



Power Systems Solutions Steel Industry






Southern States LLC

Power Systems Solutions

Established in 1916, Southern States has emerged as a global pioneer in power solutions. Our commitment to innovation, coupled with the unmatched expertise of our engineering and manufacturing teams, has propelled us to the forefront of delivering comprehensive power systems solutions.

Southern States LLC's Power Systems Solutions Division is **your trusted partner in the steel industry's journey toward decarbonization and green steel goals.**



Steel-Strong Power Solutions

Specializing in bespoke power solutions tailored specifically for the steel industry, we offer a comprehensive approach that spans from requirement analysis to the provision of power solutions.

Our capabilities encompass a spectrum of technologies, ranging from proven to cutting-edge technologies, ensuring that we meet your diverse needs. Whether it's enhancing the efficiency and productivity of electric arc furnaces, spearheading decarbonization initiatives, or supporting your green steel objectives, we are equipped to deliver solutions that drive sustainable progress

The team of experts collectively possesses over 100 years of experience in the steel sector.

Comprehensive Power Solutions

We provide comprehensive power system studies for peak performance, safety, and sustainability, tailored to meet our customers' needs. With expertise in steel production, state-of-the-art measurement tools, and advanced simulation software, we quickly deliver cost-effective solutions for voltage stability, power quality, and regulation applications, supporting decarbonization and **green steel initiatives**.



- 1 Power Flow and Harmonic Simulation
- 2 Power Quality Analysis (Steady State and Transient)
- 3 Reactive Power Compensation Design
- 4 EAF Productivity Improvement Analysis*
- 5 Short circuit, protection coordination and arc flash studies

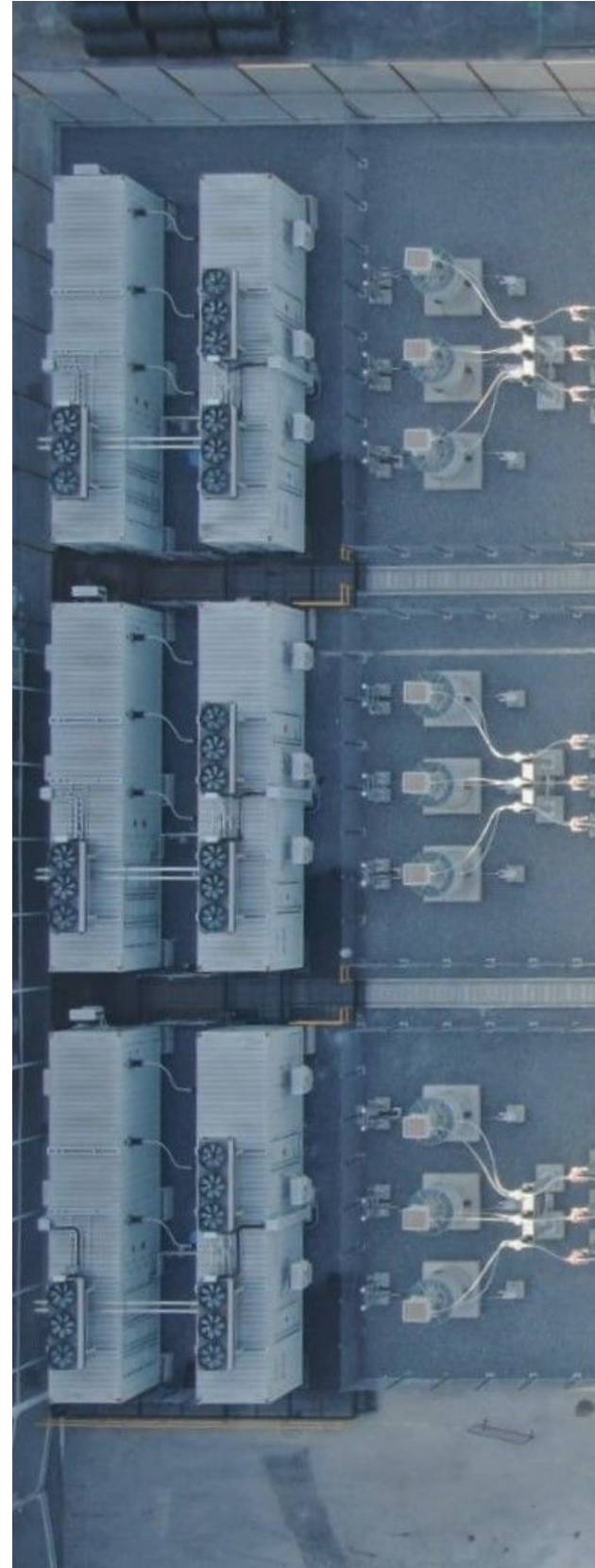
*Increased productivity case study on the last page.

