Patents Act 1977 **Opinion Number** **05/16**

OPINION UNDER SECTION 74A

Patent	GB 2431336 B
Proprietor(s)	The Heightec Group Limited
Exclusive Licensee	
Requester	The Heightec Group Limited
Observer(s)	Singing Rock s.r.o.
Date Opinion issued	06 May 2016

The Request

1. The Comptroller has been requested to issue an opinion as to whether the Timber II harness manufactured by Singing Rock s.r.o would infringe GB 2431336 B (the patent). The patent was granted on 2 December 2008 and remains in force. The request was made by the proprietor The Heightec Group Limited.

2. Observations were received from Singing Rock and the requester filed observations in reply.

The Product

3. The Timber II harness which is the subject of the request is a harness similar to those used for climbing but designed particularly for supporting a wearer whilst working at height suspended from a rope, most particularly an arborist working in a tree.

4. The product is illustrated in figures 1 and 2 below, which I have annotated to identify the significant components.

5. It will be seen to comprise a main belt (A) which attaches round the wearer's waist and two thigh loops (B). The thigh loops are connected to the main belt by metal loops and webbing straps (C). A bridge piece (D) connects these webbing straps and in the centre of the bridge piece a D-ring (E) is provided to which the suspending rope is attached. Figure 2 more clearly shows the connection between the bridge piece and the webbing straps, from which it will be noted that the webbing straps (C) comprise a lower section (C') connected between a thigh loop and a metal shackle (G) and an upper section (C'') connected between the metal shackle (G) and the main belt. The upper webbing strap section (C'') also has a buckle (F). It should be noted that the central D-ring (E) is not attached to the main

belt as may be suggested by the figures[1].

