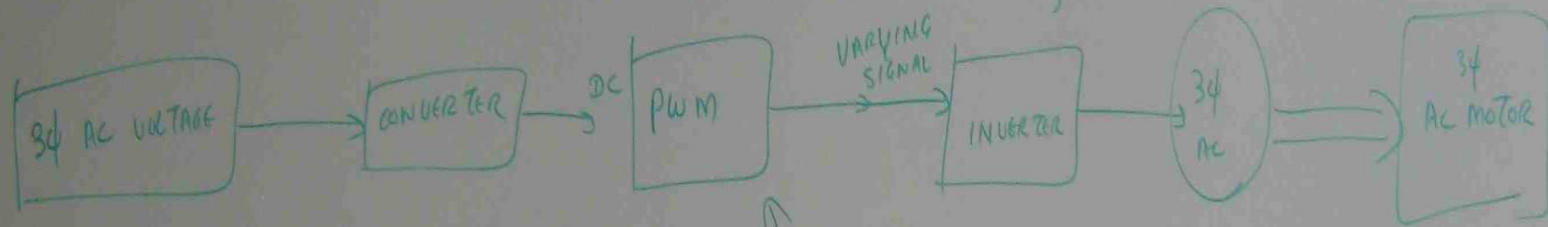
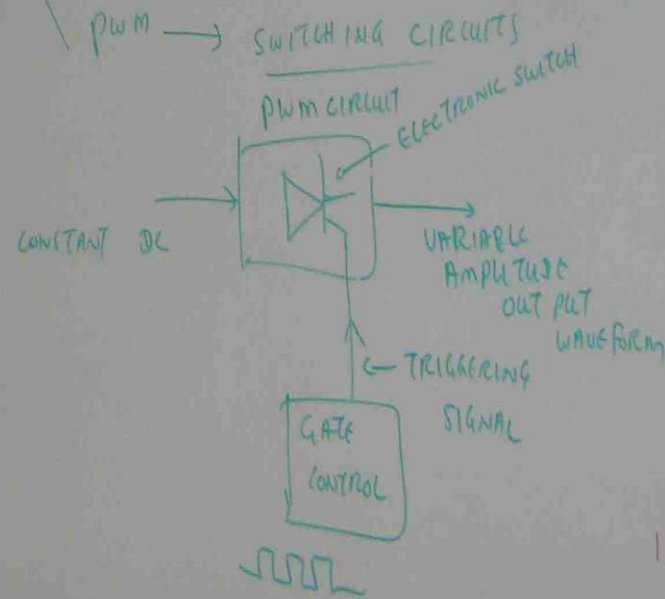


CONVERTER



PWM - PULSE WIDTH
MODULATED
CIRCUIT

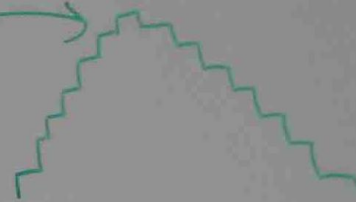


VOLTAGE MAGNITUDE
INCREASED

INCREASED
SWITCHING SPEED

34
AC MOTOR

STEP WAVE



+ FILTER =



VOLTAGE MAGNITUDE IS INCREASED



DECREASE SWITCHING SPEED

VOLTAGE MAGNITUDE IS DECREASED

INCREASED SWITCHING SPEED

REVERSED POLARITY SWITCHING

NEGATIVE HALF OF AC WAVE

AC VOLTAGE MAGNITUDE CAN BE EASILY CHANGED BY STEP UP / STEP DOWN TRANSFORMERS.

BUT AC VOLTAGE FREQUENCY CAN NOT BE CHANGED DIRECTLY.

FIRSTLY CONSTANT AC VOLTAGE IS CONVERTED INTO DC BY CONVERTER.

THE DC VOLTAGE / CURRENT IS PASSED THROUGH THE SWITCHING CIRCUIT WHICH CONSISTS OF

ELECTRONIC SWITCHES DRIVEN BY GATE DRIVEN CIRCUIT. THE GATE DRIVEN CIRCUIT

CONSISTS OF OSCILLATOR THAT PRODUCES THE FIRING SIGNAL.

DEPENDING ON PERIODIC SLOWER TO FASTER AND THEN TO SLOWER SWITCHING

RATE OF THE SWITCHING CIRCUIT, THE OUTPUT VOLTAGE MAGNITUDE IS VARIED IN STEP WAVES FORM.

THE SWITCHING POLARITY IS REVERSED TO GET A COMPLETE AC STEP WAVE FORM.

AND THE WAVE FORM IS FILTERED TO GET APPROXIMATE SINEWAVE.

NO OF WAVE FORMS IN ONE SOUND IS DETERMINED
BY SWITCHING CIRCUIT.

DEPENDS ON NO. OF WAVE FORMS PER SOUND
MOTOR VOLTAGE FREQUENCY IS VARIED AND

THE SPEED CAN BE VARIED.