Innovation to Application

From innovation to application, we excel in navigating the complexities of power projects for the steel industry.

With a seamless transition from engineering concepts to on-site implementation, we bring cutting-edge solutions to life while minimizing disruptions to your production processes.

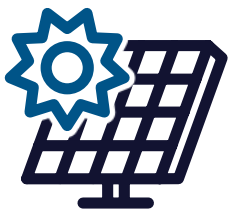
- Static Var Generators (STATCOMs)
- Static Var Compensators (SVCs)
- Medium Voltage Harmonic Filters
- Low Voltage Harmonic Filters
- SVC Upgrades and Repower
- Sub-cycle Transfer and Disconnect Switches
- Power Quality Monitoring



Applications Benefits

In no other industry, does improving power quality and controlling reactive power have more impact than in Steel production.

Our technical expertise and broad portfolio of products guarantee our customers the best and most cost-effective solution for their needs.



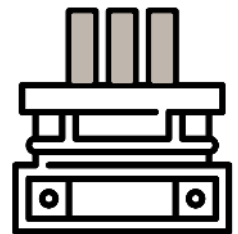
Ensure seamless renewable generation and load interconnection



Reduce downtime with enhanced grid stability



Increased productivity with voltage stability and energy savings



Reduce electrode consumption and increase refractory life

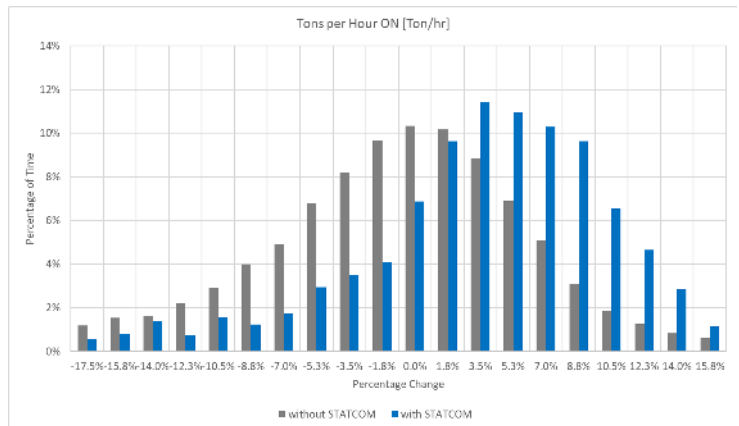


Case Study

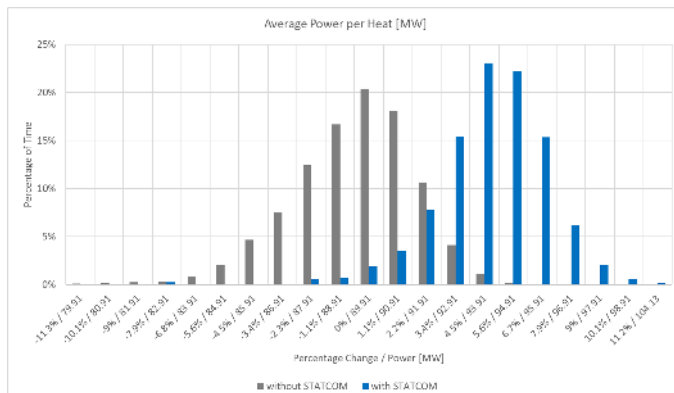
The installation of two 160 MVAR STATCOMs in separate electric arc furnaces, totaling 320 MVAR, aimed to enhance voltage stability, reduce flicker, and mitigate harmonic distortion, consequently leading to a significant increase in productivity.

This deployment notably improved power quality and stability, optimizing operational efficiency and reliability in the system.

6.5%
Productivity Increment



6%
Power Increment



5%
Power ON reduction time