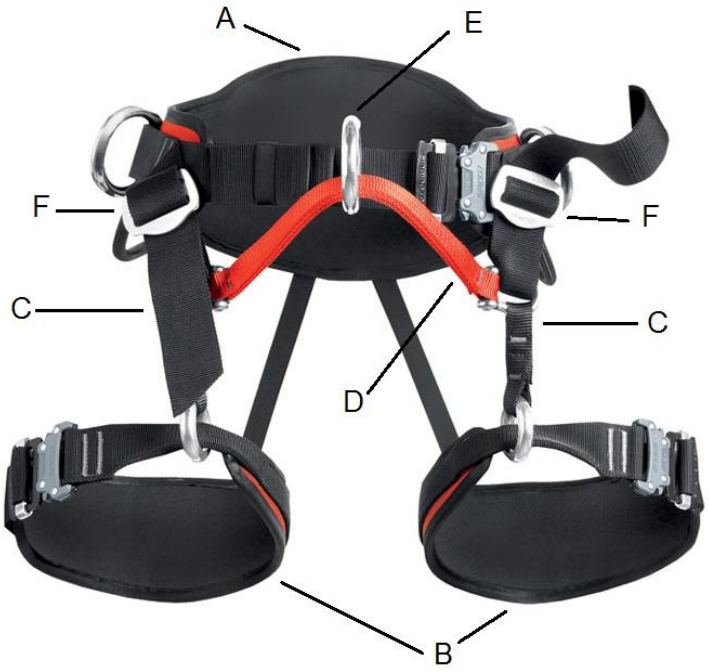

Figure 1 - Timber II Harness - overview

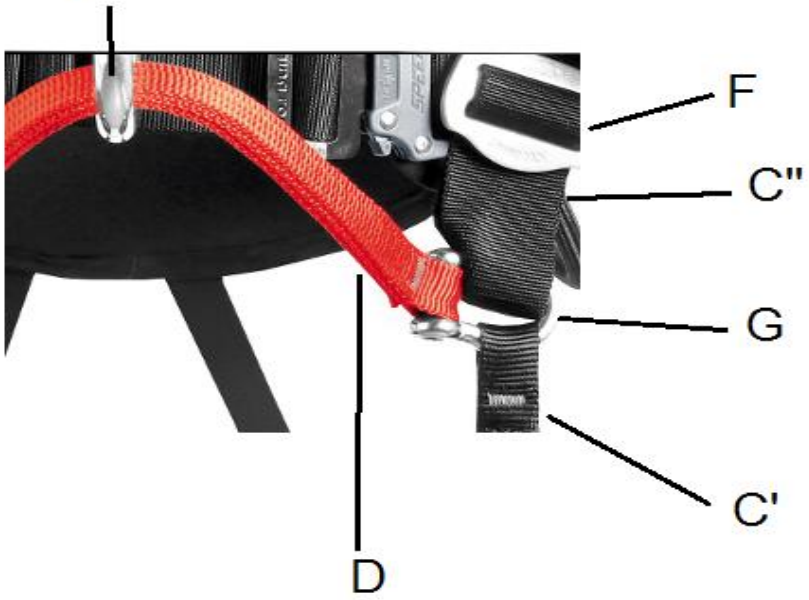

Figure 2 – Timber II Harness - detail

Observations

6. The initial observations in relation to claim 1 consist of a statement that the claim is not new and several examples are provided to apparently back up this statement.

[1] See, for example. www.youtube.com/watch?v=zNeCPTe3w14

However, this opinion is restricted to the question of infringement and I cannot take into account observations directed to the validity of the patent. Accordingly I must ignore these observations. I must similarly ignore the observations in reply which refute the statement made in the observations about the novelty of claim 1. Any party wanting an opinion on the validity of the patent must file a new request accompanied by an appropriate statement and evidence. No inference regarding the validity of the patent should be drawn based on the issuing of this opinion.

7. Further observations regarding infringement are made and I shall take these into account as necessary.

Infringement

8. Section 60 Patents Act 1977 (the Act) governs what constitutes infringement of a patent; Section 60(1) relates to direct infringement and reads as follows:

> *(1) Subject to the provisions of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -*
> *(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;*
> *(b) where the invention is a process, he uses the process or he offers it for use in the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;*
> *(c) where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.*

9. In order to decide whether there is any infringement of the patent I must determine whether the Timber II harness has all the features set out in the claims of the patent. In the first instance I only need to consider claims 1 and 6. Claims 2 to 5 are dependant claims and only if I find claim 1 infringed do I need to consider them. Claim 6 is an omnibus type claim which is specifically referred to in the request.

The Patent

10. The patent is directed to a suspension harness to be worn by a person working at height and suspended by a rope attached to the harness. Figures 2 and 3 of the patent illustrate the harness and are reproduced below as figure 3.

