What is claimed is:

1 Coated ~~(1) comprising a~~ body having ~~a surface to be coated onto which~~ a hard and wear resistant PVD coating ~~is deposited~~, said coating comprising a nanolaminated structure (5) of alternating A- and B-nanolayers wherein the A-nanolayers have element composition $(Al_xTi_{1-x-y}W_y)N$, with $0.50 \leq x \leq 0.65$ and $0 \leq y \leq 0.10$, where the coefficients given by x, 1-x-y and y correspond to the atomic concentration of aluminum, titanium and tungsten, respectively, considering only the elements aluminum, titanium and tungsten for the element quantification in said A-nanolayers, and the B-nanolayers have composition $(Ti_{1-z-u}Si_zW_u)N$, with $0.05 \leq z \leq 0.30$ and $0 \leq u \leq 0.10$, where the coefficients given by 1-z-u, z and u correspond to the atomic concentration of titanium, silicon and tungsten, respectively, considering only the elements titanium, silicon and tungsten for the element quantification in said B-nanolayers, with an average individual thickness of the A- and B-nanolayers between 1 and 200 nm, respectively, **characterized in that** said nanolaminated structure ~~(5)~~ of alternating A- and B- nanolayers exhibits a fine-grained structure, said fine-grained structure being characterized by exhibiting in SEM micrographs of fractured cross sections of the coating a microstructure free of columns and by comprising grains whose largest size is 1/3 of the overall thickness of the nanolaminated structure.

2. Coated body according to claim 1 **characterized in that** said nanolaminated structure is or comprises an equiaxed structure in which the grains have approximately the same dimensions in all directions.

6. Method for manufacturing a coated body having ~~at least a surface coated with~~ a coating comprising a nanolaminated structure ~~(5)~~ of alternating A nano-layers consisting of at least 90 at.-% AlTiN and B nano-layers consisting of at least 90 at.-% TiSiN, wherein at least two arc vaporization sources are used for the deposition of the nanolaminated structure ~~(5)~~ on the substrate surface to be coated, **characterized in that**

- each one of the at least two arc evaporation sources comprises a magnetic field arrangement provided on a target for generating magnetic fields on and above the target surface, wherein the magnetic field arrangement comprises marginal permanent magnets, a centric permanent magnet and at least one ring coil placed behind the target, whose inner diameter defined by the windings is smaller than or equal to, and in any case not considerably larger than the diameter of the target, and during the deposition of the nanolaminated structure the marginal permanent magnets are positioned away from the target, at a distance of several millimeters in relation to the target, in such a manner that the projection of the marginal permanent magnets onto the target surface is further away from the middle of the target surface by comparison to the projection of the ring coil onto the target surface, and the centric permanent magnet is positioned back away rear in relation to the target, and

- the target of one of the at least two arc evaporator sources comprises AlTi and the target of the another arc evaporator source comprises TiSi, and

- the distance between the permanent magnets and the target in each one of the at least two evaporation sources, are adjusted in such a manner that the nanolaminated film is deposited having a fine-grained microstructure which exhibits in SEM micrographs of fractured cross sections of the coating a microstructure free of columns.

7. Method according to claim 6 **characterized in that** the distance between the permanent magnets and the target is between 6 and 10 mm, preferably about 8 mm.

8. Method according to any of the claims 6 or 7 **characterized in that** a negative coil current is applied.

9. Method according to claim 8 **characterized in that** the applied coil current is between -0.1 and -1 A.

10. Method for manufacturing a coated body having ~~at least a surface coated with~~ a coating comprising a nanolaminated structure ~~(5)~~ of alternating A nano-layers consisting of at least 90 at.-% AlTiN and B nano-layers consisting of at least 90 at.-% TiSiN, wherein at least two arc vaporization source are used for the deposition of the nanolaminated structure ~~(5)~~ on the substrate surface to be coated, **characterized in that**

- each one of the at least two arc evaporation sources comprises a target used as a cathode, an anode arranged in the direct neighborhood of the cathode, and magnetic means for producing a magnetic field, whose streamlines are led to the anode, wherein the arc evaporators are operated by setting coil currents and arc currents, and

- the coil current in each one of the at least two evaporation sources, are adjusted in such a manner that the nanolaminated film is deposited having a fine-grained

microstructure which can be observed in SEM micrographs of fractured cross sections of the coating.

11. Method according to claim 10 **characterized in that** a positive coil current is applied.

12. Method according to claim 11 **characterized in that** the applied coil current is between 0.5 and 2 A.

13. Method according to any one of the preceding claims from 6 to 12 **characterized in that**

- one of the at least two arc evaporation sources comprises a composite target comprising as main components in atomic percentage aluminum and titanium, and at least this target is used as material source for the deposition of the A nano-layers, and

- one of the at least two arc evaporation sources comprises a composite target comprising as main components in atomic percentage titanium and silicon, and at least this target is used as material source for the deposition of the B nano-layers.

14. Method according to any of the claims 6 to 13 **characterized in that** the nanolaminated structure ~~(5)~~ is deposited in a coating chamber which at least during

the deposition of the nanolaminated structure ~~(5)~~ has a reactive atmosphere comprising as main component nitrogen.

15. Method according to claim 14 **characterized in that** at least during a part of the deposition of the nanolaminated structure

- the nitrogen partial pressure is between 4 and 7 Pa, and/or

- a negative DC bias voltage is applied to the body to be coated and has a value of between -20 and -60, and/or

- the body surface to be coated is maintained at a temperature not lower than 450 °C and not higher than 700 °C.