As used herein, the word "pitch" means the length of one complete turn of a strand measured along the main longitudinal axis of the elongate member.

The aforesaid dimension of the engaging means is desirably substantially equal to 67% or more of the pitch of the strands. The aforesaid dimension of the engaging means is desirably substantially equal to 75% or more of the pitch of the strands. The aforesaid dimension of the engaging means is desirably substantially equal to 100% or more of the pitch of the strands.

The clamping member may comprise a preliminary engaging projection to initially engage the elongate member. The preliminary engaging projection may comprise a tooth on the engaging means. The clamping member may comprise a plurality of the aforesaid preliminary engaging projections, such as three preliminary engaging projections. Each preliminary engaging projection may comprise a respective tooth.

The engaging means may comprise an engaging surface, which may have ~~with~~ a plurality of gripping formations. The gripping formations may comprise serrations, wherein each serration extends across the engaging surface.

The clamping member may be elongate, having a length and comprising front and rear regions, the front region leading the rear region when the clamping member is urged into engagement with the elongate member, and the front region being thinner than the rear region. The clamping member may be in the form of a wedge. The engaging means may have an engaging length which is between approximately three fifths and approximately three quarters of the length of the clamping member.

The front region of the clamping member may be convexly curved to facilitate engagement of the engaging means with the elongate member. The curvature may extend from the front region to the engaging means. The curvature of the front region may extend between approximately one quarter and approximately one third of the length of the clamping member.

The clamping member may be movable between a clamping position and a release position. The engaging means may be configured to grip the elongate member

In addition to the serrations 38, the engaging surface 14 also has two preliminary engaging projections 40 at the rear region 10B of the clamping member 10. The preliminary engaging projections 40 are provide to engage the elongate member 20 before the serrations 38, to provide purchase onto the elongate member 20 to prevent it from slipping before the elongate member 20 is engaged by the serrations 38.

It is desirable that clamping member 10 moves with the elongate member 20 during clamping of the elongate member 20 against the first wall 32. It is also desirable that the elongate member 20 can move relative to the clamping device ~~10~~ during the clamping of the elongate member onto the first wall.

In order to ensure that the clamping member 10 moves with the elongate member 20, the engaging surface 14 is provided with the aforesaid gripping formations in the form of the serrations 38. In order to ensure that the elongate member 20 can move relative to the clamping device 18, the first wall 32 is made to be smooth, to allow the elongate member 20 to slide over the first wall 32 until the elongate member 20 has been clamped thereto by the clamping member 10.

The elongate member shown in Figure 2 is a simplified representation of the elongate member, which is shown more clearly in Figure 3, and now described.

The elongate member 20 comprises six strands 22A, 22B, 22C, 22D, 22E and 22F. The strands 22A to 22F are helically wound around one another in a plurality of turns of each strand 22A to 22F. Each of the strands 22A to 22F has a pitch P. The elongate member 20 has a longitudinal main axis XX. The pitch P is the distance along the main axis XX of the elongate member 20 of one complete turn of one of the strands 22A to 22F. In Figure 3, the pitch of the strand 22A is shown, but it will be appreciated that the pitch of each other strand 22B to 22F is the same.

The clamping member 10 has a length L1 extending from the front region 10A to the rear region 10B. The engaging surface has a length L2, which is between

strands 22D, 22E and 22F. The broken lines A – D, B – E, and C – F show the points on the respective strands 22A and 22D, 22B and 22E, 22C and 22F that are opposite each other and hence engaged by either the clamping member 10 or the region of the first wall 32 aligned with the engaging surface 14.

Thus, with the use of a clamping member 10 with an engaging surface 14 that extends across three of the strands 22A to 22F, all of the strands are clamped by the clamping member 10 against the first wall 32.

Figure 5 shows an example of a clamping arrangement 100 comprising the features of the clamping arrangement 100 described above. The features shown in Figure 5 have the same reference numerals as the corresponding features shown in Figures 1 to 4. The clamping device ~~12~~ shown in Figure 5 also includes a release member for releasing the clamping member 10 from the elongate member 20.

