Examiners Report 2017
FD4 – Infringement and Validity

Patent Examination Board

Introduction

The background to this year's paper was, perhaps, a little more complicated than in previous years. The client was said to be an exclusive licensee under the patent in suit and may have had equitable title to the patent by virtue of an agreement to assign. The background did not bear heavily on the award of marks but did allow better candidates to extract the relevant information and apply the background to the conclusions.

That said, as in previous years, the client has a successful business, the profits of which are starting to be eroded by the entry in t the market of a competing product.

In the circumstances the candidate's task was to provide solutions to help the proprietor, so far as possible.

The underlying technology was simple – a sprinkler system to fight fires, the sprinkler system having a breakable bulb which contained more than one 'fluid' to give a better reaction time than had previously been envisioned.

The patent itself was a relatively long document with a single independent Claim and five dependent Claims. The dependent Claims were short and none had multiple dependencies.

This year there were two potentially infringing articles – the SPRINKL-EEZE Pro and the SPRINKL-EEZE Lite. Only the bulbs of each version were described in any detail - the frame for each potential infringement shared common features and were described in a single paragraph.

As previously, there were two pieces of patent prior art to consider (Documents C and D). Document C did contain two separate embodiments (a 'Standard Bulb' and a 'Bespoke Bulb'). Only one was described in any detail. Document D described a single embodiment. It was believed that the prior art documents clearly set out the points of interest.

Again this year, feedback was received from candidates which stated that the exam is 'time pressured'. As with the previous year's exam, most candidates were able to provide their thoughts on each section of the paper. As with previous years, the best candidates appear to be able to score highly on all sections of the paper.

The paper allowed the best candidates to demonstrate that they were able to understand the salient points, apply a consistent thought process and provide sound advice to help satisfy the client's aims.

As for last year's paper, the examiners can only speculate that many candidates were either taking the exam without adequate preparation, too early, or both. Candidates who do so clearly and consistently do not meet the requirements of the assessment criteria.

Candidates are reminded that if they do not attempt all of the sections, or if they provide a cursory attempt on, say, inventive step, they are unlikely to meet the assessment criteria and pass the paper.

The overall standard of handwriting was generally satisfactory this year. Candidates are again reminded that it is difficult to award marks if the answer script is not clearly written and legible.

It is often easier to mark scripts where candidates write on alternate lines and clearly space the answers provided.

It is also easier to mark scripts where candidates provide an annotated copy of the Claims indicating how they have broken down the Claims.

The pass rate this year was just over 41%. The pass rate was not statistically different to that for the 2016 paper.

Construction

The patent to be construed was a granted UK patent with a single independent Claim and five dependent Claims.

Once more, candidates are reminded that the Construction section is the forum for candidates to explain what each of the important terms in each Claim actually mean in the context of the patent – it is not an opportunity to re-state the claimed features in alternate language or in a different word order. Basis for the construction arrived at should be provided from the materials available.

The key to construction of Claim 1 related to the thermally responsive member and what it contained.

Many candidates, in breaking down the Claims stated that the term 'thermally responsive member' included both 'fusible solder links' and 'frangible glass bulbs' as a consequence of what is said in the patent. Such a conclusion is illogical as it ignores the subsequent portion of the Claim which requires that the thermally responsive member contains fluids. Such conclusions come about through relying on an integerised approach which breaks the Claim down into small parts without considering the Claim language as a whole.

The thermally responsive member was said to contain two fluids, at least one of which will expand to break the thermally responsive member (which again implies a frangible glass bulb).

The construction point to be answered was the nature of the two species; bluntly, did it include the air pocket.

The examiners preferred the interpretation that the air pocket was not to be included as one of the species on the basis that (i) it was acknowledged prior art (see Beloit v Valmet [1995] RPC 705), (ii) it was preferable but impossible to avoid including the air pocket, and (iii) it does not interfere with the operation of the bulb. That said, candidates who took the view that fluids did include the air bubble were not penalised.

