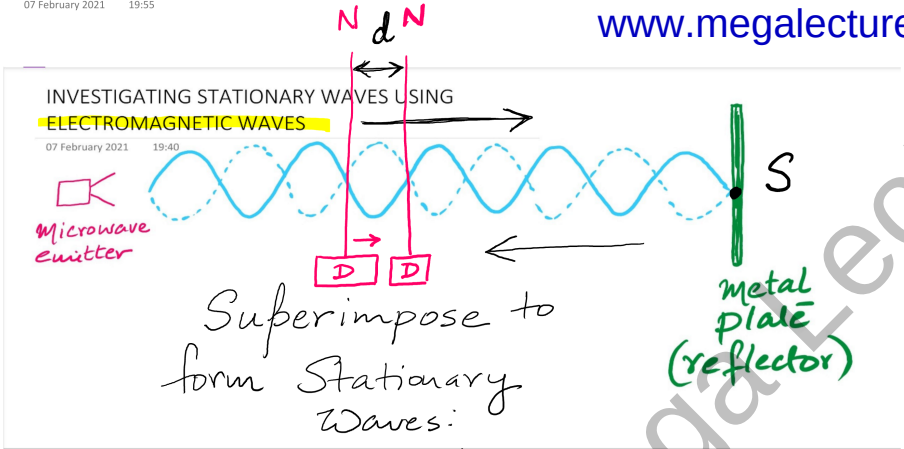

The arrangement shown is used.

Microwaves of constant frequency are emitted by the source and are reflected from a point S on the reflective surface (metal plate).
The superposition will give rise to the formation of stationary waves.
If a detector is moved between the source and the reflector, the reading varies from maximum to a minimum and then back to a maximum value.
Each minimum intensity corresponds to a NODE.
Each maximum intensity corresponds to an ANTINODE.
Using the above principle, the wavelength and the frequency can be determined as shown below.

$$\text{freq} = \frac{v}{\lambda} = \frac{3 \times 10^8}{2d} = \frac{1.5 \times 10^8}{d}$$