Harmonic? No significant harmonics before 300 kHz.

Much higher voltages possible... 300 steps, anyone?

Hundreds of steps? Advantages?

The MMC is used to build a stepped voltage. Commercial versions use

to turn it on or off; usually a thyristor (that cannot turn itself off). Force commutated switching device: a switch with circuitry attached

Response to signals/commands.

Motor drives, power supplies: a switch that turns itself on or off in

Force commutated switching device

such thing as an ON or OFF state here.

Current flows in all switching modules all the time. There is really no

Each switch module supports, in this case, Vdc/4.

Converter

Multilevel

Modular

Lesson 18

T A D Applications of Voltage Sourced Converters

ECE 404 / 504
capacitors carefully stabilize the voltage by itself.
No need for a DC bus capacitor, switching the little
which is periodic and hence harmonic in nature.
Communication, noise and communication transient reduction,
high frequency current harmonics: switching and
essentially constant in the short term. They influence the
What do the choke coils do for us? They keep the current
What is the current in each leg of the converters?
pretty severe faults, even those right at the terminals.
Fault protection? A lot of devices can protect against some
a practical observation.
(10% for full bridges, 1.5% for full bridges) for similarly rated converters, as
2-3 level converters have losses of 2% to 3%, MIG has <1% losses
They conduct ALL the time. All of them
More devices
Shower switching... what's the advantage? Switching loss is
cycle.
change state? At least once per fundamental frequency.
Switching frequency? How often does each switch switch?