CLAIMS

1. A method of authenticating a magnetically induced mark (1) applied on a substrate (2) and comprising a zone with a plane layer of a material including magnetically oriented partially reflective platelet-shaped magnetic or magnetizable pigment particles (6), with a portable device equipped with a light source (5) operable to deliver visible light, an imager (4), a processor and a memory, wherein the zone of the magnetically induced mark comprises a first zone including magnetically oriented partially reflective platelet-shaped magnetic or magnetizable pigment particles (6), which ~~are~~ orientation is tilted at a first angle to a first direction being parallel to the plane layer, the method comprising:

- disposing the imager of the portable device facing the zone of the magnetically induced mark;
- illuminating the first zone of the magnetically induced mark with the light source and taking a plurality of digital images of the illuminated first zone with the imager being for each different digital image at a corresponding distinct viewing angle θ with respect to said first zone, by moving the imager above the magnetically induced mark in said first direction of the orientation of the magnetic or magnetizable pigment particles and parallel to the plane layer;
- for each digital image of the illuminated first zone, calculating, with the processor, a corresponding average intensity I of the light (8) reflected by the partially reflective platelet-shaped magnetic or magnetizable pigment particles and collected by the imager at corresponding viewing angle θ;
- storing the calculated average intensities of the reflected light and corresponding viewing angles to obtain a reflected light intensity curve I(θ);
- comparing the stored reflected light intensity curve I(θ) with a stored reference reflected light intensity curve $I_{ref}(\theta)$ for magnetically induced mark, and
- determining whether the magnetically induced mark is genuine based on a result of the comparison.

2. The method according to claim 1, further comprising

- calculating a rate of change of the reflected light intensity curve I(θ) to determine an angular value and corresponding intensity peak value of the curve;
- comparing the calculated angular value and the intensity peak value with a stored reference angular value and intensity peak value for said magnetically induced mark, respectively,

wherein determining whether the magnetically induced mark is genuine is further based on a result of said comparison.

3. The method according to claim 1, further comprising

- calculating a variance of the reflected light intensity over said zone of the magnetically induced mark from the acquired digital images;

- comparing the calculated variance with a reference value of the variance for said magnetically induced mark,

wherein determining whether the magnetically induced mark is genuine is further based on a result of said comparison.

4. The method according to any one of claims 1 to 3, further comprising reading a geometrical reference pattern, the geometrical reference pattern at least partially overlapping the zone of the magnetically induced mark and being in the form of an encoded mark selected from encoded alphanumeric data, one-dimensional barcode, two-dimensional barcode, QR-code (12) or datamatrix.

~~6~~5. The method according to any one of preceding claims, wherein the zone of the magnetically induced mark comprises ~~a~~the first zone including magnetically oriented partially reflective platelet-shaped magnetic or magnetizable pigment particles (6), which are co-parallel in the first direction, and a second zone with partially reflective platelet-shaped magnetic or magnetizable pigment particles (6') which orientation is tilted at a second angle to a second direction being parallel to the plane layer, different from the first direction~~, and the method further comprises:~~

~~illuminating the second zone of the magnetically induced mark with the light source and taking a plurality of digital images of the illuminated second zone with the imager being for each different digital image at a corresponding distinct viewing angle θ with respect to said second zone, by moving the imager above the magnetically induced mark in said second direction of the orientation of the magnetic or magnetizable pigment particles and parallel to the plane layer;~~

~~for each digital image of the illuminated second zone, calculating, with the processor, a corresponding average intensity I of the light (8) reflected by the partially reflective platelet-shaped magnetic or magnetizable pigment particles and collected by the imager at corresponding viewing angle θ, storing the calculated average intensities of the reflected light and corresponding viewing angles to obtain a reflected light intensity curve I(θ), and comparing the stored reflected light intensity curve I(θ) with a stored reference reflected light intensity curve I_{ref}(θ) for magnetically induced mark, wherein determining whether the magnetically induced mark is genuine is further based on a result of said comparison~~.

~~7~~6. The method according to any one of preceding claims, wherein the portable device is a smartphone (3) or tablet.

~~8~~7. A non-transitory computer-readable medium comprising computer code parts executable by a processor to cause a portable device equipped with a light source (5) operable to deliver visible light (7) and an imager (4), to perform the method of any of claims 1 to ~~7~~6.