

## Spur Gear Terminology

- Addendum circle - passes out at tips of teeth
- Dedendum circle - passes through bottom land
- pitch circle - imaginary, allows gears to mesh
- base circle - generates curve profile of gear tooth
- Addendum - Addendum to pitch circle
- Dedendum - pitch circle to Dedendum circle

\*Diametral pitch  $P$  - defined as the number of teeth per inch of pitch diameter

$$P = N/d, P = N_p/d_p, P = N_g/d_g$$

Circular width of tooth is  $= \Pi/2P$

- Conjugate gear tooth action - action that allows the gears to maintain a constant ratio between the gears
- Involute curves?
- Usually talking about diameter of pitch circle when diameter is talked about
  - pitch diameter used to determine center to center distance
- Tangent line between base circles - Line of action of the force
- Pressure angle  $\Phi$  - angle between tangent line and horizontal
- point of contact moves outwards on larger gear, and inwards on smaller gear
  - Follows tangent line of two base circles