With the use of pulse rectifiers, the oxide quality is better than the one obtained with a conventional rectifier, as proved by the tests on abrasion, efficiency (ISO 3210) and corrosion (Kesternich). So it is possible (without disadvantages) to work with a current density higher than conventional rectifiers. Thus the use of pulse rectifiers gives a benefit of 20-25% time saving compared with the conventional ones.

The pulse rectifiers are characterized by 3 values.
- Base current
- Pulse current = base current x 1.5
- Average current = 1.35 x base current

Example:
- Base current = 2000 A
- Pulse current = 2000 x 1.5 = 3000 A
- Average current = 2000 x 1.35 = 2700 A

Therefore:
If the size of a pulse rectifier is chosen with the same average current of a conventional rectifier a better oxide quality is obtained, but without any time saving. If the size is chosen with the same base current as a conventional rectifier, also a 20-25% time saving is obtained.

MAX. VOLTAGE
The pulse rectifiers are provided for a 22 V max. voltage (instead of 20V max. as for conventional rectifiers) to have the possibility of pulse superposing.

TECHNICAL FEATURES
Control:
By means of SCR set on primary or secondary side

Rectifier circuit:
Six-phase provided with interphase transformer.

Main transformer: according to IEC 742 standard “Safety isolating transformers”
General switch:
Magnetothermic or magnetic (automatic) type

Cooling:
On request: closed loop air cooling by means of air/water exchanger (IP54)

Protections:
- Max. current: by means of electronic device and automatic general switch
- Max. temperature: by means of thermostats inside the main transformer windings and on the diode cases.

Voltage/current control:
Constant current and (or) constant voltage control

Accuracy ± 1% against ± 10% network variation and load variation from 10% to 100%.

Optionals:
- Interfacing with external PLC (by means of opto- insulated cards)
- APC – Anodizing process computer:
  - Automatic survey of the surface to be anodized
  - Pre-setting of anodizing current density
  - Pre-setting of the requested number of microns
  - Automatic printout of anodizing parameters. Further technical details in our brochure “APC”- Anodizing Process Computer

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