

**Patents Act 1977**  
**OPINION UNDER SECTION 74A**

**Opinion Number 03/05**

Patent	<b>GB 2294790</b>
Proprietor(s)	MR ANDREW DAVID LEWIS
Exclusive Licensee	
Requester	Mr Andrew David Lewis, on 4 November 2005
Observer(s)	The Assay Master
Date Opinion issued	3 February 2006

**The request**

1. The comptroller has been requested to issue an opinion as to whether the patent is valid and whether it has been infringed. The request has been submitted on behalf of the proprietor by patent attorneys Franks & Co.
2. As filed, the request was not entirely satisfactory in four respects. Firstly, the requester is the proprietor and the request for an opinion on validity, perhaps unsurprisingly, contains no submission as to why the patent may not be valid. The proprietor merely requested confirmation that the presumption of validity at grant still holds. A description of some prior art was provided, but this only related to one aspect of the inventive process, the marking of articles by a traditional process. We cannot give an opinion on validity when no case has been presented as to why the patent might not be valid. However, I sense that the requester was seeking to protect his position in the expectation that an observer would challenge validity, and this is indeed what happened. I am therefore going to consider validity on the basis of the case made by the observer. For the future, I would note that a patentee making a request for an opinion on infringement does not need to protect his position in this way. If validity is challenged by an observer, no opinion on validity will be given without first giving the patentee the opportunity to reply, as happened here.
3. Secondly, the supporting documents that accompanied the request were originally marked "commercial confidential". As the opinions process is a public one, the Office cannot take account of confidential documents. However, I am pleased to say that after this had been pointed out to the requester, he removed these markings. I note in this connection that

under rules 93(4)(a) and 94(1), documents filed in connection with a request for an opinion are immediately open to public inspection and not subject to the normal 14 day grace period.

4. Thirdly, it is clear from the request that the requester had a potential infringer in mind, however no interested parties were identified in the request, contrary to rule 77B(2)(a). Again, I am pleased to say that the requester rectified this when the omission was drawn to his attention.
5. Fourthly, the request only referred to the questions of validity and infringement in respect of the whole of the patent and did not look at them on a claim-by-claim basis. I have not therefore been able to go into much detail on the subordinate claims. In general, a request for an opinion on infringement or validity ought to identify the specific claims that are alleged to be infringed or alleged to be invalid.
6. The submission to back up the case on infringement is apparently an eyewitness account by the proprietor of a process he has seen, but he has provided no supporting documentary evidence. Because the opinions process has no mechanism for testing the veracity of an account like this, an opinion based on unverified evidence will usually have to be qualified by the proviso "if this account is accurate, then . . .". However, in the present case the observer has acknowledged certain aspects of the account, and to the extent that they have done so, my opinion does not need to be qualified.

### **Observations; observations in reply**

7. Observations in response to the request were received on 23 December 2005 from the Assay Master at the Sheffield Assay Office ("SAO") where the acts of infringement are alleged to have been (or are being) performed. Some light is thrown on the prior art pertaining at the priority date of the patent to enable me to give a view on validity. Infringement is denied.
8. Like the request, the observations were not entirely satisfactory, because they concluded "if required, documentation will be submitted to evidence (1) the processes used by the SAO (2) invalidating prior art". The opinions process is supposed to be a quick one and accordingly does not make provision for extra rounds of evidence. This documentation should therefore have been filed with the observations. Because it wasn't, I have been unable to validate many of the submissions made, and this has prevented me from giving an unequivocal opinion.

9. Observations in reply from the requester (proprietor) were received on 13 January 2006 and comment on the observations above. They also provide more background of the industry involved and a discussion of the advantages of the invention.
10. Please note that in the following, when I refer to the “observer” and “observations”, I mean the observations provided by the Sheffield Assay Office on 23 December 2005. These are not to be confused with the “observations” provided by the requester on 4 November 2005 or his subsequent update on 23 November 2005. I shall refer to these as the requester’s submission or evidence.

### **The approach I shall take**

11. Firstly I shall set out the background of the patent and what it relates to.
12. Secondly, I shall consider the evidence supplied in the various submissions to determine which facts have been established with reasonable certainty and which have not.
13. I shall then go on to consider the validity of the claims on the grounds of novelty and inventive step – to the extent that I am able - taking into account the considered evidence. The strength of the evidence may allow me to make a definite opinion – if the evidence is corroborated– or a qualified opinion if it is not.
14. I shall then consider whether the claims are infringed in the light of the evidence.
15. Finally, I will summarise my conclusions.

### **The patent**

16. Patent application GB9417644.3 was filed on 2 September 1994 and had no claim to an earlier priority date. Initially, two inventions were claimed: 1) an apparatus and method for labelling an article and 2) a method of characterisation of an article. The application was published on 6 May 1996. Following the patent examination, the two inventions were reduced to one by appending the claims of the second invention to those of the first. Two prior art patent documents were cited against the first invention by the patent examiner, but this resulted in only a small clarifying amendment to the scope of the invention. A patent was granted as GB2294790 and published on 18 February 1998.

