PQActiF for SKF Indonesia

Client profile and key challenges

SKF Indonesia is a global leader in bearing technology and rotating equipment solutions, serving key sectors such as automotive, industrial, and energy. Their manufacturing operations are driven by high-efficiency systems, including compressor lines with variable speed drives (VSDs), which enable dynamic control and energy optimization.

However, the extensive use of VSD-based compressors introduced critical power quality issues, primarily in the form of high harmonic distortion and a consistently low power factor. This condition not only affected the stability of their electrical system but also exposed SKF Indonesia to potential kVAR penalties from PLN due to poor reactive power performance.

Furthermore, the harmonic interference caused operational inefficiencies, unnecessary heat on cables and capacitor banks, and increased stress on critical electrical infrastructure.

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Active harmonic filter PQactiF in cabinet configuration

Solution

To address these challenges, PT Oscorp Elektrik Indonesia deployed its advanced PQactiF active harmonic filter system across the affected areas. A total of 8 PQactiF modules were installed, with a focus on targeting harmonics generated by VSD compressors while also improving power factor simultaneously.

The PQactiF system dynamically injects corrective current in real-time, eliminating harmful harmonic content and compensating for reactive power without disrupting operations. This resulted in significantly enhanced electrical stability, reduced system losses, and prevention of kVAR-related penalties from the utility provider.

Most importantly, the solution restored full efficiency to the compressor line, optimizing production output and lowering long-term energy and maintenance costs.

PQActiF
Improve poor power quality

Technical Data

320A (Harmonic + PF Correction)
Equiped

kVAR Penalty
Avoided

Total Harmonic Distortion < 1%
Maintained