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Title: Simulación de un Mecanismo de Línea Recta

Authors: Homero JIMÉNEZ RABIELA, Benjamín VÁZQUEZ GONZÁLEZ,
Gilberto Domingo ALVAREZ MIRANDA, Israel BARRAGÁN SANTIAGO

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Mail: hjr@correo.azc.uam.mx
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ECORFAN-México, S.C.

244 – 2 Itzopan Street
La Florida, Ecatepec Municipality
Mexico State, 55120 Zipcode
Phone: +52 1 55 6159 2296
Skype: ecorfan-mexico.s.c.
E-mail: contacto@ecorfan.org
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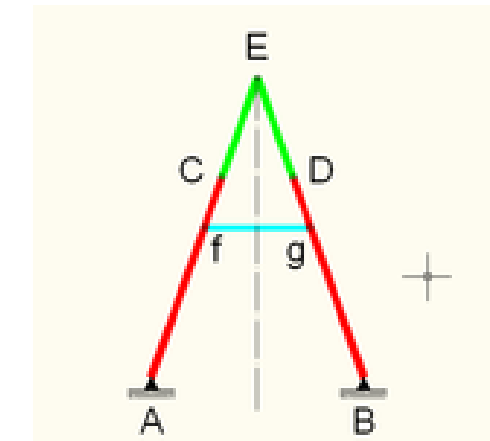
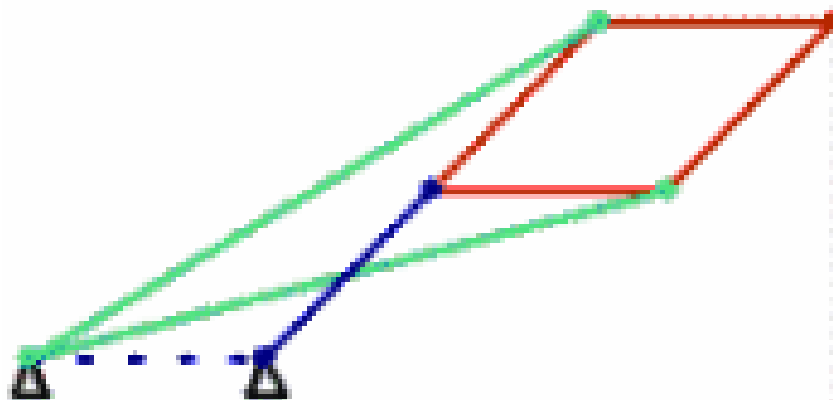
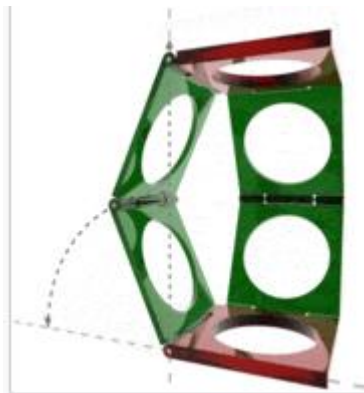
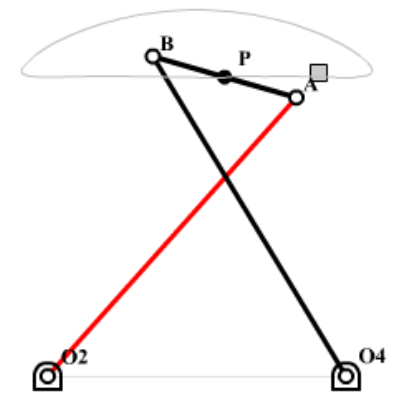
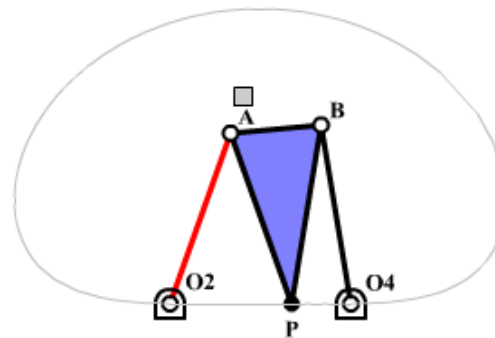
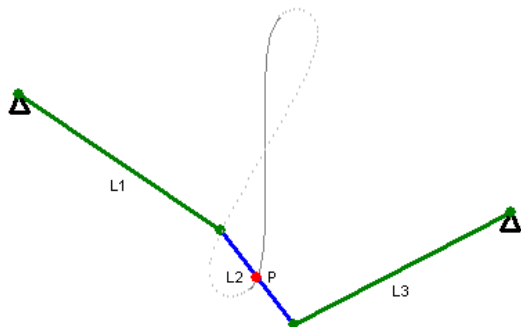
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Simulación de un Mecanismo de Línea Recta