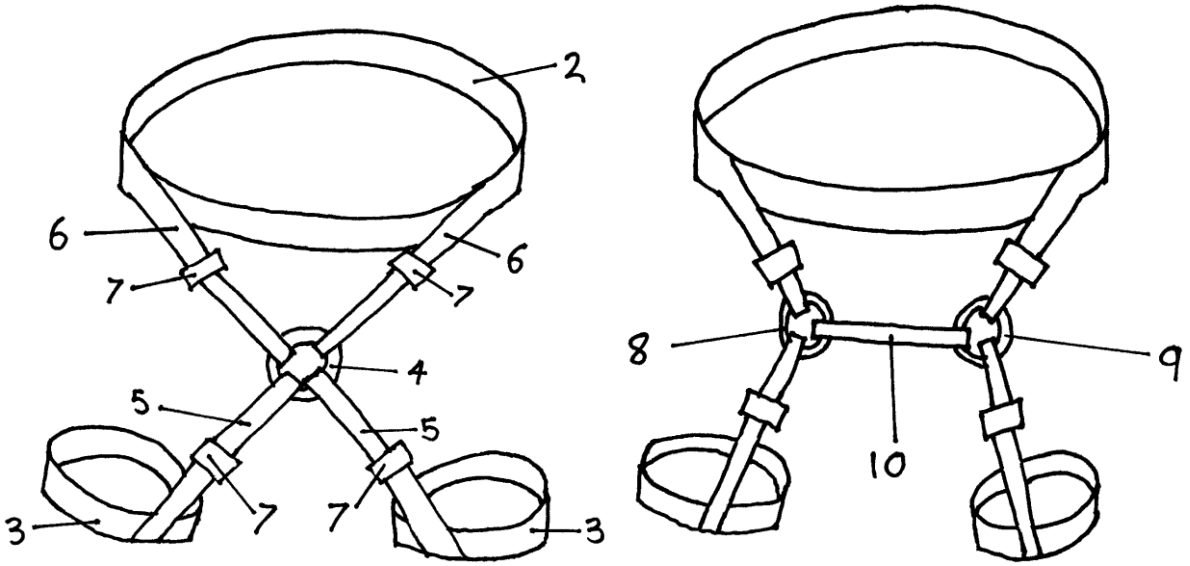

Figure 3 –Figures 2 & 3 of the patent showing embodiments of the harness

11. The harness of the patent comprises a belt (2) and two leg loops (3). Connecting elements (5, 6) extend between the leg loops and the belt, and an attachment point (4, 10) is provided for attaching the rope from which the harness is suspended. Adjustment means (7) are provided on the connecting elements. The adjustment means allow for the attachment point to be adjusted with respect to the wearer. The patent teaches that this allows the harness to be adjusted for people of different builds or body sizes. So, for example, with a prior art harness a wearer of small build and a low centre of gravity will be held in an upright position and a wearer of large upper body build will have a high centre of gravity and may not receive adequate support. The adjustment means allows the attachment point to be adjusted to take account of the differences in the position of the centre of gravity of the wearer so that the harness provides appropriate support to enable the wearer to work comfortably whilst suspended and to reduce fatigue.

12. This is reflected in claim 1 which requires (the letters a to g being added to denote the various features for ease of reference):

> *1. A suspension harness comprising*
>
> *a) a plurality of strap portions adapted to secure the harness to a wearer's body,*
>
> *b) an attachment member being provided on the harness for connection to a rope or safety line,*
>
> *c) the attachment member being adjustably mounted on the harness, whereby,*
>
> *d) in use, the vertical position of the attachment member with respect to the centre of gravity of the wearer can be varied;*

e) the harness comprising a belt portion adapted to extend around the waist of the wearer

f) and first and second leg portions, each leg portion defining a closed loop adapted to extend around a respective thigh portion of the wearer;

g) the attachment member being mounted on connection portions extending between the belt portion and first and second leg portions.

Claim Construction

13. The claims must be construed purposively following the well known House of Lords authority on claim construction *Kirin-Amgen v Hoechst Marion Roussel and others*[2]. This requires that I put a purposive construction on the claims, interpreting them in the light of the description and drawings as instructed by Section 125(1) and take account of the Protocol to Article 69 of the EPC. Simply put, I must decide what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.

14. Section 125(1) of the Act states:

> *For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.*

15. The Protocol on the Interpretation of Article 69 of the EPC (which corresponds to section 125(1)) states:

> *Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties.*

16. The person skilled in the art is considered to be harness designer, particularly of harnesses to suspend a person from a rope whilst working at height.

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[2] *Kirin-Amgen v Hoechst Marion Roussel and others* [2005] RPC 9.

17. The majority of the claim is considered to be straightforward to construe and may be construed as read. However, feature (d) is more problematic and requires further analysis.

18. Firstly, feature (d) requires that *in use* the vertical position of the attachment member with respect to the centre of gravity of the wearer can be varied. When the harness is in use the wearer would be suspended from a rope and the centre of gravity of the wearer would be generally vertically below the attachment point. V*ertical* adjustment when in this orientation will not have the same effect as that envisaged in the patent which describes vertically adjusting the position of the attachment member to take account of the different build or body size of the wearer.

19. In this instance it seems that *in use* is not to be construed as in use when being worn and suspended by a rope, but in use should be construed as the harness being worn by a person prior to being suspended.

20. The patent does refer more generally to adjusting the attachment point with respect to the harness. See, for example, page 3, lines 6 to 10. However, I consider that the patent identifies that there is a need to provide a harness which is adjustable to take into account different wearers having higher and lower centres of gravity as described on page 1, lines 11 to 15. The corresponding solution taught by the patent is to enable the attachment point to be moved up or down a person's body, i.e. vertically when they are standing generally upright, to a sufficient degree to enable the harness to provide adequate support to wearers having different centres of gravity.

