

2.2 VOLTAGE CONTROL OF INVERTERS

✿ The various methods for the control of output voltage of inverters can be classified as:

- (a) External control of ac output voltage
- (b) External control of dc input voltage
- (c) Internal control of the inverter.

External Control of ac Output Voltage

In this type of control as shown in Figure, an ac voltage controller is used to control the output of inverter. Through the firing angle control of ac voltage controller the voltage input to the ac load is regulated.

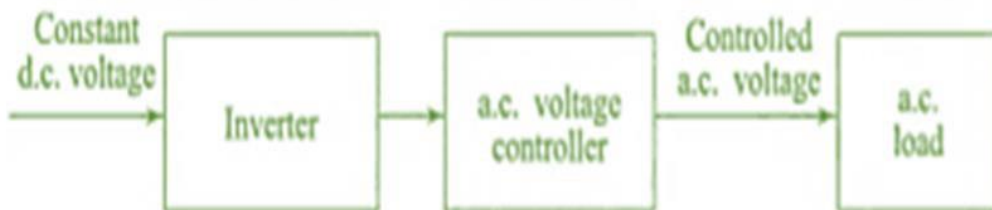


Fig 2.2.1. External Control of Output Voltage

[Source: "Power Electronics" by P.S.Bimbra, Khanna Publishers Page: 347]

External Control of dc Input Voltage

✿ When the available voltage source is ac then the dc voltage input to the inverter can be controlled through fully controlled rectifier, uncontrolled rectifier and chopper, ac voltage controller and uncontrolled rectifier as shown in Figure .

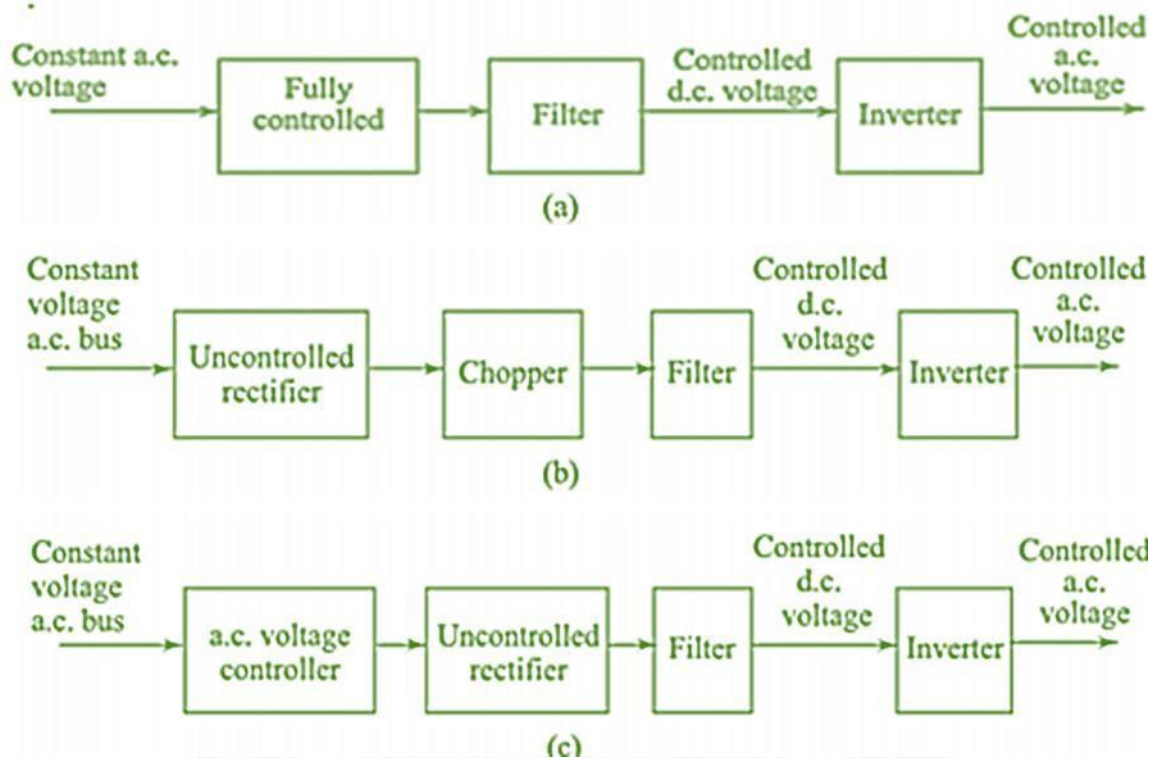


Fig 2.2.2. External Control of Input Voltage

[Source: "Power Electronics" by P.S.Bimbra, Khanna Publishers Page: 348]

Internal Control of Inverter

- The first method require the use of peripheral components whereas the second method requires no external components.
- Output voltage from an inverter can also be adjusted by exercising a control within the inverter itself. The most efficient method of doing is by pulse- width modulation control used within an inverter. This method is called the internal voltage control of the inverter.