

**OPINION UNDER SECTION 74A**

Patent	GB 2455958
Proprietor(s)	James Fisher MFE Limited
Exclusive Licensee	
Requester	James Fisher MFE Limited
Observer(s)	Deep C Group
Date Opinion issued	10 August 2018

**The request**

1. The comptroller has been requested to issue an opinion as to whether GB 2455958 (the patent) is infringed by a product named Deep C Blower (the product) produced by Deep C Group. Despite submitting that “*the Product falls within the scope of at least claim 1 of the Patent*” the request only comments upon claim 1 of the patent and I shall do the same.
2. Observations have been received from Curo AS on behalf of Deep C Group and observations in reply have been received from Marks & Clerk LLP on behalf of the requester, who is also the patent proprietor.

**The patent**

3. Filed as a Patent Cooperation Treaty application on 26 November 2007 with a priority date of 29 November 2006, the patent was granted with effect from 20 July 2011 and remains in force.
4. The invention is entitled “Underwater excavation apparatus” and is concerned with a subsea mass flow excavation system. Several embodiments are illustrated, the first of which is shown in figures 3(a) to (c):

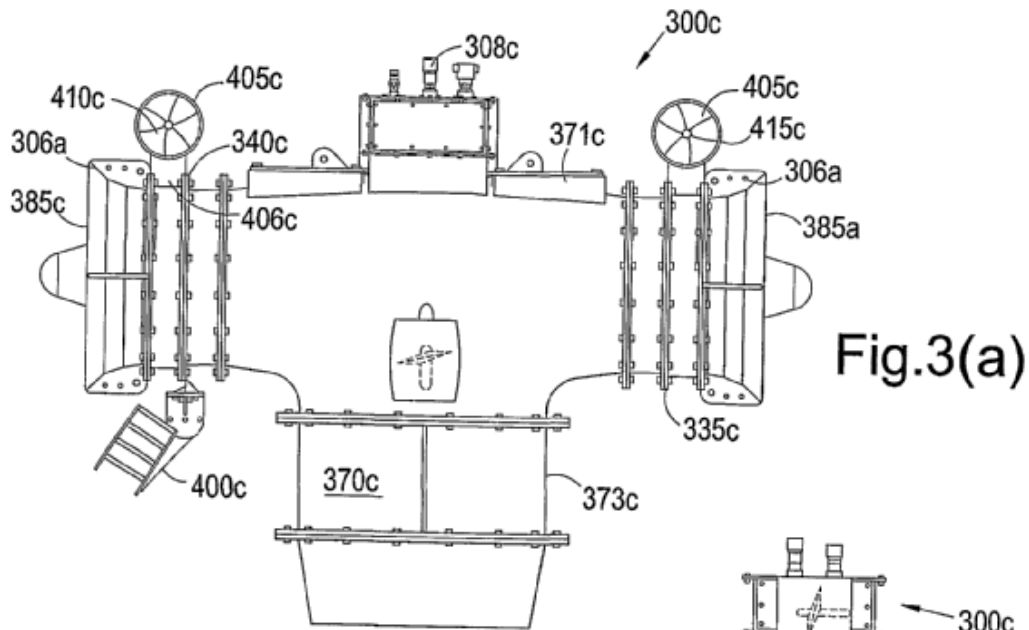


Fig.3(a)

