

Question A ball mass  $m$  attach to a wire lenth  $l$  is rotate in a horizontal circle area of a wire is  $a$  and it's breaking straight is  $s$  maximum angular velocity is

Solution:

Centrifugal force is equal to elastic one, respectively  $m\omega^2 l \leq as$ , then  $\omega_{\max} = \sqrt{\frac{as}{ml}}$ .

The answer:

$$\omega_{\max} = \sqrt{\frac{as}{ml}}$$

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