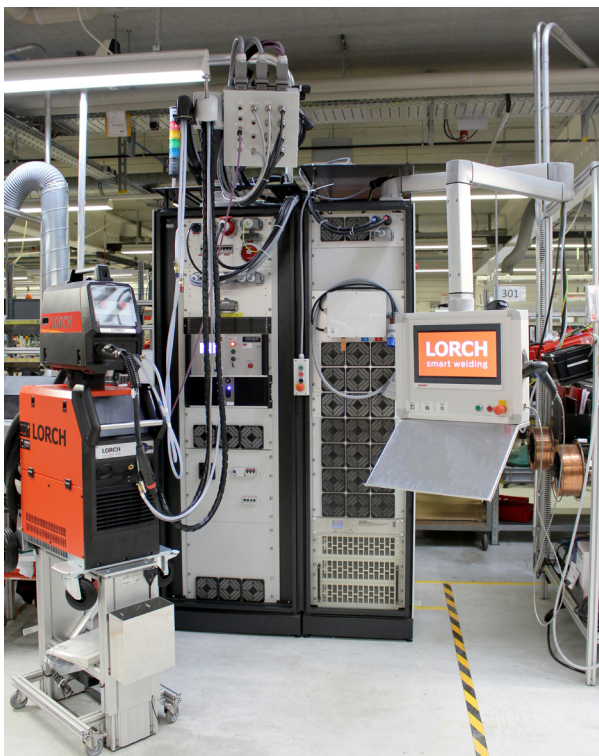


Customer Application #20

Testing Welding Power Sources

Lorch Schweißtechnik GmbH is one of the leading manufacturers of arc welding systems for industrial applications, for the demanding metal trade and for use in automation with robots and collaborative robot systems.



For more than 60 years, Lorch quality systems have been manufactured in Germany in one of the world's most modern welding system production facilities and exported to more than 60 countries. Lorch welding technology combines great practical benefits, the simplest operation as well as high economic efficiency and sets new technological standards in the market.

Test with Electronic Load PLI14412

In a recently developed end-of-line test stand for welding power sources, the entire almost completely automated unit testing of the welding system is carried out:

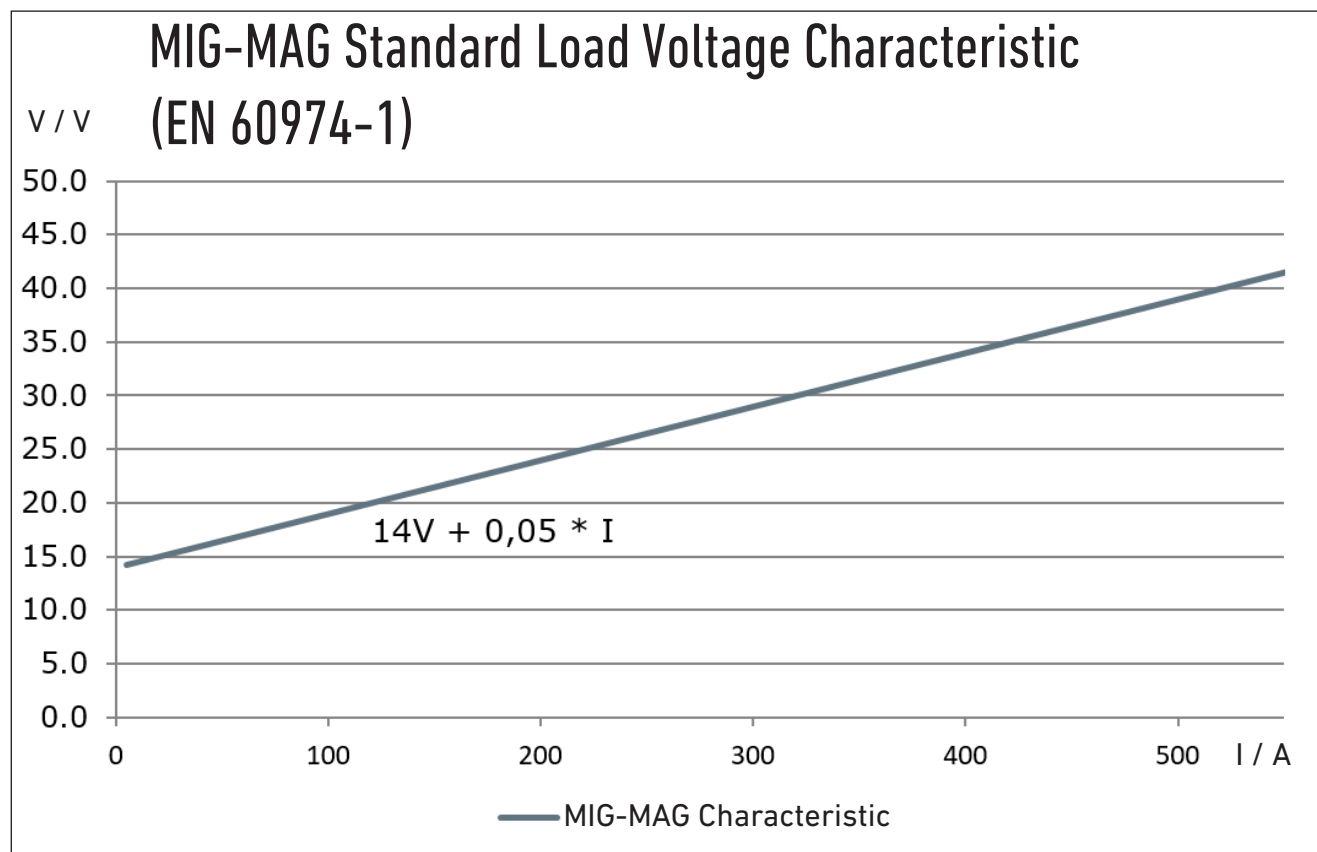
- Testing according to EN 60974-1
- Visual inspection
- Safety test
- Function test
- Load test

During the load test, the H&H PLI series electronic load comes into play: it simulates the welding process.

The load is used to test the minimum and maximum output values of the power source. The PLI14412 is capable of a continuous power of 14,400 W, but can be temporarily loaded with twice this power. In this application, it is operated with a 20 kW series resistor and can thus perform longer load tests with 500 A at 40 V without difficulties.

The load was integrated into the system via the Ethernet interface. To switch between the different operating points during operation, the LabVIEW drivers supplied by H&H are used.

In this way, the entire output characteristic curve of the current source is run through, see the following figure.



In order to be able to quickly replace a respective device in the event of a fault and thus keep downtimes low, the test stand was implemented modularly with 19" plug-in units.

The software modules were programmed with NI LabVIEW and integrated via the test management software Teststand.