

Schaeffler Global Technology Solutions

Steel and non-ferrous metals

Thermographic Examination Of Cabinets

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.

Challenge for Schaeffler

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 downtimes 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.

Schaeffler 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.



Technical Information about the Plant

Low voltage cabinets:

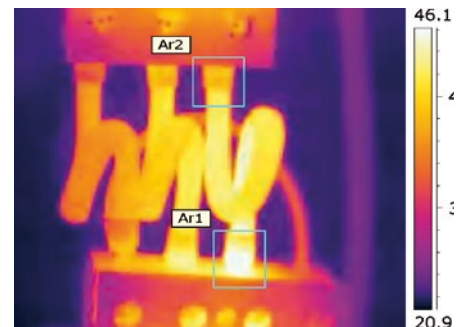
- Saw switchboards
- Blower switchboards
- Welding machines switchboards
- Lighting switchboards



Low voltage cabinet



Low voltage cabinet



Thermographic measurement

Benefit for the customer

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.

Thanks to the thermographic measurements carried out by Schaeffler the customer has realized the following savings:

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
Yearly cost saving:	€ 16 000

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

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.