Customer Success Story

We pioneer motion

Thermographic examination of cabinets

A Spanish steel manufacturer was experiencing an increasing number of switchgear failures, despite carrying out internal preventive maintenance work. During continuous operation, thermographic measurements were conducted on low-voltage systems and the heat sources were located with pinpoint accuracy. In some cases, it was possible to correct the malfunctions directly on site and the availability of the system was ensured.
Annual savings: 16.000 Euro

Customer
Steel manufacturer, Spain
Sector
Steel & non-ferrous metals
Anwendung
Low voltage cabinets
Solution
Thermography

Benefits

- Quick localization of failures caused by heat sources
- Reduced repair costs
- Less unplanned downtime and consequential damage
- Increased plant availability

SCHAEFFLER

What our customer drives ...

Challenge

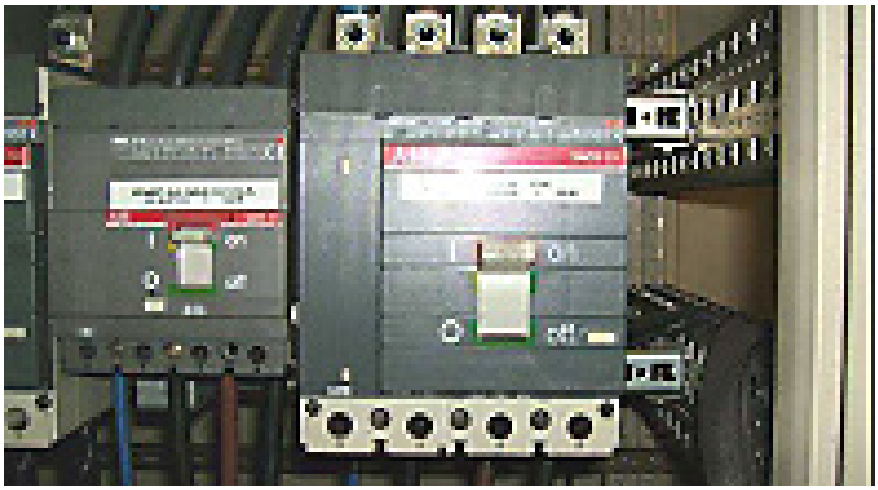
A large number of control cabinets is installed in each of the customer's two plants. In the past, all control cabinets were examined and their contact screws tightened every month. Nevertheless, the customer was experiencing unplanned down-times due to control cabinet failures. So all control cabinets were to be monitored by means of thermographic measurements In view of the good results of the maintenance support provided by Schaeffler in the form of condition monitoring, the customer also enlisted Schaeffler for this job.

Welded steel pipes

Technical information about the plant

Low voltage cabinets

- Saw switchboards
- Blower switchboards
- Welding machine switchboards
- Lighting switchboards



Low voltage cabinets

What Schaeffler has to offer ...

Solution

The experts of Schaeffler Iberia carried out thermographic measurements on different low voltage cabinets. The aim was to locate the hot areas that had caused the unplanned downtimes without the regular examinations and adjustments and without reducing the machine's availability.
Afterwards, the Schaeffler expert prepared a report in which the critical points were identified and suitable corrective actions were recommended.

Switchgear is examined with a thermal imaging camera

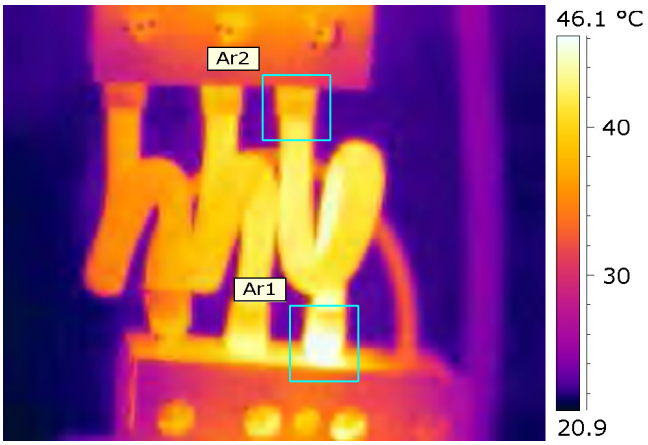
What's special

Schaeffler experts also carry out thermographic measurements on motors, industrial furnaces, bearings, gearings, and many other types of equipment. Every examination is documented accurately, and customers receive a photo-optical analysis of every monitored plant or machine as well as recommendations. In the implementation phase the customer can also make use of other Schaeffler services like vibration measurement, alignment services etc.

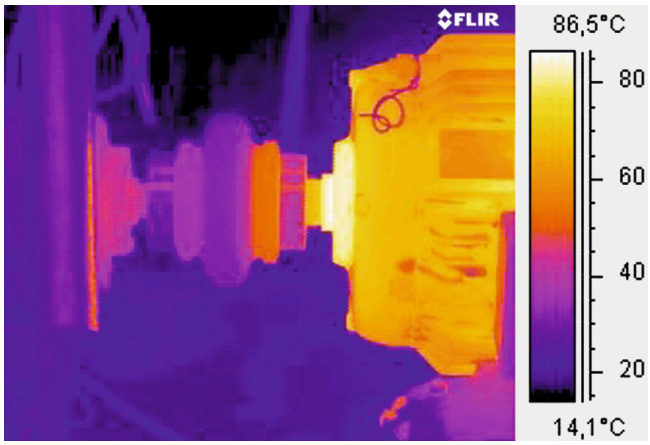
Technical Information about the Solution

Infrared thermographic camera system

- Range of temperature: -20 °C to +120 °C
- Digital zoom
- Accuracy: +/-2 °C
- Number of measuring points: 50
- Number of cabinets examined: 3
- Lighting switchboards, general panels and terminal panels



Thermographic measurement: switch cabinet



Thermographic measurement: motor

What our customer saves ...

Heat sources in cabinets can be located by means of a thermographic camera. Problems and malfunctions are detected immediately due to their high temperatures and can often be eliminated directly. Repair work is restricted to a minimum compared to an actual breakdown. The machine's availability is ensured at minimal monitoring and repair costs.

Yearly costs of the cabinet examination by the customer (tightening of contact screws, monthly)	**24,000 €**
Yearly costs of Schaeffler thermography service (thermographic examination every three months	8,000 €

16,000 €

Annual savings

Customer

The customer is one of the leading Spanish manufacturers of heat and cold formed welded steel piping and hot strip. Its annual production amounts to 130,000 tons of 3/8 inch to 4 inch piping, nearly half of which is exported.

Thermography
With the infrared-thermography deviations in the thermal behavior of a plant can be shown without dismounting work.
Regular infrared measurements provide a reliable fire protection, which is honored by many insurance companies.

Typical areas of application
Production equipment, electrical switchgear, motors, piping,
Industrial furnaces (damage in the cladding, bearings, gear teeth,
Transmission (in combination with vibration measurements)