

Multi-level topology of high power voltage source inverter for variable speed drive of electrical machines

High power pumps or fans are generally driven by constant speed machines using valves. Though driving the machine at variable speed with voltage source inverters offers better energy efficiency. In the medium voltage range, the challenge is to develop efficient drives with conventional semiconductors.

DESCRIPTION*

- High power and medium voltage source inverter topology
- Generation of three phases voltage based on:
 - A switching module made of three legs connected in series
 - A multiplexer module switching at modulation frequency
- Topology using conventional semiconductors or thyristors



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TECHNICAL SPECIFICATIONS

Power level	1 to 10 MW
Voltage	1 to 10 kV
Frequency	50-60 Hz (higher on request)
Target efficiency	> 95%

COMPETITIVE ADVANTAGES

- Multilevel topology
- High efficiency
- Energy savings
- Operational flexibility
- Costs savings

APPLICATIONS

- Power generation industry
- Mining industry
- Chemical industry
- Oil & Gas

INTELLECTUAL PROPERTY

- Patent pending

DEVELOPMENT STAGE

- Technology concept formulated

1 2 3 4 5 6 7 8 9

LABORATORY

- Statics Converters Group



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