- Introducción: Watt, Robert, Chebyshev
Sarrus, Peaucellier-Lipkin, Inversor de Hart



Simulación de un Mecanismo de Línea Recta

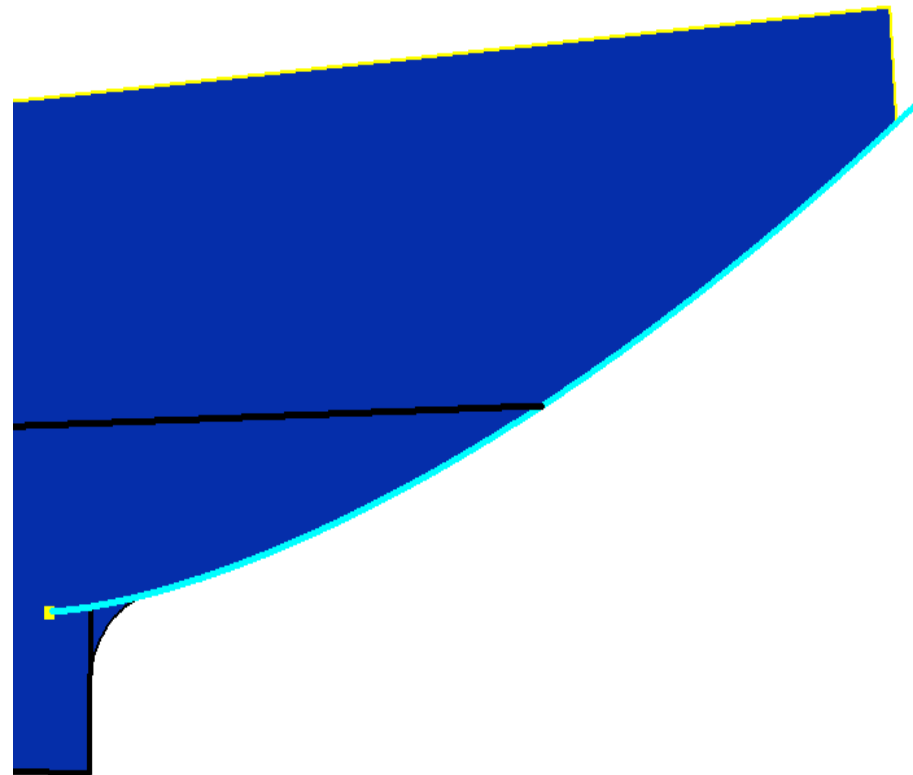
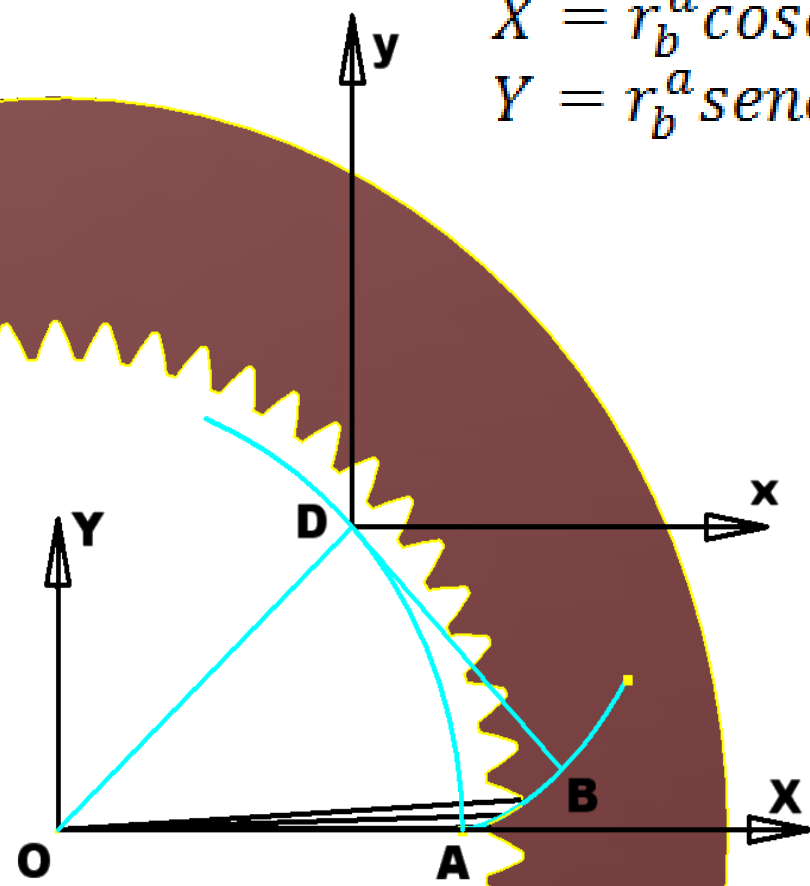
- Metodología:

P	2	ul	Paso diametral
rp	7.25	in	Radio de paso planetario
FI	25	deg	Ángulo de presión
OM	1	ul	Vel. angular armadura

Simulación de un Mecanismo de Línea Recta

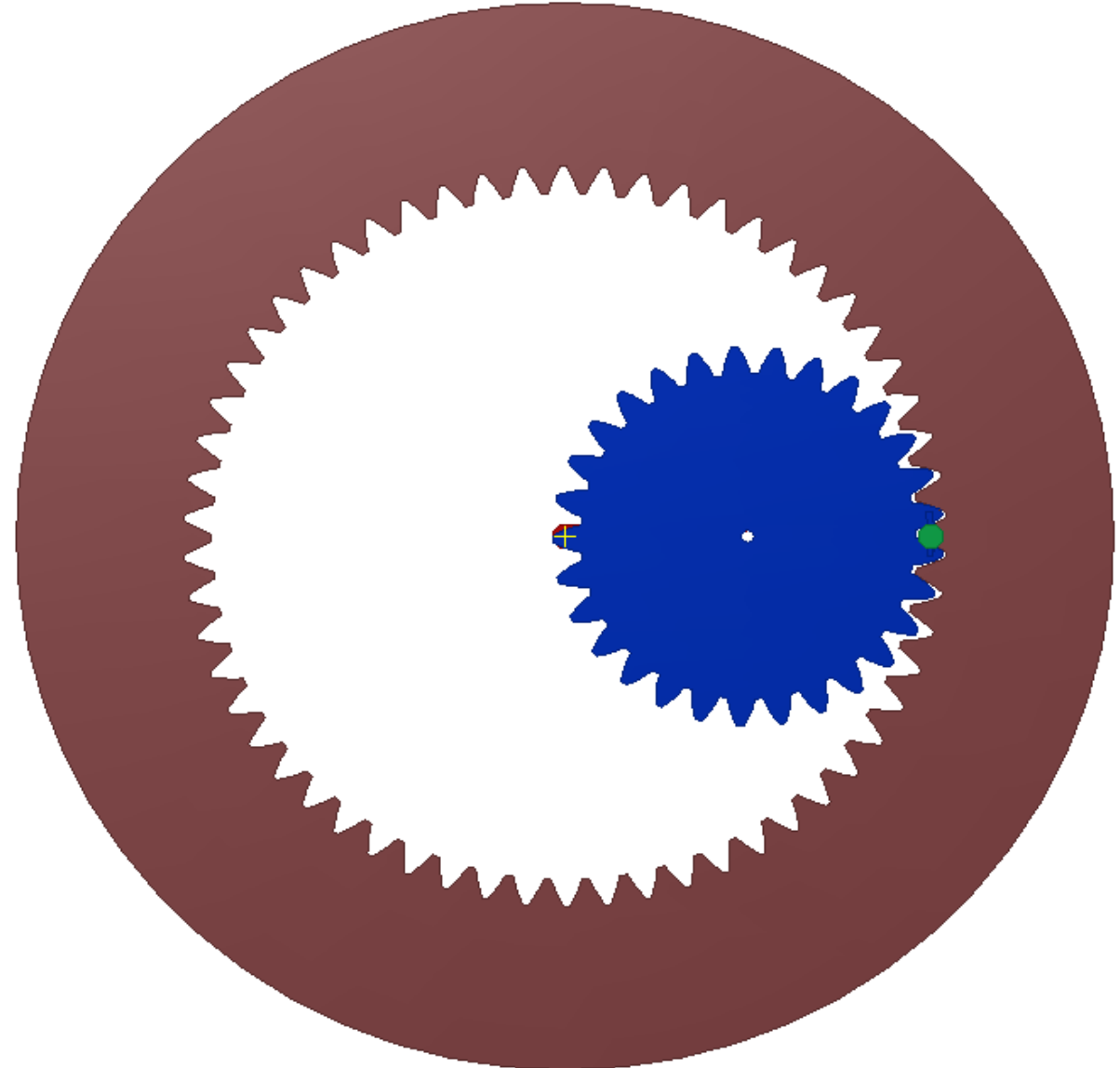
- Generación de Eslabones:

$$X = r_b^a \cos \delta + \delta r_b^a \cos(1.5\pi + \delta)$$
$$Y = r_b^a \operatorname{sen} \delta + \delta r_b^a \operatorname{sen}(1.5\pi + \delta)$$



Simulación de un Mecanismo de Línea Recta

- Ensamble del Mecanismo:



Simulación de un Mecanismo de Línea Recta

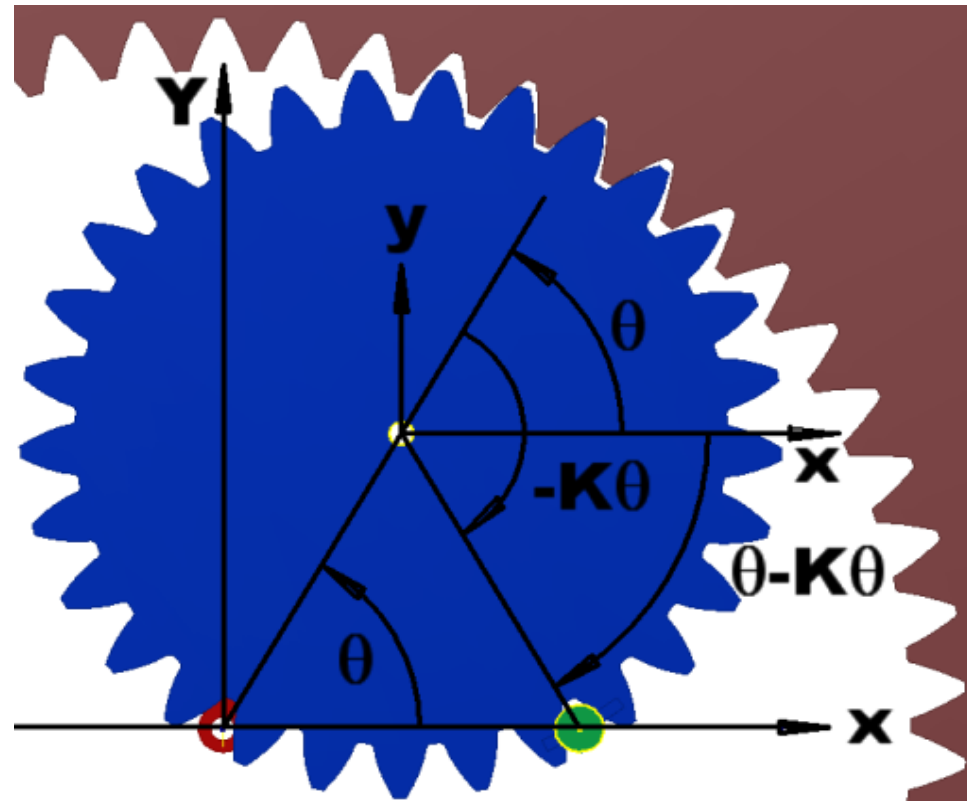
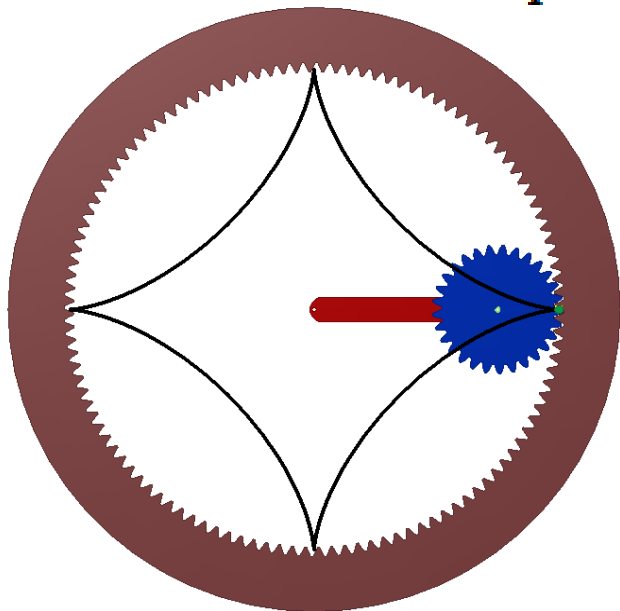
- Simulación del Mecanismo

$$X = (r^a - r^p) \cos \theta + r^p \cos \left(\theta - \frac{r^a}{r^p} \theta \right)$$

$$Y = (r^a - r^p) \sin \theta + r^p \sin \left(\theta - \frac{r^a}{r^p} \theta \right)$$

$$X = 2r^p \cos \theta$$

$$Y = 0$$



Simulación de un Mecanismo de Línea Recta

- Resultados:

La metodología permitió mostrar el mecanismo de manera virtual, tridimensional, paramétrica y cinética.

Simulación de un Mecanismo de Línea Recta

- Conclusiones:

El diseño de los engranes aseguró que las circunferencias base sean, en ambos casos, menores a las circunferencias de dedendum; evitando la posible interferencia y socavación de los dientes.



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