The 'actuation time' feature appeared to exercise a lot of candidates with some spending an inordinate amount of time providing upper and lower ranges for 12s and 7s. Given that the Claim required a time of 'less than 12s' and 'less than 7s' this appeared inappropriate.

Most candidates spotted the lack of antecedence in Claim 1 for 'one of the species'. This then caused some candidates difficulty is respect of what was meant by 'fluids' earlier in the Claim. The preferred construction was that 'species' meant 'fluids'.

On the whole, candidates scored reasonably well on this section.

Claim 2 was handled reasonably well although a few candidates seemed to find difficulty in maintaining a consistent approach between the construction of Claim 1 and Claim 2.

Claim 3 was addressed fairly well on the whole. Most candidates discussed the lack of antecedence for 'third species', were able to resolve the 'first and third species' point and were able to construe the terms used.

Claim 4 had some similar issues to Claim 3 insofar as it mentioned 'first and second *liquids*'. The best candidates were able to address this point.

Claim 5 required candidates to consider whether terms in the claims were actual limitations. For example, depending on the construction of 'thermally responsive member' was 'glass bulb' an actual limitation. The Claim also called for a construction of relative terms 'upper' and 'lower' which were resolvable in relation to the installation direction of the bulb.

Claim 6 appeared to cause a few candidates a great deal of difficulty. This was surprising. Those candidates sought to construct the Claim as if there was a requirement that the glass bulb was internally subdivided, for which there appeared to be no basis in the patent.

All-in-all the construction section was answered reasonably well and candidates scored relatively highly on this section. 19 marks were available.

Infringement

The situation specifies that the new company, Bulb-us, is selling both the Pro version and the Lite version. The client has analysed the Pro version and confirms that it is as shown in the press release.

Although there were two potentially infringing articles, there was a great deal of commonality between them, specifically in relation to the frame features of the sprinkler. Accordingly, candidates could pick up marks with little additional work between the two versions.

The main issue for most candidates was whether the solid plastic plug was indeed a fluid. It was clear that the plastics plug was solid at room temperature and that it was liquid above its melting point (ca 60°C). What was required was a clear reasoning as to the conclusions reached. Candidates who considered that the air pocket was one of the 'fluids' in the construction section had no trouble in finding that the Pro version infringed (based on water and air as the fluids). Other candidates were able to convincingly demonstrate that the plastics plug was a fluid at the actuation temperature and so found that the Pro version did indeed meet this integer (whether or not the air pocket was included).

The Lite version required the same analysis and was open to a finding of non-infringement if the air pocket was not considered to be one of the fluids.

The actuation time of both the Pro and Lite versions required some analysis.

For the Pro version, the reaction time was 'very flat' from 80 to 100°C, *e.g.* was around 1s at 91°C. It must be the case that if the reaction time is 1 s at 100°C, it will not be longer at 120°C and so the upper temperature requirement was met. For the lower temperature requirement, it was perhaps less possible to make a clear prediction and so (even though it would appear likely to be met) it was appropriate to consider testing an actual article (which the client has in hand).

For the Lite version, similar considerations apply.

The examiners preferred outcome was that the Pro version was found to infringe Claim 1 and that the Lite version was not (based on the lack of two species). Candidates were awarded marks for consistently applying their construction to the issue of infringement. Claim 2 appeared to present little difficulty.

Claims 3 and 4 required candidates to think about what was happening in the Pro version and extract some basic physical principles from the words used in the press release, *i.e.* the immiscibility of PC and water, relative boiling points/densities etc.
Claims 5 and 6 appeared to offer little difficulty.

This year there were 19.5 marks available, basically due to the two infringing articles.
On the whole the infringement section appeared to present little difficulty to candidates. As in prior years, some candidates did not achieve the marks that they might have because they indicated by a cross or a tick if the particular integers were present. It is essential that candidates both indicate that a feature is shown in the infringement and say where it is in the document.

Candidates are reminded that points are available for stating conclusions (whether in each section or at the end of the paper) and these should not be missed.