21. This interpretation is also considered to correspond with the description on page 3, lines 15 to 22 of the patent which discusses how the support provided by the harness is changed when the belt connecting elements (6) are shortened and the leg connecting elements (5) are simultaneously lengthened, or vice versa.

22. Additionally, following the *principles of claim construction* outlined by the courts[3], I cannot ignore the word *vertical* in this part of the claim. In particular principle (g) specifies:

> *(g) It follows that if the patentee has included what is obviously a deliberate limitation in his claims, it must have a meaning. One cannot disregard obviously intentional elements.*

23. I therefore construe feature (d) as requiring that the position of the attachment member with respect to the centre of gravity of the wearer can be varied in a generally vertical direction when the harness is being worn and the wearer is standing generally upright.

24. Secondly, in relation to feature (d) it is noted that a person's centre of gravity is not rigidly fixed and varies as they move their limbs. In particular, the centre of gravity will differ dependant on whether the person's legs are straight with respect to their trunk or whether they are in a seated position.

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[3] See *Mayne Pharma v Pharmacia Italia SpA* [2005] EWCA Civ 137

25. However, this is not an issue if I adopt the construction above, whereby it is based on the ability to move the attachment point up and down a person's body when that person is standing generally upright.

Analysis

26. The Timber II harness is considered to comprise features (a) to (c) and (e) to (g) of claim 1 as set out above. Indeed this harness is generally similar to the embodiment illustrated in figure 3 of the patent save that it has only one pair of adjustment buckles (F – figures 1 and 2 above) rather than two pairs. In particular, feature (a) is considered to be self evident. The attachment member of feature (b) is the bridge (D) in accordance with the description[4] and this is mounted to the webbing straps (C) such that feature (g) is also satisfied. The bridge is adjustable by virtue of the adjustable webbing straps (C'') and this corresponds to feature (c). The belt (A) and thigh loops (B) correspond to features (e) and (f) of the claim.

27. The question I must then decide is whether having a single pair of buckles is sufficient to meet the requirements of feature (d) of claim 1 as I have construed it.

28. In answering this question, I note that the lower webbing straps (C') are not adjustable so that there is no adjustment between the thigh loops (B) and the attachment point (D), and the amount of vertical adjustment up/down a wearer's body will accordingly be limited.

29. Adjustment of the buckles (F) of the Timber II harness will cause the metal shackles (G), where the bridge attaches to the webbing (C), to move in three dimensions. In part the metal shackles (G) will move towards or away from each other. This will cause a corresponding movement of the lower webbing straps (C') around the thigh loops, these straps being free to move around the leg loops to a certain extent. It is noted that this cannot be replicated in the harness illustrated in the patent because the connecting elements appear to be fixed in position on the leg loops.

30. This adjustment also results in the formation of a respectively taller or shorter arch in the bridge piece. As the bridge piece is considered to be the attachment point, this could be interpreted as a potential vertical adjustment. However, any variation solely in the height of the arch does not affect the support provided by the harness and is equivalent to a lengthening or shortening of the rope from which the wearer is suspended in use. Because it does not affect the degree of support, I do not consider it appropriate to take account of this variation when deciding whether or not the harness has feature (d) of the claims as it does not reflect the purpose of the invention. In deciding whether or not there is vertical adjustment of the attachment point I need to consider whether there is vertical adjustment of the ends of the bridge piece, i.e. the metal shackles (G) to which the bridge pieces attaches.

31. The adjustment of the upper webbing strap will change the shape of a notional triangle formed by the metal shackles (G) (the apex) and the points where the webbing straps attach to the belt and the leg loops. The size and shape of this triangle affects the support provided by the harness. In use the harness will rotate about the apex of this notional triangle so that the centre of gravity lies generally

[4] Page 3, line 25 specifies "the strap (1) forming the attachment point."

vertically below it and the lengths of the straps will determine the orientation of the wearer. This is illustrated in the photographs attached to the request[5] where the lengthening of the upper strap effectively causes the body to recline.

32. The adjustment is therefore adjustment with respect to the centre of gravity of a wearer and it affects how a wearer is supported and whether they are supported in an upright or more supine position.

