# CLAIMS

1. A fastener comprising:

a shaft having a cross-sectional profile having an entrance point at a first end and a head at a second end;

wherein the shaft has inscribed thereon a first thread profile in a first zone and a second zone, wherein the first thread profile is a thread forming thread profile shaped to generate internal threads having a predefined size in a nut member;

wherein the first zone begins at the entrance point and extends for approximately a first predefined number of thread pitches along the shaft, wherein a diameter of the first zone increases from the entrance point to the second zone;

wherein the second zone has a constant outer diameter and extends for approximately a second number of predefined thread pitches; and

a third zone having a second thread profile differing that (i) has thread height that is greater or lesser than a thread height of the first thread profile, and (ii) has a thread width that is lesser than that of the first thread profile if the thread height of the second profile is greater than the thread height of the first thread profile or has a thread width that is greater than that of the first thread profile if the thread height of the second profile is lesser than that of the first thread profile, and the second thread profile extending from a transition from the second zone along a substantial portion of the remainder of the shaft towards a bottom of the head, wherein the second thread profile is a thread locking thread profile and wherein the second thread profile has a predefined size based on knowledge of the predefined size of the internal threads to create a desired amount of mechanical interference between one or more flanks or tips of one or more threads of the second thread profile and the internal threads formed by the first thread profile in the nut member.

2. The fastener of claim 1, wherein the desired amount of mechanical interference between the one of more flanks of the first thread profile of the fastener and the nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is increased and the (ii) width of threads is narrowed such that the amount of predefined prevailing torque increases.

3. The fastener of claim 1, wherein the desired amount of mechanical interference between the one or more tips of the first thread profile of the fastener and the nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is increased and (ii) the width of threads is narrowed such that the predefined amount of prevailing torque decreases.

4. The fastener of claim 1, wherein the desired amount of mechanical interference between the one or more flanks of the first thread profile of the fastener and the nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is decreased and (ii) the width of threads is increased such that the predefined amount of prevailing torque increases.

5. The fastener of claim 1, wherein the desired amount of mechanical interference between the one or more tips of the first profile of the fastener and the nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is decreased and (ii) the width of threads is increased such that the predefined amount of prevailing torque decreases.

6. The fastener of claim 1, wherein the cross-sectional profile has three or more lobes.

7. The fastener of claim 6, wherein the desired amount of mechanical interference between the one or more tips of the first thread profile of the fastener and the nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile the height of threads is increased and the width of threads is narrowed such that the predefined amount of prevailing torque increases.

8. The fastener of claim 6, wherein the desired amount of mechanical interference between the one or more flanks of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and wherein for

the second thread profile relative to the first thread profile (i) the height of threads is increased and (ii) the width of threads is narrowed such that the predefined amount of prevailing torque decreases.

9. The fastener of claim 6, wherein the desired amount of mechanical interference between the one or more tips of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is decreased and (ii) the width of threads is widened such that the predefined amount of prevailing torque increases.

10. The fastener of claim 6, wherein the desired amount of mechanical interference between the one or more flanks of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and wherein the second thread profile relative to the first thread profile (i) the height of threads is decreased and (ii) the width of threads is increased such that the predefined amount of prevailing torque decreases.

11. A fastener comprising:

a shaft having a cross-sectional profile having an entrance point at a first end and a head at a second end, wherein the cross-sectional profile of the shaft transitions from a substantially non-circular cross section to a substantially circular cross section;

wherein the shaft has inscribed thereon a first thread profile in a first zone and a second zone, wherein the first thread profile is a thread forming thread profile shaped to generate internal threads having a predefined size in a nut member;

wherein the first zone begins at the entrance point and extends for approximately a first predefined number of thread pitches along the shaft, wherein a diameter of the first zone increases from the entrance point to the second zone;

wherein the second zone has a constant outer diameter and extends for approximately a second number of predefined thread pitches; and

a third zone having a second thread profile that (i) has a tread height that is greater or lesser than the thread height of the first thread, and (ii) has a thread width that is less than that of the first thread profile if the thread height of the second profile is greater than the thread height of the first thread profile or has a thread width that is

greater than that of the first thread profile if the thread height of the second profile is lesser than that of the first thread profile, and the second thread profile extending from a transition from the second zone along a substantial portion of the remainder of the shaft towards a bottom of the head, wherein the second thread profile is a thread locking thread profile and wherein the second thread profile has a predefined size based on knowledge of the predefined size of the internal threads to create a desired amount of mechanical interference between one or more flanks or tips of one or more threads of the second thread profile and the internal threads formed by the first thread profile in the nut member.

12. The fastener of claim 11, wherein the desired amount of mechanical interference between the one or more flanks of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is increased and (ii) the width of threads is narrowed such that the predefined amount of prevailing torque increases.

13. The fastener of claim 11, wherein the desired amount of mechanical interference between the one or more tips of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and wherein for the second thread profile relative to the first thread profile (i) the height of threads is increased and (ii) the width of threads is narrowed such that the predefined amount of prevailing torque decreases.

14. The fastener of claim 11, wherein the desired amount of mechanical interference between the one or more tips of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and for the second thread profile relative to the first thread profile (i) the height of threads is decreased and (ii) the width of threads is increased such that the amount of prevailing torque increases.

15. The fastener of claim 11, wherein the desired amount of mechanical interference between the one or more flanks of the first thread profile of the fastener and nut member generates a predefined amount of prevailing torque and wherein for

the second thread profile changes relative to the first thread profile (i) the height of threads is decreased and (ii) the width of threads is increased such that the predefined amount of prevailing torque decreases.