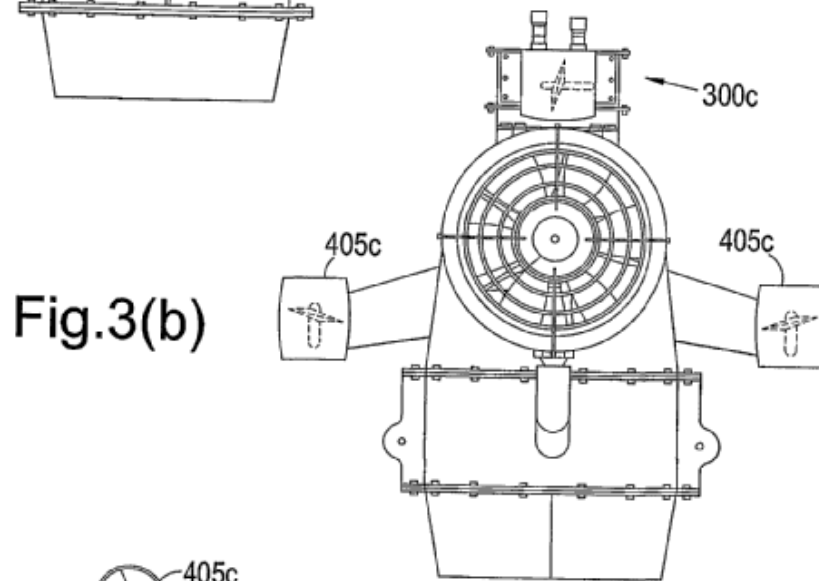


Fig.3(b)

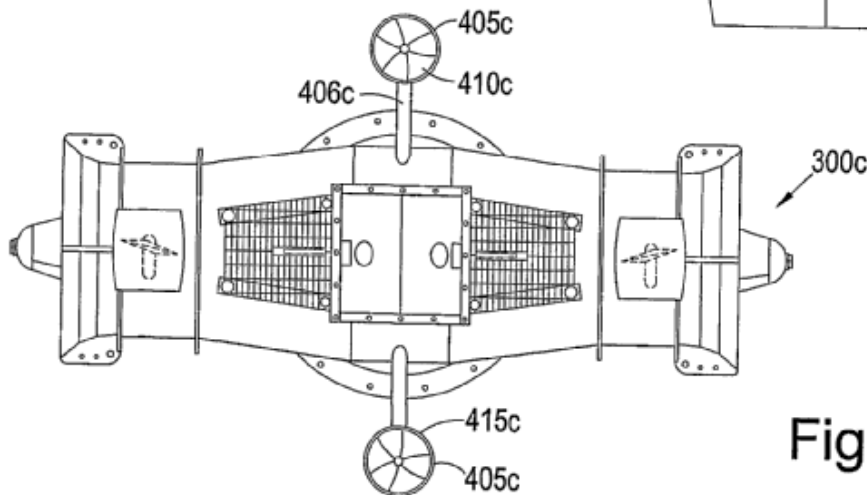


Fig.3(c)

5. This shows underwater excavation apparatus 300c which comprises a hollow body 370c formed from a pair of horizontally opposed inlet ducts 371c and an outlet duct 373c. Within the body 370c and not visible in these figures are a drive motor provided along an axis common to the horizontally opposed inlet ducts 371c and a pair of impellers which draw water into the hollow body 370c via the inlet ducts 371c and direct the water through the outlet duct 373c and towards the sea bed.

Suspension brackets 306a enable the apparatus to be suspended from a surface vessel. To quote from pages 12 and 13 of the patent, starting at line 20 on page 12:

*... The apparatus 300c also comprises at least one means 405c for moving the underwater excavation apparatus, the at least one moving means 405c being provided on or adjacent to the underwater excavation apparatus 300c.*

*The at least one moving means 405c comprises means for orientating, positioning, rotating (e.g. in use, around at least one substantially vertical axis, and at least one substantially horizontal axis), counteracting reactive torque and/or steering the apparatus 300c.*

*The moving means 405c is capable of moving the apparatus 300c:  
forward and/or backward;  
to one side and/or to another side;  
up and/or down;  
rotationally around a vertically extending axis in one and/or another direction rotatably around at least one (or two perpendicular) horizontally extending axis (axes) in one and/or another direction.*

*The/each moving means 405c allows for required achievement and maintenance of a desired position/orientation of the apparatus.*

*The moving means causes, in use, one or more jets of fluid, e.g. of the underwater fluid.*

*The moving means 405c comprises a plurality of moving means 405c, connected to the apparatus 400c by connection means 406c, such as brackets, arms or the like.*

*In this arrangement the moving means 405c comprises a pair of moving means 405c, which are substantially symmetrically disposed on or adjacent to the apparatus 405c. The pair of moving means 405c are disposed at or adjacent an upper surface of the apparatus 300c, and at or near adjacent ends of the apparatus 300c. The apparatus 300c further comprises a further pair of moving means 405c placed on a respective sides of the apparatus 300c.*