17. The invention generally concerns a method of analysing a goods article to identify a characterising feature and then marking or labelling the article with a mark denoting that feature. This has particular application to the jewellery and precious metals industry, eg hallmarking, but is not limited to that. There are two independent claims: claim 1 relating to apparatus for performing the method and claim 6 relating to the method itself. There are 7 figures in the drawings of the patent. Figures 1, 4, 5 show examples of markings and labels that may be applied to the article; Figure 2 shows an example of apparatus embodying the invention; Figure 3 shows an example of a characterisation chart suitable for use in the apparatus and method of the invention; and Figures 6 and 7 show examples of a single article and a batch of articles, respectively. For the purposes of this opinion, I only need consider in detail the description in pages 1-11 relating to Figure 2. I do not believe it necessary to consider pages 12-34 which are largely concerned with the characterisation feature of the original, second invention and provide extensive examples relating to specific articles.

### **The evidence submitted**

In the request:

18. In his submission of 4 November 2005, the requester provides a detailed eye witness account prepared in February 2005 of what he has seen at what later transpired to have been the Sheffield Assay Office. Preceding that in the submission is firstly a breakdown of the various components of the apparatus of claim 1 of the patent and how these relate to the equipment seen at the SAO. Secondly, there is a similar breakdown of the steps of the method of claim 6 of the patent and how these relate to the process seen at the SAO. This information is provided for me to form an opinion on whether acts performed at the SAO at the time infringed the claims of the patent. Information on traditional methods and equipment for marking articles was also provided.
19. In a subsequent update to the request, the requester tried to bolster the request for an opinion on validity by submitting a potted history of the patent application through to grant of the patent, including a list of the prior art citations, and a reiteration of the statement of prior art relating to traditional methods and equipment for marking articles. He argued that patents granted by the UK Patent Office after the normal processes of search and examination carry a presumption of validity and therefore the patent is valid. As I have already indicated, though, I cannot provide an opinion on validity purely on the basis of submissions like this.
20. The eyewitness account contained much detail of the processes carried

out at the SAO and a lot of it is more than I need. I think the “Overview of Apparatus” (the first breakdown referred to above) does effectively identify which parts of the SAO apparatus relate to which features of apparatus claim 1 and the “Overall Process” (the second breakdown) does effectively identify which parts of the SAO process relate to which features of method claim 6.

21. I would like to make two points here:
  - a. The term “labelling” is used in the submission in the sense of hallmarking using a handheld punch or by a laser rather than by applying physical labels. It is clear that the SAO does not hallmark by applying physical labels to articles;
  - b. For the purpose of analysing the constituents of an article, the equipment seen at the SAO employs X-Ray Fluorescence (XRF). The patent does not specifically mention this form of sampling, though equally I do not think there is any dispute that the claims are broad enough to encompass it.

In the observations

22. The SAO also give a description of their activities with regard to the hallmarking of precious metals. This amounts, in paragraphs 5.1-5.6 to the process of handling a batch of articles, for example 200 gold chains. The receipt of these is recorded and a sample is taken from an article by scraping or cutting and then weighed. It is then tested, which, for gold items, means mixing with silver, enclosing in a lead sleeve and putting in a furnace to burn off any base metals including the lead sleeve. The silver is then dissolved with chemicals, leaving the ‘pure’ gold. This is weighed and this as a percentage of the weight of the original scraping calculated. This percentage is used to classify the quality of the gold, eg 22 carat, and is marked as such using a punch. This hallmark includes other details as well.
23. The above is said in paragraph 6 to be the traditional method of testing and hallmarking of allegedly precious metals by Assaying Offices and has been relatively unchanged since at least the 1300s and by the SAO since 1904. The proprietor, in reply, acknowledges the existence of this, and I therefore accept this as an accurate description of the traditional method. However, the proprietor dismisses it, in his paragraphs 2 to 5.6, to the extent that the process is destructive and cannot handle modern high volume demands and articles with complex structures, unlike the techniques disclosed in the patent.
24. In paragraph 7 of the observations, the SAO state that laser hallmarking was first used by them in 1997, although the use of this technique had

been discussed in the industry since before the priority date of the patent. It was also used in other industries for marking articles. The machine the SAO uses is a stand alone item. None of this is challenged by the proprietor in reply; indeed the proprietor draws attention to the fact that the SAO have used this technique.