In the embodiment shown in Figure 5, the release member comprises a screw 50 threadably secured to the rear region 10B of the clamping member 10. The clamping member 10 can be moved to its release position by pulling the screw 50 in the direction indicated by the arrow Y.

The embodiment of the clamping device 18 shown in Figure 5 has securing formations 52 to secure the clamping device ~~10~~ to a further article (not shown). Each securing formation 52 comprises a wing member 54 defining an aperture 56. Each wing member 54 extends outwardly ~~form~~ the housing 24 on opposite sides thereof. A fastening member such as a bolt can be received through each aperture 56 to secure the clamping device 18 to the article.

There is thus described a clamping member 10 that has an engaging surface 14 that is of such a length that all of the strands of a multi-strand elongate member 20 can be clamped by a clamping device. There is also described a clamping arrangement and a clamping device 18 that enables an elongate member to be clamped more firmly than prior art clamping devices, and reduces the risk of such clamping cutting through the elongate member 20.

20. A clamping arrangement according to any preceding Claim, wherein the clamping member is in the form of a wedge.

21. A clamping arrangement according to any preceding Claim, wherein the clamping device comprises a housing defining the passage, the clamping member being arranged in the housing

22. A clamping arrangement according to Claim 21, wherein the reaction member is fixed relative to the housing to provide the reaction against the elongate member received in the passage when the clamping member is urged along the passage to clamp the elongate member.

23. A clamping arrangement according to Claim 21 or 22, wherein the reaction member and the reaction element are arranged opposite one another and angled towards one another.

24. A clamping arrangement according to Claim 23, wherein each wall is part of the housing.

25. A clamping arrangement according to any of Claims 21 to 24, wherein the clamping device defines a pair of passages into each of which a respective region of the elongate member can be received.

26. A clamping arrangement according to ~~any of~~ Claim~~s 21 to 24~~, comprising two elongate members, wherein the clamping device defines a pair of passages into each of which a respective one of the elongate members can be received.

27. A clamping arrangement according to ~~any of~~ Claim~~s 21 to~~ 26, wherein the clamping device comprises a pair of clamping members, each of which is associated with a respective one of the passages, and the clamping device further including a pair of urging means, each of which is arranged to urge a respective one of the clamping members towards the passage with which it is associated.

28. A clamping arrangement according to ~~any of~~ Claim~~s 21 to~~ 27, wherein the clamping device comprises a single reaction member associated with both passages, the reaction member having two surfaces, and each surface providing a reaction against a respective elongate member in each passage.

29. A clamping arrangement according to any of Claims ~~21~~ to 28, wherein the clamping device comprises two reaction members, each being associated with a respective one of the passages.

In addition to the serrations 38, the engaging surface 14 also has two preliminary engaging projections 40 at the rear region 10B of the clamping member 10. The preliminary engaging projections 40 are provide to engage the elongate member 20 before the serrations 38, to provide purchase onto the elongate member 20 to prevent it from slipping before the elongate member 20 is engaged by the serrations 38.

It is desirable that clamping member 10 moves with the elongate member 20 during clamping of the elongate member 20 against the first wall 32. It is also desirable that the elongate member 20 can move relative to the clamping device 18 during the clamping of the elongate member onto the first wall.

In order to ensure that the clamping member 10 moves with the elongate member 20, the engaging surface 14 is provided with the aforesaid gripping formations in the form of the serrations 38. In order to ensure that the elongate member 20 can move relative to the clamping device 18, the first wall 32 is made to be smooth, to allow the elongate member 20 to slide over the first wall 32 until the elongate member 20 has been clamped thereto by the clamping member 10.

The elongate member shown in Figure 2 is a simplified representation of the elongate member, which is shown more clearly in Figure 3, and now described.

