

Asymmetrical triple bridge converter based power electronic transformer

The invention discloses an asymmetrical triple bridge (ATB) converter based power electronic transformer (PET).

The Technology

- The ATB converter includes two H-bridge inverters, two high frequency transformers, and a full bridge converter containing two active legs and one passive leg.
- The primary windings of these transformers are linked with each H-bridge converter. The secondary windings of both transformers include two terminals: first and second. The first terminals of both secondary windings are electrically connected to the mid-point of the passive leg consisting of two diodes.
- The second terminal of the first secondary winding and the second terminal of the second secondary winding are connected across the first and second active legs respectively.
- Both active legs include a pair of power electronic switches. The passive leg is placed between these two active legs. Further, various ATB converter based PET topologies are also provided.

Asymmetrical Triple Bridge Converter based Power Electronic Transformer (ATB-PET)

