

50 years Spitzenberger & Spies –  
50 years of excellent technology

**In 1963 Carl Spitzenberger and Hans Spies started the development of linear transistor-based power amplifiers.** In 1964 the first 200W transistor amplifier reached the market, followed by the first three-phase power amplifier system with internal oscillator in 1968. The first system-solution of Spitzenberger & Spies was a computer-controlled test system for circuit breakers in the year 1980.

One of the first **power-highlights came in 1985 when a power amplifier system with 750kW output power was delivered to a nuclear fusion laboratory.** For the power distribution industry several multi-phase test- and simulation systems have been developed and produced in the 70's and 80's – for example testing equipment for frequency- and distance protection relays. Since the late seventies Spitzenberger & Spies products are microprocessor controlled, also supplying an external IEEE488 interface. The experience in simulation of power supply networks led 1992 to the well-

known Basic EMC System for fully compliant CE testing (IEC/EN 61000-3 series). The increasing number of immunity test standards and the requirements of advanced power sources (IEC/EN 61000-4 series) reached the 1994 developed 4-quadrant amplifier PAS in a perfect way. In connection with a windows based test software and the central control unit SyCore the **Spitzenberger & Spies „Basic EMC System with Windows Software®“** is worldwide recognized since 1996. The ongoing development brought the magnetic field simulation system (1996, IEC/EN 61000-4-8), the integrated control- and measurement system DDS (1998) and the Analyser Reference System ARS (1999). Generation „2“ of the Basic EMC System integrated from 2000 on new immunity standards (IEC/EN 61000-4-xx) and extended the application field of the system within the EMC directive. Since 1999 the **Automotive power supply simulation system PAS/GN/KFZ** for fully compliant testing accor-

ding to ISO- and manufacturer specific test standards is available on the market. One of the newest products is the **Photovoltaic Simulator PVS for testing of solar inverters according to EN 50530.** One actual power highlight is a complete PVS test system for solar inverters with a power capability up to 350kW for the asian market.

*Spitzenberger & Spies is manufacturing since 1986 at the actual location for Germany, Europe and the worldwide market. A global distribution partner network covers the world. 2007 Carl Spitzenberger senior turned over the company's management into the hands of his sons Carl Spitzenberger und Michael Maimer. 2012 Carl Spitzenberger senior died unexpectedly. In the anniversary year 2013 new products will reach the market which will be presented by Spitzenberger & Spies during fairs and exhibitions in 2013.*

[www.spitzenberger.de](http://www.spitzenberger.de)