

## High currents at low voltages: Power<sup>IT</sup> Compact Rectifier business new in Turgi

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The ABB business unit High Power Converter ATPR based in Turgi/Switzerland expanded their product range with the Power IT Compact Rectifier - a rectifier generating high currents up to 15'000 A at low voltages - at the beginning of this year. Typical applications are various industrial processes such as electroplating and surface- and drinking water treatment. By means of various options a solution can be developed on a standardised basis, which exactly meets the customer's requirements.

High voltages and high currents - this is the area in which the converter experts at ABB High Power Converters in Turgi occupy a leading position. At the beginning of this year the Power IT Compact Rectifiers were included in the portfolio. Now we can respond to customer inquiries in the lower voltage range with extremely competitive offers, too.

### Compact, reliable and efficient

The clear design of the Power IT Compact Rectifier is impressive: equipped with a contactor, transformer and thyristor module on the power side and an ABB DCS 500 controller on the control side it is excellently suited for a vast variety of applications in the defined operating range. Thanks to the "all-in-one" design the unit is easy to install, operate and service. In fact all that has to be done for start-up is pressing the "Start" button. Other outstanding features are the simple design and the proven topology, high quality components and the short delivery time of only a few weeks.



### Task and solution

The range of applications is wide. In the metal industry the rectifiers are used for surface treatment e.g. in the production of steel for seaworthy vessels. This includes various baths for cleaning and treatment in process lines. Other fields are chemical applications such as electrolysis or electroplating baths. All these applications require a high current at a relatively low DC voltage.

Currently, two circuit topologies are being used for such systems: for voltages up to 50 V the interphase transformer connection is used, whereas the typical three-phase bridge connection is used for voltages up to 500 V. In order to reach the required current several units may be connected in parallel. For a copper production plant in Canada for example we designed a system generating a total of 50'000 A at 35 V consisting of four sub-units with 12'500 A each.

### New opportunities

With the Power IT Compact Rectifier ABB Turgi can access a new market segment. Whereas there are only few projects per year for systems generating very high powers, there are many applications for the new rectifiers every year in places all over the world. With this excellent new product ABB can easily meet these demands.

**The ABB Power IT Compact Rectifier is easy to install, operate and service.**