The elongate member 20 comprises six strands 22A, 22B, 22C, 22D, 22E and 22F. The strands 22A to 22F are helically wound around one another in a plurality of turns of each strand 22A to 22F. Each of the strands 22A to 22F has a pitch P. The elongate member 20 has a longitudinal main axis XX. The pitch P is the distance along the main axis XX of the elongate member 20 of one complete turn of one of the strands 22A to 22F. In Figure 3, the pitch of the strand 22A is shown, but it will be appreciated that the pitch of each other strand 22B to 22F is the same.

The clamping member 10 has a length L1 extending from the front region 10A to the rear region 10B. The engaging surface has a length L2, which is between

strands 22D, 22E and 22F. The broken lines A – D, B – E, and C – F show the points on the respective strands 22A and 22D, 22B and 22E, 22C and 22F that are opposite each other and hence engaged by either the clamping member 10 or the region of the first wall 32 aligned with the engaging surface 14.

Thus, with the use of a clamping member 10 with an engaging surface 14 that extends across three of the strands 22A to 22F, all of the strands are clamped by the clamping member 10 against the first wall 32.

Figure 5 shows an example of a clamping arrangement 100 comprising the features of the clamping arrangement 100 described above. The features shown in Figure 5 have the same reference numerals as the corresponding features shown in Figures 1 to 4. The clamping device 18 shown in Figure 5 also includes a release member for releasing the clamping member 10 from the elongate member 20.

In the embodiment shown in Figure 5, the release member comprises a screw 50 threadably secured to the rear region 10B of the clamping member 10. The clamping member 10 can be moved to its release position by pulling the screw 50 in the direction indicated by the arrow Y.

The embodiment of the clamping device 18 shown in Figure 5 has securing formations 52 to secure the clamping device 18 to a further article (not shown). Each securing formation 52 comprises a wing member 54 defining an aperture 56. Each wing member 54 extends outwardly from the housing 24 on opposite sides thereof. A fastening member such as a bolt can be received through each aperture 56 to secure the clamping device 18 to the article.

There is thus described a clamping member 10 that has an engaging surface 14 that is of such a length that all of the strands of a multi-strand elongate member 20 can be clamped by a clamping device. There is also described a clamping arrangement and a clamping device 18 that enables an elongate member to be clamped more firmly than prior art clamping devices, and reduces the risk of such clamping cutting through the elongate member 20.

20. A clamping arrangement according to any preceding Claim, wherein the clamping member is in the form of a wedge.

21. A clamping arrangement according to any preceding Claim, wherein the clamping device comprises a housing defining the passage, the clamping member being arranged in the housing

22. A clamping arrangement according to Claim 21, wherein the reaction member is fixed relative to the housing to provide the reaction against the elongate member received in the passage when the clamping member is urged along the passage to clamp the elongate member.

23. A clamping arrangement according to Claim 21 or 22, wherein the reaction member and the reaction element are arranged opposite one another and angled towards one another.

24. A clamping arrangement according to Claim 23, wherein each wall is part of the housing.

25. A clamping arrangement according to any of Claims 21 to 24, wherein the clamping device defines a pair of passages into each of which a respective region of the elongate member can be received.

26. A clamping arrangement according to Claim 25, comprising two elongate members, wherein the clamping device defines a pair of passages into each of which a respective one of the elongate members can be received.

27. A clamping arrangement according to Claim 25 or 26, wherein the clamping device comprises a pair of clamping members, each of which is associated with a respective one of the passages, and the clamping device further including a pair of urging means, each of which is arranged to urge a respective one of the clamping members towards the passage with which it is associated.

28. A clamping arrangement according to Claim 25, 26 or 27, wherein the clamping device comprises a single reaction member associated with both passages, the reaction member having two surfaces, and each surface providing a reaction against a respective elongate member in each passage.

29. A clamping arrangement according to any of Claims 25 to 28, wherein the clamping device comprises two reaction members, each being associated with a respective one of the passages.