the Kiemle-Hankins family of Companies. Our dedicated staff will work tirelessly to not only fix your system, but to solve the underlying cause.

In this case, our customer's environment was hot, dirty and the application called for frequent start and stop cycles. These conditions led to excessive heat in the rotor of their 3500 HP medium voltage motor.



Arriving on site in response to an emergency service request, Kiemle-Hankins technicians quickly identified a potential source of concern. Arching was witnessed during starting and operation of the motor. In addition to the arching, there was debris near the motor and in the process area. Our technicians recommended immediately removing the motor from service to prevent a potential catastrophic failure. The customer complied and Kiemle-Hankins transported the motor to our facility.

Upon disassembly and inspection, the technician's concerns were validated. The rotor bars had deteriorated to the point that they were disintegrating and pieces of the bars were being expelled into the stator air gap. Had this condition continued, the stator would have suffered severe damage including a potential insulation failure and a short circuit condition. Left unchecked this condition would have quickly turned into a stator rewind.

In typical fashion, KH proceeded to identify possible solutions to their customer's problems. A key motor was out of service and there was a good likelihood that the spare unit would suffer a similar fate. In an effort to provide valuable alternative solutions, KH scoured their contacts in the used motor industry and identified a used alternative. Unfortunately, this option proved to be too costly to be economical for the customer. The next step in our investigation was focused on extending the life of the existing motor. Understanding that the failure was closely tied to the heat experienced in the rotor, a solution presented itself. A plan was devised to replace the current aluminum alloy in the rotor bars with a copper alloy. This substitution would offer increased thermal tolerance and minimize the physical stresses of the rotor bars promoting a longer life. The customer recognized the value of the proposed plan and authorized KH to proceed.



In the end, the customer's motor was returned in better-than-new condition and is ready for the long road ahead!