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# XXVIII CONGRESO LATINOAMERICANO DE HIDRÁULICA
BUENOS AIRES, ARGENTINA, SEPTIEMBRE DE 2018

# MICROTURBINAS HIDRÁULICAS. DISEÑO, ADAPTACIONES PARA ENSEÑANZA DE MICROGENERACIÓN

*Teresa Reyna, María Lábaque, Belén Irazusta, Santiago Reyna y Cesar Riha*

**RESUMEN:**

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**ABSTRACT:**

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**PALABRAS CLAVES:** 7 7 # 7

# INTRODUCCIÓN

# METODOLOG A

## DESARROLLO

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. $c_з$
$c_{iu}$
$\alpha_i$ . / $c_i \, y \, u_i$ $\beta_i$ . / $w_i$
$-u_i$ : : 6 : . - .
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$$\acute{w}_1 = \acute{c}_1 - \acute{u}_1 \tag{1}$$



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$$H_u = \frac{u_1^2 - u_2^2}{2g} + \frac{w_2^2 - w_1^2}{2g} + \frac{c_1^2 - c_2^2}{2g} \tag{2}$$

( . / #
$\pm \dfrac{c_1^2 - c_2^2}{2g} \pm \dfrac{c_1^2 - c_2^2}{2g}$ / $\dfrac{u_1^2 - u_2^2}{2g} + \dfrac{w_2^2 - w_1^2}{2g}$

$\dfrac{u_1^2 - u_2^2}{2g} + \dfrac{w_2^2 - w_1^2}{2g}$ # .

$\dfrac{u_1^2 - u_2^2}{2g} \dfrac{u_1^2 - u_2^2}{2g}$ . #

# #

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$H_p$          $H_u$

$$GR = \frac{H_p}{H_u} = \frac{altura\ de\ presi\acute{o}n\ absorbida\ por\ el\ rodete}{altura\ total\ absorbida\ por\ el\ rodete}$$          [3]

$H_p = 0$

$GR > 0$

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$GR > 0$

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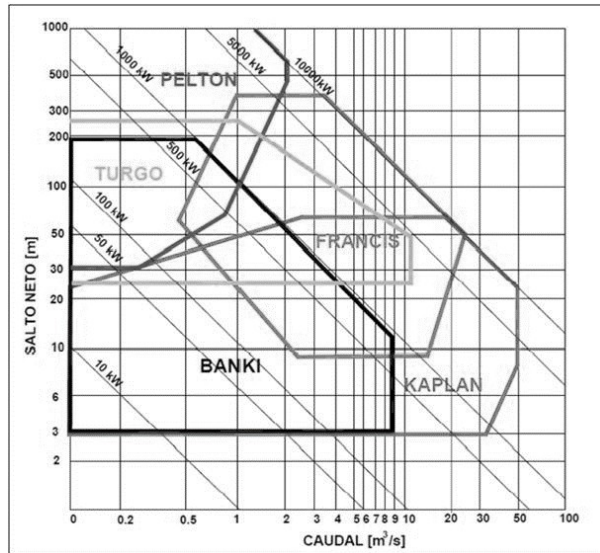
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## MICROTURBINA MICHELL BAN*I

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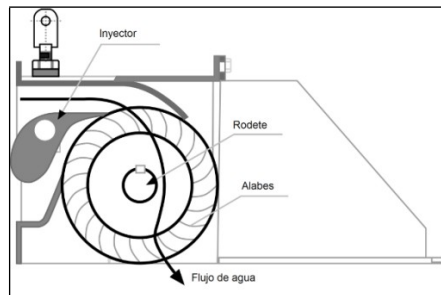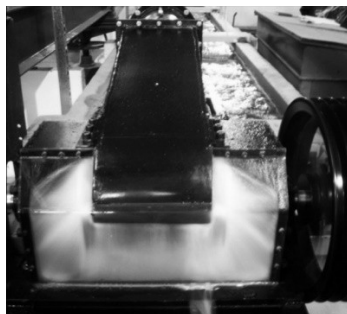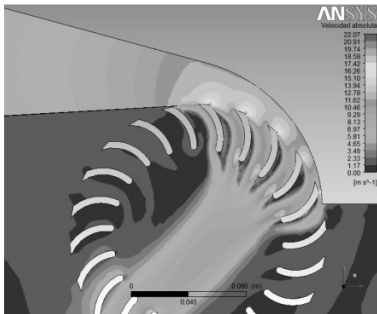    #                                                        /
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## MICROTURBINA AXIAL

