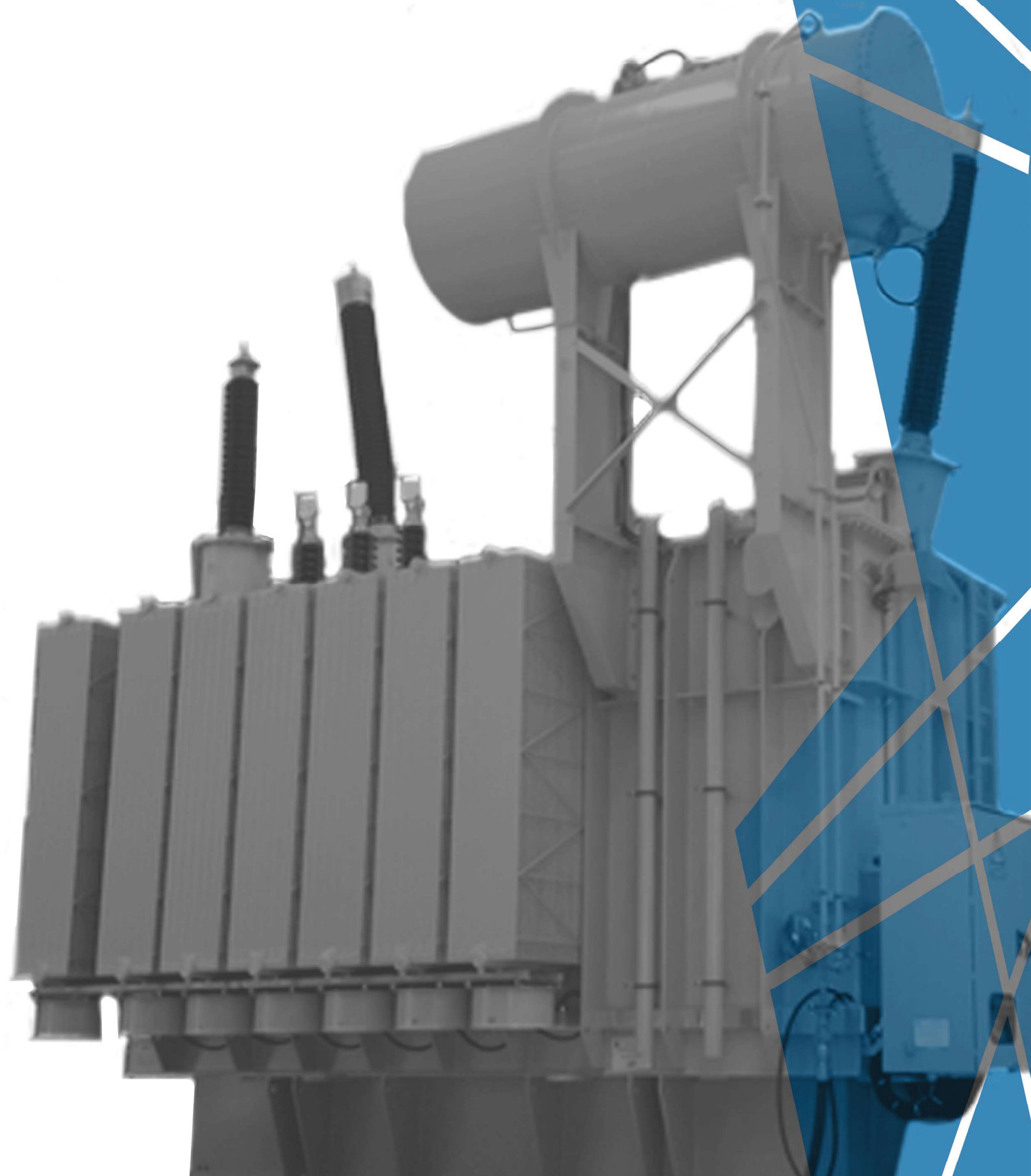


# Flexible and Durable Solution for SVC Systems

**BEST**



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Static Var Compensation (SVC) systems are used to balance line voltages with fast acting active and reactive power balancing option. These complex systems have harmonic filter, thyristor controlled reactor and capacitors or mechanically controlled capacitor banks or reactor banks. Transformers are letting SVC system to get connected at higher voltages.



Pic. 1: SVC transformer before FAT

Best Transformers ([www.besttransformer.com](http://www.besttransformer.com)); have experience in distribution, power and dry type transformers. Thus; transformers like SVC, phase shifting, arc furnace transformer or reactors are called “special transformer” in Best and we could manufacture these high-tech products according to customer needs as called as “tailor-made”. SVC transformers are a kind of special transformer and Best manufactured an example at 2016 for off-shore project in England, UK.

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Requested SVC was with 140MVA rated power, ONAN/ONAF cooling system and 220kV rated voltage at high voltage side. These values seems pretty standard for a power transformer but requirements like more than 25% voltage harmonic that could cause core to saturate easily and current harmonics that will cause overheating in windings is not very common. Transformers ideally insulate primary side from secondary side and could absorb and minimize harmonics in windings so for a SVC system, a skilled transformer will be beneficial. In addition; customer for this project requested windings to withstand DC current up to a limited amount.



Pic. 2: Fully mounted SVC transformer

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It is planned to be placed in UK at an off-shore platform; SVC transformer must be as light as possible and must have a small area to cover. Total weight 190 ton, length 7m, width 4.7m and height at maximum point, where bushing terminal is, 8.2 meter dimensions are enough for this challenge. After manufacturing; transformer passed all Factory Acceptance Tests (FAT) and earned its place in Best's Honor Wall.



Pic. 3-4: SVC transformer before transport

## Key Points:

- 140MVA rated power, allows fast power balancing
- Developed with reduced weight and low floor area requirement for off-shore platforms
- 5% THD, 25% voltage harmonics and 120% overloading capacity, continuously