Written by Craig K. Kelch and R. James Seffrin, Infraspection Institute
Saturday, 01 May 1999 19:04

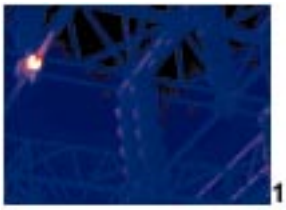
With increasing demand to cut costs and remain competitive, many companies are expanding their maintenance programs to include predictive and proactive technologies such as infrared thermography

Recent years have seen an increase in the acceptance and use of infrared thermography for preventive and predictive maintenance. While early applications were confined primarily to electrical and structural situations, today's industrial environment has found new and diverse applications for thermal imaging and noncontact temperature measurement.

The introduction of focal plane array (FPA) imagers during the early 1990s revolutionized infrared imaging by providing high-resolution imaging systems while greatly reducing size and weight. Thermal imaging systems have evolved from cumbersome systems often weighing more than 20 kg (44 lbs.) to systems resembling a video camera that fit in the palm of the user's hand.

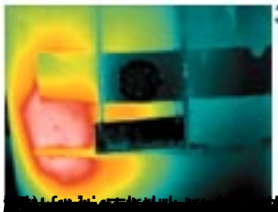
These high-resolution infrared imaging systems allow thermography to be applied to more applications than ever before, such as with mechanical systems, intricate process equipment, and printed circuit boards. Infrared thermography can detect unseen problems such as loose or deteriorated electrical connections. Timely repair of these incipient failures can provide tremendous cost savings by avoiding unscheduled downtime.

Infrared thermography also can provide substantial savings by helping to detect problems in products or processes. Permanent improvements in such systems often offer the greatest cost benefit because the repairs are permanent and savings are realized every day that the process operates. Even greater savings are realized when the process or product output is increased.

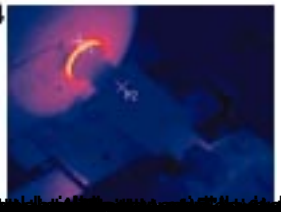


1

2



3



4

[redacted]Applicati[redacted]www.infraspection.com[redacted]