It was expected that Claims 1-4 would be found to be infringed by the Pro version and none of the Claims by the Lite version.

Novelty

There were two documents to be considered, an extract from a catalogue (Document C) and a British patent application (Document D). Both documents were very modest in size with limited amounts of technical information.

The publication date of Document C was clearly stated on the page.

Document C did disclose two separate embodiments, the Standard Bulb and the Bespoke Bulb. The examiners expected candidates to discard the Bespoke Bulb from their novelty analysis on the grounds that it lacked enablement. The Bespoke bulb entry was very speculative, stated that it was prepared by new (and undisclosed) filling technology and a corresponding bulb was never commercialised (client letter). That said, there were marks to be gathered for discussing the lack of enablement, and some of the technical features, as well as the lack of prior use.

The section on the Standard bulb did not discuss a frame. It did state that the bulbs were 'usable with a frame' and the best candidates were able to consider whether or not this was an anticipation.

Further consideration had to be given to the actuation time and whether the features of the Claim were met. The examiners expected that candidates would not find that Claim 1 lacked novelty over Document C.

Claim D disclosed all of the features of the system. The major point for consideration related to the use of air as one of the fluids. Candidates that did not consider the air pocket to be one of the fluids were able to take the (examiner's preferred) position that Document D did not anticipate the Claim.

With regards the actuation time, again the best candidates provided an explanation as to whether or not Document D taught the feature. Some stated that experiments may be needed. That would appear to be a sensible point to take.

In conclusion, the preferred view of the examiners was that neither Document C nor D disclosed the features of Claim 1, although marks were awarded where candidates were able to apply their construction in an a clear, cogent and non-contradictory fashion.

Claims 2 to 4 appeared to require a consistent application of the construction and then to arrive at the conclusions. This did not appear to trouble too many candidates. As always, the examiners were looking for consistency of analysis and application.

Claims 5 and 6 also appeared to present little difficulty. Some of the relative terms appeared to cause some candidates trouble but each of these points seemed resolvable based on a careful consideration of the documents.

The examiners preferred position was that each of the Claims was novel. Candidates which arrived at different, appropriately supported, answers were awarded marks.

Inventive Step

There were 19 marks available for inventive step this year (one fewer than last year). Candidates must be able to provide a coherent and appropriate analysis of inventive step to satisfy the paper in this regard.

Overall, the examiners believe that the standard of candidates' inventive step analysis is increasing. This is to be welcomed as inventive step is typically key to most validity questions in practice and candidates should be prepared and able to consider inventive step in an exam setting.

As with many (if not all) previous years, many candidates again failed to demonstrate that they were able to provide a cogent inventive step analysis.
As in previous years, the candidates who gave a good or reasonable account of themselves in this section were those that tended to meet the assessment criteria and pass the paper.

The starting point for an inventive step analysis is a clear statement of the test to be applied. That should not be a task which is beyond candidates!

The skilled person is an engineer for fire sprinkler systems. This seemed uncontroversial. In terms of the CGK it was possible to extract parts of each of the Client Letter, Documents A, C and D. As document C was only published less than a year before the filing date it was appropriate to discuss whether each of the entries in the catalogue was indeed CGK.

Importantly, Document D was published after the filing date of the patent in suit and so was unavailable for an obviousness attack on the patent. There was some feedback from candidates which suggested this was 'unfair'. The examiners do not believe that it was. It is a fundamental principle of practice to determine the status of documents which are available to attack validity. Failing to spot that a document is only available as state of the art under S.2(3) UKPA appears to demonstrate a lack of attention to detail.

Candidates were free to take either the Standard or the Bespoke bulb as the closest prior art.

If candidates had concluded that the air pocket was part of the Claim then they found little trouble in finding that the Standard Bulb was usable with a prior art frame to anticipate the Claim.

If the air pocket was not part of the construction then the use of two separate activating species would come from the Bespoke bulb to help to tailor the actuation profile. It would seem sensible to use CH and DMF as starting materials and it might be argued that the actuation temperatures could be achieved by routine trial and error.