*The Applicant has termed the/each moving means 405c as a "thruster".*

*The/each moving means 405c comprises an impeller/propeller/blade 410c. The/each moving means 405c also comprises a body 415c having a through passage, e.g. a hollow cylindrical body. The/each respective impeller 410c is mounted in the respective cylindrical body 415c for rotation around a longitudinal axis of the through passage.*

## **Claim construction**

6. Firstly I need to construe claim 1 of the Patent, that is to say I must interpret it in the light of the description and drawings as instructed by Section 125(1). In doing so I must interpret the claim in context through the eyes of the person skilled in the art. Ultimately the question is what the person skilled in the art would have understood the patentee to be using the language of the claim to mean.
7. Section 125(1) of the Act states that:

*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.*

8. Claim 1 of the patent reads as follows:

*1. An underwater excavation apparatus comprising a hollow body having at least one pair of inlets and at least one outlet, at least one pair of impellers rotatably mounted in the hollow body, means for driving the impellers, and at least one means for moving the underwater excavation apparatus, the at least one moving means being provided on or adjacent to the underwater excavation apparatus.*

9. The only parts of claim 1 whose construction seems to be in issue are “*at least one pair of inlets*” and “*at least one pair of impellers*”. The observations from Curo AS on behalf of Deep C Group suggest that “*symmetry and arrangement in pairs [of inlets and impellers] are common denominators for GB 2455958 B1*”. Whilst it is true that the embodiments shown in the patent include arrangements of inlets and impellers that are both symmetrical and arranged in pairs, I can see nothing from the patent to suggest that these are essential features of the invention. It seems to me that “*at least one pair of inlets*” in claim 1 should not be taken to mean that the inlets must be arranged in any particular way, such as in pairs and/or symmetrically. The same is true of the impellers.

## **Infringement**

10. Section 60 Patents Act 1977 governs what constitutes infringement of a patent; Section 60(1)(a) in particular concerns infringement where the invention is a product and reads:

*Subject to the provision 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;*

11. In the Supreme Court in *Actavis v Eli Lilly*<sup>1</sup> Lord Neuberger stated that the problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, i.e. the person skilled in the relevant art. Those issues are:

*(i) does the variant infringe any of the claims as a matter of normal interpretation; and, if not,*

*(ii) does the variant nonetheless infringe because it varies from the invention*

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<sup>1</sup> *Actavis UK Limited and others v Eli Lilly and Company* [2017] UKSC 48

*in a way or ways which is or are immaterial?*

12. If the answer to either issue is “yes”, there is infringement; otherwise there is not.
13. The request alleges that Deep C Group infringes the patent by virtue of “*making, importing, disposing of, offering to dispose of, using or keeping of a product*”, namely the Deep C Blower. There is no evidence supplied of the circumstances in which any or all of these actions took place, for example where or when the product was made, etc. However, the observations on behalf of Deep C Group do not deny doing any or all of the things specified in Section 60(1) in the United Kingdom while the patent was in force. I take it therefore that the only question I need to consider is whether the product meets the requirements of claim 1. If it does meet those requirements then my opinion must be that there is infringement.
14. Details of the product have been supplied with the request in the form of eight colour photographs, a copy of a page from Deep C group’s website, a video available on YouTube (RTM) at <https://www.youtube.com/watch?v=qflhXACNETI> and two stills taken from that video. The observations filed on behalf of Deep C Group have not taken issue with any of these details and I will assume that they all relate to the product. The request acknowledges there are some differences between the product in the photographs and that on the webpage and in the stills. Since Deep C Group have not raised any concerns over the differences I will take it that they are not significant to my opinion.
15. The alleged infringing article as a whole is shown in Annex 3:



16. The mid section of the product in Annex 3 is shown in more detail in Annex 7:



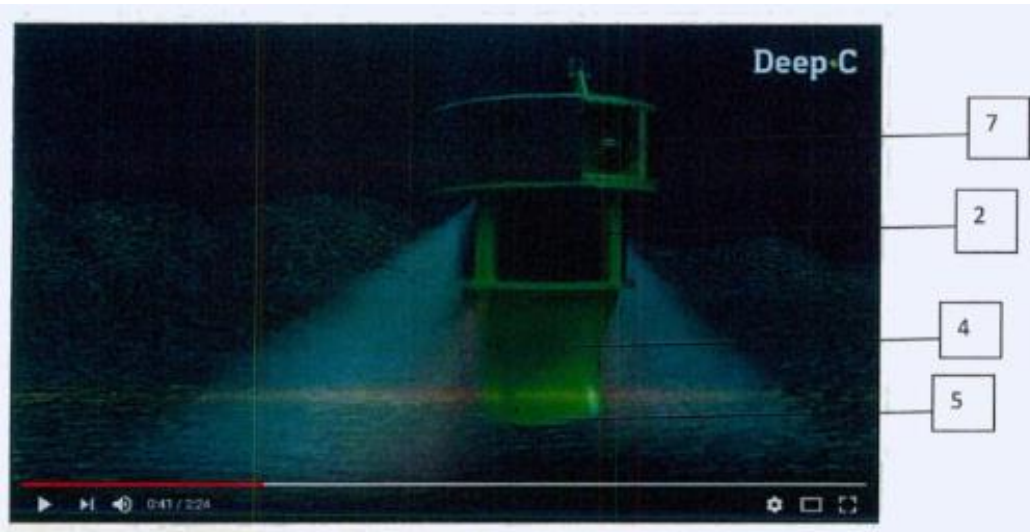
17. It seems to be common ground that this mid section forms an inlet to the number of blue housings marked as reference 3 in Annex 7, which housings each contain an impeller marked as reference 6 in Annex 6:



18. At the base of the product are a number of outlets marked as reference 5 in Annex 1:



19. Not apparent from the photographs is an impeller in the upper part of the product. This can be seen clearly approximately 40 seconds into the video and is marked as reference 7 in a still at Annex 10, although it is less clearly visible than in the video itself. An inlet is also shown in Annex 10 marked as reference 2:



20. In terms of claim 1 the product shown is an underwater excavation apparatus comprising a hollow body. It clearly has an inlet and a number of outlets, i.e. at least one outlet. In their observations Deep C Group dispute that the inlet to the product forms “*at least one pair of inlets*” since they believe that there is a single inlet, although they acknowledge that it is “*sectioned in five due to strength considerations ...*”. They also construe “*at least one pair of inlets*” in the claim as requiring inlets arranged in pairs and argue that this requirement is not met. In the request it is further argued that if reference 2 does not meet the requirement for “*at least one pair of inlets*” then the blue housings 3 provide the inlets required. I agree with the

observations on behalf of Deep C Group that the region marked 2 does not provide multiple inlets, merely a single inlet area. There are structural members bridging the region 2 (see Annex 7 above), however I do not feel that these result in multiple inlets. That said, I agree with the requester that the blue housings 3 form multiple inlets to the hollow body. I do not accept that these need to be arranged in pairs to form “*at least one pair of inlets*” as required by claim 1. To be clear, I believe that the top parts of the blue housings 3 form “*at least one pair of inlets*”.

21. It follows that the impellers found within the blue housings 3 provide “*at least one pair of impellers rotatably mounted in the hollow body*”. I do not accept the contention from Deep C Group that claim 1 somehow requires that these impellers must be arranged in pairs or symmetrically. There is no explicit disclosure of “*means for driving the impellers*”, but I agree with the request that these are understood to be present for the impellers to fulfil their intended function.
22. Finally the video and Annex 10 show “*at least one means for moving the underwater excavation apparatus, the at least one moving means being provided on or adjacent to the underwater excavation apparatus*” in the form of an impeller, reference 7.
23. Thus it is my view that the Deep C Blower product meets all of the requirements of claim 1 of the patent and hence infringes claim 1 as a matter of normal interpretation.

## **Opinion**

24. In my opinion the product shown in the annexes to the request infringes claim 1 of the patent.

Karl Whitfield  
Examiner

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## **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.*