Why to use MCR Type SVC in EAF and Ladle Furnace?

Electric Arc Furnace (EAF) and Ladle Furnace

The electric arc furnace and ladle furnace are typical non–linear and erratic loads in the power grid, causing a series of adverse effects to the power grid:

- Result in serious three–phase unbalance of the power grid, and cause negative–sequence currents.
- Produce high order harmonics, such as coexist of 2nd, 4th even harmonics and 3rd, 5th, 7th odd harmonic, which make severe voltage distortion become more complicated.
- Serious voltage flickers
- Low power factor

The best way to solve the problems mentioned above is to install fast–acting reactive power compensation device (SVC). The response time of Wanlida's SVC is less than 10ms, which can meet the strict technical demand. The SVC can supply reactive current rapidly to electric arc furnace and ladle furnace and stabilizes the voltage level in the power grid, then the output of the metallurgical active power can be increased, and the impact of flicker can be minimized. The separated phase compensation function of SVC can eliminate the three–phase unbalance caused by electric arc furnace and ladle furnace. The filtering devices of the SVC, can remove the harmful high order harmonics so as to improve power quality, then the power factor can be increased through providing capacitive reactive power to the system.

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