Starting from the bespoke bulb and using a standard sprinkler head, again CH and DMF might reasonably be used and the actuation temperatures achieved by trial and error.
It is of note that the Bespoke bulb uses a blend of liquids. The examiners were also ideally looking for a discussion of what a skilled person would do if, selecting CH and DMF, the liquids turned out to be immiscible.

The examiners were looking for a clear exposition of the structured approach to inventive step which is advocated by the courts.

In many other cases, where candidates were able to discuss points of difference and provide an inventive step analysis points were awarded.

The examiners' expectation was that candidates would have found that Claim 1 was obvious, on the basis that the field of endeavour was sprinkler systems, the skilled person was an engineer and that the CGK clearly incentivised the use of multiple fluids.

Regarding Claim 2, this seemed to live or die on the same basis as Claim 1.

Claim 3 depended on the construction of 'third' because the bespoke bulb is said to be 100% filled (and whether that was achievable). Starting from the Standard bulb, the immiscibility point required further elucidation based on the disclosure of 'blends'.

Claims 5 and 6 appeared to pose little difficulty when starting from the Standard bulb. Candidates are reminded that it is important to consider which documents are being combined when looking at dependent Claims. For example, Claim 3 was dependent on Claim 2. In order to find Claim 3 obvious it is inherently necessary to find Claim 2 obvious over the same combination of documents.

Sufficiency

In terms of sufficiency, there was a point which was missed by many candidates relating to the disclosure. The patent stated that it required a vast amount of research to determine suitable thermophysical properties and that there were no immediate resources to find those data.

It was not possible to predict performance. It would have been appropriate to question if the disclosure in the patent enabled the skilled person to carry out the invention across its entire breadth without an undue burden of the type which is not permitted. For example, the patent only specified two separate species (CH, DMF) and yet claimed all species that were able to achieve the desired actuation time. Moreover, the thickness/type of the bulb was not specified.

All of this resulted in points being available for a cogent discussion of sufficiency.
3.5 marks were available.

Amendment

There were amendments to be made to correct the claims.

It was necessary to amend Claim 1 to make it valid over the prior art.

The best candidates noted that it is not open to an exclusive licensee to amend a patent under s.27 or s.75 UKPA. Candidates were not penalised if they did not note this.

The examiners were prepared to award any supportable amendment which captured the infringement whilst being able to distinguish the Claims from the prior art.

It was possible that Claim 3 was not rendered obvious, and this may have provided a suitable amendment.

Alternatively, the different volumes of the first and second species (where air is excluded from the construction) also appeared to provide a suitable amendment to capture the Pro version and provide protection for the invention.

Depending on the sufficiency points, an amendment to CH/DMF might be required which would not capture the alleged infringement.

Advice

The advice section is the crux of the paper. It is an opportunity for candidates to bring the disparate points together and to demonstrate that they have understood the commercial context in which the task is posed.

This year, fewer boiler-plate type answers and points appear to have been provided in this section. These will not be awarded marks unless they are pertinent to the situation in hand.

The points of contention related to the status of the patent and the client as a licensee/equitable owner of the patent.

It is clear that damage is being done to the client and that there is also a desire from the client not to engage in litigation.

The best candidates were able to sum up the relevant points and provide viable solutions to the client to meet his needs.

Of course, discussion of whether or not an infringement action should be launched or whether amendment should be sought first under S.27 was appropriate (notwithstanding the status of an exclusive licensee under s.27/s.75).

Some candidates questioned the entitlement to Bulb-Us' patents (if the brother was an inventor – which was unknown on the basis of the information provided).

Many candidates suggested the possibility of cross licencing and allowing access to the domestic market for the Lite version.

The examiners were prepared to award marks for any sensible and appropriate points based on the materials to hand, especially those which demonstrated that candidates understood the commercial context of the dispute. This is seen as the opportunity for candidates to demonstrate that they can apply the conclusions to provide appropriate commercial advice.

On the whole this section was answered reasonably.