33. When a user is suspended by the harness, the nature of the three dimensional movement of the metal shackles (G), as a result of adjustment of the buckle, will also lead to changes in the position of these shackles in a direction towards or away from a wearer's body, and in their position up and down a wearer's body.

34. The Requester argues in their statement:

> *"Adjusting the buckles (F) will vary the height of the attachment member in relation to the waist section of the harness...*
>
> *"It may be noted that the Timber II does not contain adjustment in the straps between the leg sections and the rings connecting the attachment member. Although this feature increases the precision with which the harness may be adjusted it is not required to achieve the function as defined in claim 1. This is illustrated in the photographs below where only the attachment member waist straps were adjusted."*

35. The arguments in response in the observations are found under the heading *claim two* and they state:

> *"Said non-adjustable connection between the shackle and leg loop portion makes the possibility of varying the vertical position of the attachment member with respect to the centre of gravity of the wearer impossible. And we see this point crucial for the whole patented solution to achieve the function described in the description part."*

36. The observations in reply on this point merely claim:

> *"A non-adjustable connection between each leg strap portion and the attachment member does not make the function of varying the height of the attachment member with respect to the wearer's centre of gravity impossible. This is illustrated in the original statement supplied with the request for opinion."*

37. I have not found the evidence and arguments especially helpful in determining whether or not there is any vertical movement of the metal shackles to which the ends of the bridge piece attach.

38. The requester's arguments and the photographs in the request do not seem to me to deal explicitly and specifically with the ability to move the attachment point vertically with respect to a wearer whilst standing. Although the request refers to being able to vary the height of the attachment member, it is not clear which height they are

[5] Reproduced as Appendix 1.

referring to, whether it is the height while in use suspended from a rope or being worn prior to being suspended. Additionally the photographs provided show what happens to the patented harness and not the Timber II harness.

39. In contrast the observer argues that varying the vertical position of the attachment member is impossible because of the non-adjustable connection between the thigh loops and the shackle. This however seems to be an over-simplification. It seems to me that the lower webbing straps will rotate about the thigh loops to an extent and this rotation and the resultant three-dimensional movement of the metal shackles will inevitably result in a degree of vertical movement.

40. Having considered the issue carefully I consider that there will be three-dimensional movement of the shackles, and that such three-dimensional movement includes vertical movement. The extent of the vertical movement is dependent on the length of the upper webbing straps. In other words, the vertical position of the attachment member can be varied such that it meets the requirements of feature (d) of claim 1 as I have construed it.

41. The photographs accompanying the request show the harness of the patent being adjusted in a similar way to the Timber II harness, i.e. having only one pair of buckles adjusted. On close inspection of the photographs it is possible to determine some movement of the attachment member in a direction parallel to the body of the wearer which would correspond to a vertical movement when in an upright orientation. Whilst this is not the Timber II harness I consider a similar movement would nevertheless occur. Furthermore, I am cautious about relying solely on these photographs as there may be other factors which affect their interpretation, such as differing camera viewpoints. Nevertheless, I believe they support my conclusion that the vertical position of the attachment member can be varied.

42. I therefore conclude that the Timber II harness does have all the features of claim 1 as I have construed it, and falls within its scope. Relevant actions in relation to the patent are therefore infringing. In particular, the offering for sale in the UK and the importation into the UK of the Timber II harness infringe claim 1 of the patent.

43. Having found that claim 1 is infringed, I will also need to consider claims 2 to 5 which are dependent claims.

44. Claim 2 requires (amongst other things):

> *... a first strap member extending between the first leg portion and the attachment member, a second strap member extending between the second leg portion and the attachment member, and at least one further strap member extending between said attachment member and the belt portion, the length of each of the first, second and further strap portions being adjustable..*

45. In order therefore to fall within the scope of claim 2, the straps between the leg loops and the attachment member have to be adjustable. As the lower webbing straps (C') of the Timber II harness are not adjustable it does not fall within the scope of claim 2.

46. Claim 3 is dependent on claim 2 and claims 4 and 5 are dependent on claim 3. As the Timber II harness does not fall within the scope of claim 2, it does not fall within

the scope of any of these claims either.

