Answer on Question #62328, Physics / Mechanics | Relativity

A garage mechanic uses a stroboscope to equilibrate a wheel. By decreasing the frequency of flashes, he observes that the wheel appears stationary for frequencies 60 Hz, 30 Hz, 20 Hz,... Calculate the frequency of the wheel.

Solution:

By decreasing the frequency of flashes, the wheel appears stationary for frequencies 60 Hz, 30 Hz, 20 Hz. The "truth or real" frequency wheel has of several multiple frequencies $\frac{1}{2}f$ and $\frac{1}{3}f$.

Thus, the wheel rotates with a frequency of 60 Hz.

Answer: 60 Hz.