$$E = \frac{U}{g}\left(C_{U1} - C_{U2}\right) \qquad [4]$$

$$E_{tot} = \frac{1}{2g}\left[\left(C_1{}^2 - C_2{}^2\right) + \left(W_{r2}{}^2 - W_{r1}{}^2\right)\right] \qquad [5]$$

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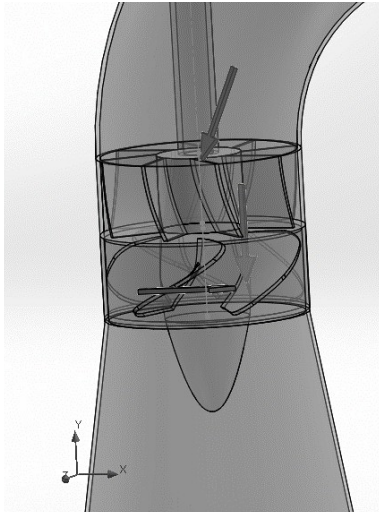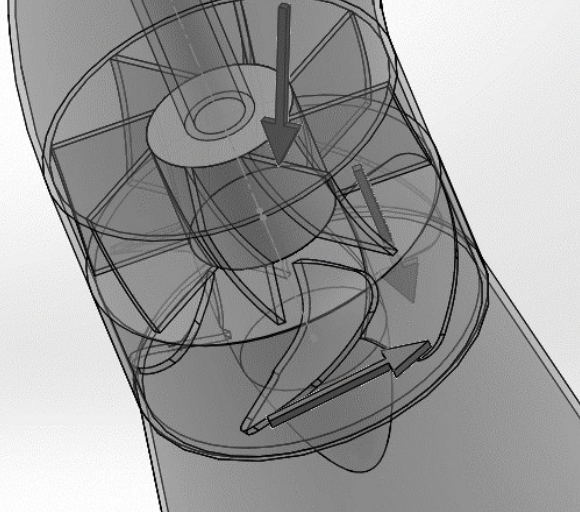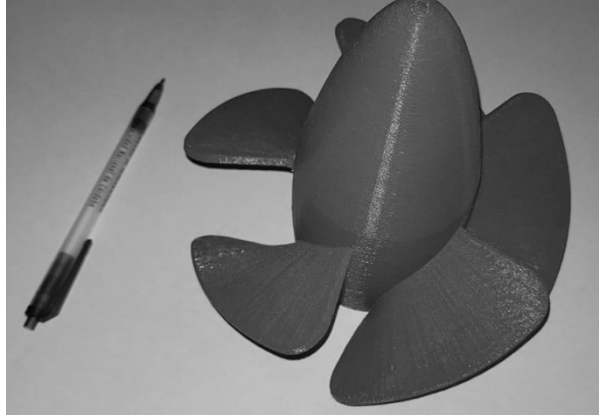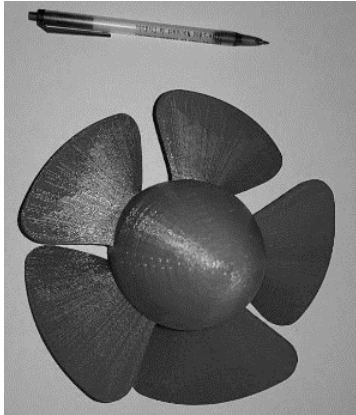
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$$E = \frac{U}{g}\left(C_{U1} - C_{U2}\right) \qquad [6]$$

$$E_{tot} = \frac{1}{2g}\left[\left(C_1{}^2 - C_2{}^2\right) + \left(W_{r2}{}^2 - W_{r1}{}^2\right)\right] \qquad [7]$$

