What is claimed is:

1. A method for inspection of rotational components, the method comprising:

based on successive frames of a plurality of video frames of the rotational components in motion, each video frame having a plurality of pixels, ascertaining a plurality of optical flow images for the video frames respectively by ascertaining a plurality of motion vectors of the pixels, wherein the successive video frames include a plurality of camera views;

based on the optical flow images, partitioning each video frame into a plurality of regions, wherein the partitioning is performed according to similar magnitudes and angles of the motion vectors of the pixels;

based on regions having substantially same optical flow characteristic and rotational component location, ascertaining a plurality of region pairs for the successive video frames and performing feature matching for the region pairs;

ascertaining a subset of the region pairs which correspond to a subset of the video frames having at least camera motion;

based on the feature matching of the subset of the region pairs, ascertaining a transformation matrix for the subset of the region pairs; and

based on the transformation matrix, performing mapping of a plurality of defect trajectories of each camera view to a subsequent camera view, wherein the plurality of camera views includes the subsequent camera view.

2. The method of claim 1, further comprising:

based on similarity of images of defects on each rotational component which correspond to a same one of the defect trajectories in each camera view and the subsequent camera view, ascertaining the defects as distinct defects or same defect.

3. The method of claim 2, further comprising:

for each rotational component, based on the ascertained distinct defects or same defect, ascertaining a count of distinct defects thereon.

4. The method of any one of claim 1 to claim 3, wherein the defect trajectories include ellipse-based trajectories.

5. The method of any one of claim 1 to claim 4, wherein ascertaining the subset of the region pairs which correspond to the subset of the video frames having the at least camera motion includes:

excluding some of the region pairs which include abnormal illumination and/or smooth region.

6. The method of any one of claim 1 to claim 5, wherein ascertaining the subset of the region pairs which correspond to the subset of the video frames having the at least camera motion includes:

classifying the optical flow images and thereby ascertaining some of the optical flow images having the at least camera motion.

7. A system for inspection of rotational components, the system comprising:

a memory device storing a plurality of video frames; and

a computing processor communicably coupled to the memory device and configured to:

based on successive frames of the plurality of video frames of the rotational components in motion, each video frame having a plurality of pixels, ascertain a plurality of optical flow images for the video frames respectively by ascertaining a plurality of motion vectors of the pixels, wherein the successive video frames include a plurality of camera views;

based on the optical flow images, partition each video frame into a plurality of regions according to similar magnitudes and angles of the motion vectors of the pixels;

based on regions having substantially same optical flow characteristic and rotational component location, ascertain a plurality of region pairs for the successive video frames and perform feature matching for the region pairs;

ascertain subset of the region pairs which correspond to a subset of the video frames having at least camera motion;

based on the feature matching of the subset of the region pairs, ascertain a transformation matrix for the subset of the region pairs;

based on the transformation matrix, perform mapping of a plurality of ellipse-based trajectories of each camera view to a subsequent camera view, wherein the plurality of camera views includes the subsequent camera view.

8. The system of claim 7, wherein the computing processor is further configured to:

based on similarity of images of defects on each rotational component which correspond to a same one of the ellipse-based trajectories in each camera view and the subsequent camera view, ascertain the defects as distinct defects or same defect.

9. The system of claim 8, wherein the computing processor is further configured to:

for each rotational component, based on the ascertained distinct defects or same defect, ascertain a count of distinct defects thereon.

10. The system of any one of claim 7 to claim 9, wherein the defect trajectories include ellipse-based trajectories.

11. The system of any one of claim 7 to claim 10, wherein the computing processor is configured to ascertain the subset of the region pairs which correspond to the subset of the video frames having the at least camera motion by being further configured to:

exclude some of the region pairs which include abnormal illumination and/or smooth region.

12. The system of any one of claim 7 to claim 11, wherein the computing processor is configured to ascertain the subset of the region pairs which correspond to the subset of the video frames having the at least camera motion by being further configured to:

classify the optical flow images and thereby ascertaining some of the optical flow images having the at least camera motion.

13. A non-transitory computer-readable medium having computer-readable code executable by at least one computing processor to perform the method according to any one of claim 1 to claim 6.