47. The request also covers claim 6 which is an omnibus claim as follows:

> *6. A harness substantially as herein described with reference to the accompanying drawings.*

48. Claims written in this form are construed narrowly based on the embodiments disclosed and illustrated[6]. The embodiment of figure 3 of the Patent is of particular relevance. Nevertheless, I consider it to be clear that this embodiment has four adjustable buckles for adjusting the harness with respect to the centre of gravity of the wearer. For any item to infringe claim 6 based on this embodiment, it must also have four such adjustable buckles. As the Timber II harness has only two relevant adjustable buckles it does not fall within the scope of claim 6 and it does not infringe claim 6 either.

Opinion

49. Based on the evidence and arguments before me I consider that the Timber II harness falls within the scope of claim 1. Accordingly it is my opinion that the offering for sale in the UK and the importation into the UK of the Timber II harness infringe GB 2431336.

Matthew Jefferson
Examiner

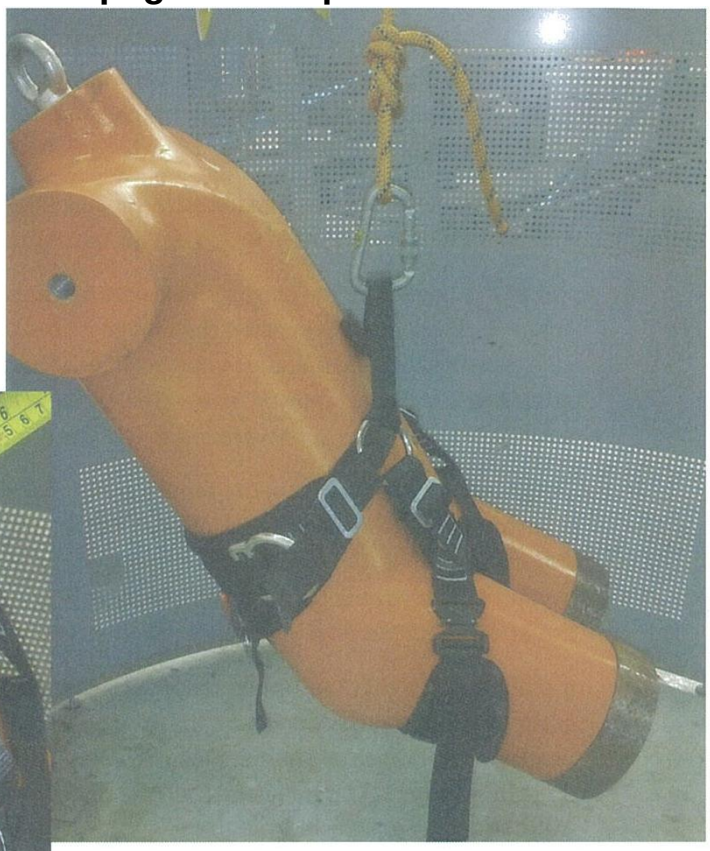
NOTE

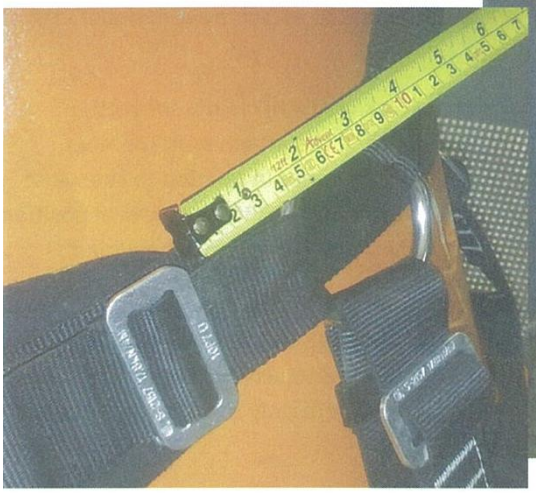
This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.

[6] See Manual of Patent Practice section 14.124.

Appendix 1 – Photographs from page 3 of requester's statement

Waist adjustment strap 45mm. Smaller angle between suspension rope and chest, wearers centre of gravity higher.





Waist adjustment strap 90mm. Larger angle between suspension rope and chest, wearers centre of gravity lower.