

## Piezo-electric sensing element

↳ Piezo-electric Transducers:-

- Based on Piezo-electric crystal

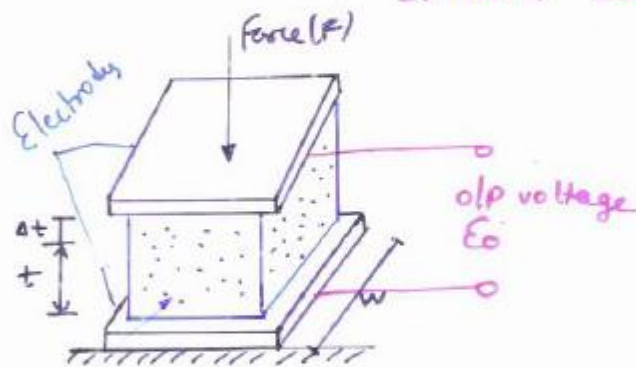
Principle:- Application of mechanical force across the surface of crystal  $\Rightarrow$  produces electrical potential (voltage) across it.

'Piezo-Electric effect.'

This effect is Reversible.

Mechanical Motion  $\rightleftharpoons$  Electrical O/P.

- Materials used - Rochelle Salts, Quartz, Lithium sulphate.



Piezo-electric crystal

- Piezo-electric transducers are used for measurement of displacement. They can also be used for measurement of Force, Pressure or acceleration.
- They are used for 'Dynamic Measurements':  
 $\rightarrow$  Used in measurement of quantities such as Surface roughness, in accelerometers & vibration pickups.