

LICENSING OPPORTUNITY: CHRONOGRAPHY SYSTEM AND METHOD FOR PERFORMING REDUNDANT MEASUREMENT OF PROJECTILE VELOCITY

DESCRIPTION

Problem

Prior to this invention, the configuration of multiple chronographs that were used for testing of projectile speed introduced a velocity measurement uncertainty associated with the different separations between the light screens of the chronographs.

Invention

The invention is a design of new method of configuring multiple light screens (comprising both emitters and detector arrays) in both the entrance (start) plane and exit (stop) plane of a chronograph. This configuration of light screens allows multiple detector arrays to be located on either or both the start and stop planes and with nominally equal spacing between the start and stop planes. This configuration allows for redundant measurements of projectile velocity (speed), thereby decreasing the measurement uncertainty of speed. It solves the requirement for redundant measurements having nominally the same separation between the paired start and stop planes of a chronograph along the projectile trajectory.

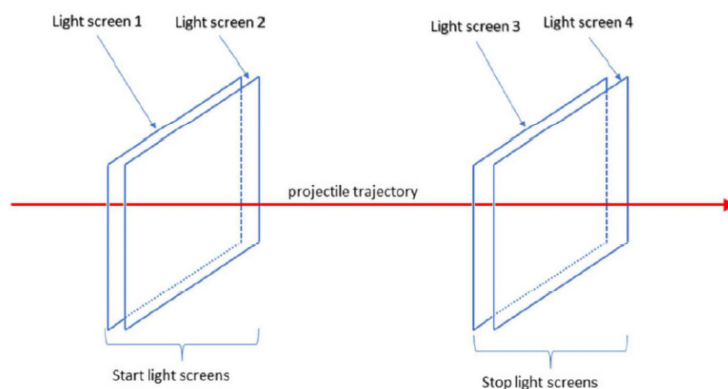
BENEFITS

Commercial Application

This invention reduces the velocity measurement uncertainty when using multiple chronographs for commercial testing of projectile speed, thereby improving the performance of a multi-chronograph system as described in ASTM International and National Institute of Justice (NIJ) documentary standards.

Competitive Advantage

The patent would improve testing lab capability, velocity measurement accuracy, and ensure product performance.



Traditional configuration of the Light Screens of a two-chronograph system.

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