Various embodiments, aspects and features of the present invention encompass a golf flag comprising retroreflective material. Certain embodiments may also comprise fluorescent materials useful for being easily seen from a distance. Because golfers using laser-based rangefinders naturally aim a rangefinder at a golf flag, as opposed to the flagstick upon which the golf flag is mounted, it is an advantage of the solution that the flag is configured to reflect a portion of the laser beam back to the rangefinder. In this way, embodiments of the solution work to ensure accurate distance measurements for users of a laser-based rangefinder.
REFLECTIVE GOLF FLAG FOR RANGE FINDING TARGET

BACKGROUND

[0001] The present invention relates to range finding solutions and, more particularly, to a reflective golf flag that may serve as a range finding target for a laser range finder. Low to mid-handicap golfers benefit from accurate distance calculations, as proper club selection for an approach shot to a green is highly dependent upon shot distance estimation. Consequently, range finding devices have become common equipment for many golfers.

[0002] Some rangefinders use a laser to determine a distance to a target. As would be understood by one of ordinary skill in the art, a laser-based rangefinder uses a laser beam to determine the distance to a target, such as a pin on a golf green. The most common form of a laser rangefinder operates on the time of flight principle by sending a laser pulse in a narrow beam towards the target and measuring the time taken by the pulse to be reflected off the target and returned to the rangefinder.

[0003] Laser rangefinders need a target that efficiently reflects the laser beam back toward the rangefinder. As such, prior art solutions in golf course applications rely on corner retroreflector devices integrated into, or removably mounted to, a flag stick or pin. Besides being expensive and prone to damage, retroreflector targets mounted to the pin have proven to be ineffective rangefinder targets due to the average golfer’s tendency to aim the rangefinder at the flag instead of the pin. Moreover, because pin-mounted retroreflectors are small targets not easily seen from a distance, even experienced golfers trying to aim a rangefinder at a pin may not be able to see where on the length of the pin to focus the aim.

[0004] Notably, laser rangefinders are only as accurate as the ability of the user to aim the rangefinder at the retroreflective target. Further, golfers have a tendency to aim a rangefinder at a flag that they can easily see, as opposed to the relatively thin pin upon which the flag is mounted. Therefore, there is a need in the art for a reflective golf flag that is useful as a target for laser rangefinders.

BRIEF SUMMARY OF THE INVENTION

[0005] Various embodiments, aspects and features of the present invention encompass a golf flag comprising retroreflective material. Certain embodiments may also comprise fluorescent materials useful for being easily seen from a distance. Because golfers using laser-based rangefinders naturally aim a rangefinder at a golf flag, as opposed to the flagstick upon which the golf flag is mounted, it is an advantage of the solution that the flag is configured to reflect a portion of the laser beam back to the rangefinder. In this way, embodiments of the solution work to ensure accurate distance measurements for users of a laser-based rangefinder.

[0006] An exemplary embodiment comprises a flagstick tube, a flag body, and a retroreflective portion operable to perform as a target for a laser-based rangefinder. The retroreflective portion may be associated with any one or more of the flagstick tube, one or more cantons of the flag body, a charge of the flag body, and an edging element of the flag body. The retroreflective material may comprise microscopic glass beads. The flag body may comprise a luminescent material.
presented in a fluorescent or luminescent material. As would be understood by one of ordinary skill in the art, a golf flag comprising fluorescent material would react with ultraviolet ("UV") light and emit it back out in the visible spectrum for the benefit of a rangefinder user. As such, accurately targeting an embodiment of the solution that comprises fluorescent material may be more easily done during daylight hours when the flag appears relatively brighter due to UV light excitation.

What is claimed is:

1. A golf flag configured to function as a laser rangefinder target, the golf flag comprising:
   a flagstick tube;
   a flag body; and
   a retroreflective portion operable to perform as a target for a laser-based rangefinder.
2. The golf flag of claim 1, wherein the retroreflective portion is associated with the flagstick tube.
3. The golf flag of claim 1, wherein the retroreflective portion is associated with one or more cantons of the flag body.
4. The golf flag of claim 1, wherein the retroreflective portion is associated with a charge of the flag body.
5. The golf flag of claim 1, wherein the retroreflective portion is associated with an edging element of the flag body.
6. The golf flag of claim 1, wherein the retroreflective portion comprises microscopic glass beads.
7. The golf flag of claim 1, wherein the flag body comprises a luminescent material.

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