After installation, rectifier systems should run fault-free and efficiently as long as possible. The following GSB services, which are offered for products independent from manufacturers, are focused towards this goal.

**Assessment – Inspection**
GSB uses different methods to ensure that errors are detected early, potential damage is avoided or at least minimized. Among these methods are visual inspections, temperature measurements, performance factor and harmonic wave measurements, the testing of alarm and shutdown signals as well as function tests of overvoltage/overcurrent protection relays.

**Preventative maintenance**
Preventative maintenance is the replacement of wearing material and parts that are no longer available as spare parts as well as the selection of suitable replacement products.

After 10 to 15 years in operation, programmable control systems are no longer technically up to date due to continuous developments of their functional scope and should be replaced. Even if spare parts are expected to be either obsolete or very expensive.

**Performance upgrade**
Adjustment to increasing requirements in order to prevent an overload and shortening of the life cycle. This includes the installation of additional semiconductors or fuses, reinforcement of transmission cross sections, and improvements to the cooling. Such measures may also optimize efficiency.

**In the unlikely event of a fault**
If a rectifier should fail in spite of all precautions, GSB’s commissioning engineers are available via hotline 24 hours a day, 365 days per year. They first help to isolate the cause of the error, procure spare parts at short notice and organize additional specialist to give support on site.

**Maintenance contracts**
System support can also be arranged and carried out as a package within the scope of a maintenance contract.