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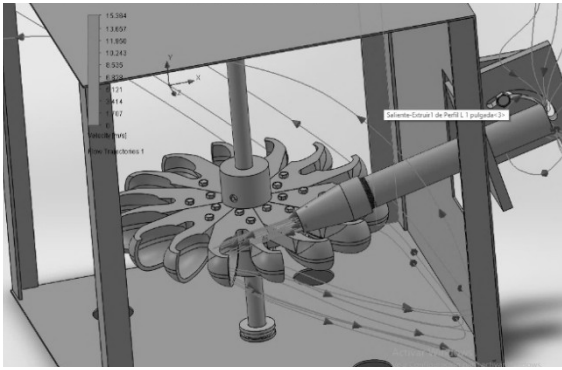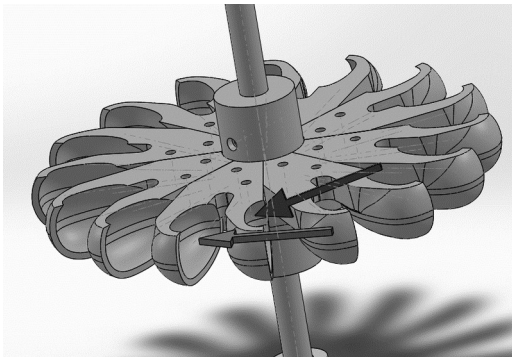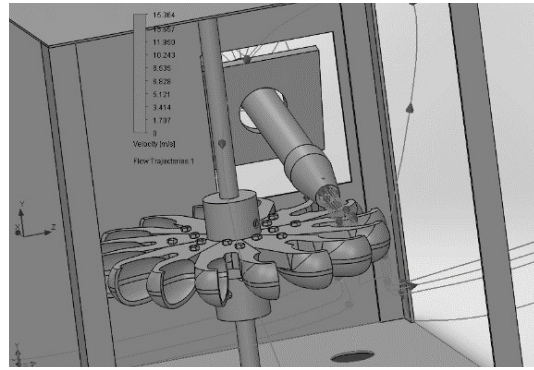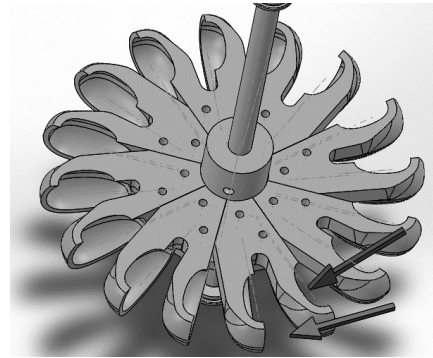
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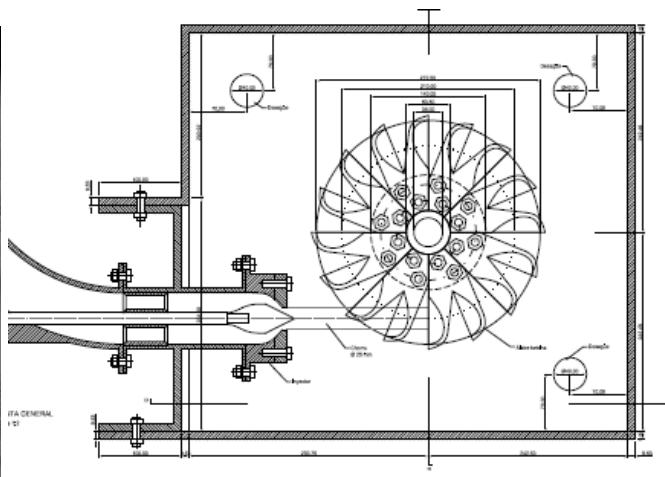


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CONCLUSIONES

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