25. In paragraph 8, the SAO state that XRF testing has been used in different industries since the 1970's and was first used in the hallmarking industry in or around 1992 by the Birmingham Assay Office (BAO). In his reply, the proprietor asserts that, to the best of his knowledge, the BAO have not disclosed this to the public, pointing out also that staff at the BAO have a confidentiality clause in their employment contracts. I think the proprietor has pinpointed a weakness in the SAO's case here. So far as the validity of the present patent is concerned, use by the BAO is irrelevant unless that use was made public, and the SAO have not suggested it was made public. The proprietor also challenges SAO's assertion that outside the hallmarking industry, XRF testing has been used to test the purity of gold since at least 1972. As the SAO have provided nothing to back up this assertion, I will have to treat it as unproven.
26. The SAO admits in paragraph 15, that the first XRF machine was tested by the SAO in 1996 and installed for regular use in 1997. In his reply, the proprietor states that to the best of his recollection, the SAO first used an XRF machine in 1995. Either way, these dates are all after the priority date of the patent.
27. According to paragraph 16, the SAO possesses a report (not supplied) by Johnson Matthey Chemicals Limited dated 12 June 1972, which refers to testing a small gold bar for purities and impurities by means of XRF testing. In reply, the proprietor rightly points out that SAO have not established that the report was public knowledge. Again, that is an important point, because if the report is not public, it is irrelevant to the questions of novelty and inventive step. The proprietor also remarks that the method and apparatus claimed in the patent has the technical advantage of applying XRF machines to alloys whereas the report apparently only discloses the application to a pure metal. I do not see the relevance of this point, because I can see nothing in the claims that debars their application to pure metals.

In the observations in reply

28. Other than for the information provided to confirm or deny the evidence provided in the observations above, I do not believe that the reply by the proprietor provides any further evidence and is mainly concerned with stressing the unsuitability of the traditional methods of testing and

hallmarking for modern needs and how the apparatus and methods disclosed in the patent overcome these problems.

29. I should point out here that, in the reply, the proprietor repeatedly refers to the features of the invention as disclosed in the patent which distinguish it from the prior art. In contrast, for the purposes of this opinion, I have to consider the *claims* of the patent and only refer to the disclosure in the description and drawings in order to construe the full meaning and scope of those claims.

### Validity

30. In this assessment, I look at the claims and consider their validity in terms of novelty and inventive step in the light of new prior art information provided largely by the observer. With regard to inventive step the general approach I take is summarised as follows. I have to determine what the inventive concept of each claim is, who the skilled addressee would be at the priority date of the patent and whether he or she would consider the inventive concepts to be obvious at that date. The skilled addressee would be someone familiar with the workings of the hallmarking and allied industries and the problems and difficulties it presents. This person would be aware of not only the traditional methods used but also new developments in the industry. This is based on the recommended test in *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59.

31. Claim 1 reads:

*“An apparatus for labelling a goods article, the apparatus comprising:*

*a sampling means for sampling a measurable parameter of the goods article, and for deriving a parameter signal therefrom;*

*an identification means for receiving the parameter signal and identifying the sampled parameter therefrom;*

*a characterisation means for characterising the identified parameter in accordance with a common description or use of the article; and*

*a marking means for marking the article with a mark denoting the characterised parameter.”*

32. I have already made a point in paragraph 21a above about the interpretation of the word “labelling” in respect of the requester’s submission. Similarly, claim 1 purports to relate to the *labelling* of a

goods article, but the last component is defined only as means for marking the goods article with a mark. It is clear from the specification as a whole, however, that while the attachment of physical labels, such as the tag described with reference to Figure 1, is the preferred embodiment, other forms of marking are also envisaged. In lines 20-24 of page 8 of the patent it says, if labelling is inconvenient, a “bar code may be etched into the metal object by chemical etching, laser etching or otherwise printed directly onto the article.” It seems that the patent uses the words labelling and marking interchangeably, so I shall therefore construe the claim as covering all these alternatives.

33. On another point of claim construction, I think the observer makes the erroneous assertion, in his discussion of infringement in paragraphs 10-12 that a claim to “an apparatus” means a single piece of equipment. It is clear from the description in the patent, in relation to Figure 2 for example, that the apparatus may be composed of more than one piece of equipment and I have to construe the claims in this light. In fact there is no disclosure in the patent of a single piece of apparatus that will provide all the functions specified in the claim.
34. The SAO do not assert that claim 1 lacks novelty, but they say it lacks an inventive step. Both sides agree that the XRF machine incorporates the first three integers of claim 1 – sampling, identification and characterising means – as explained in the Overview of Apparatus in the requester’s initial submission and in paragraph 18 of the SAO’s observations. SAO say it would be obvious to use an XRF machine in combination with a machine for laser hallmarking, which would provide the fourth element of claim 1.
35. This argument seems to me to be based on a misunderstanding of claim 1. I can see nothing in claim 1 to require the marking means to be a machine. Traditional hand punches would apparently meet the requirements of the fourth element of claim 1 just as well. On this basis, if the combination of an XRF machine and a laser hall marking machine would invalidate claim 1, so would the combination of an XRF machine and traditional hand punches. However, I am conscious that this is an argument neither side has addressed. I will therefore go on to consider the arguments they have put forward on the combining of an XRF machine and a laser hallmarking machine.
36. I have no evidence that laser hallmarking was actually in use at the priority date of the invention, however it seems to me that the proprietor accepts the SAO’s statement that the technique’s potential had been recognised in the industry before that date and, indeed, had been used in other industries for marking articles.

37. I do not have sufficient evidence to be sure that, at the priority date, the potential of XRF for testing the composition of precious metal articles was public knowledge within the industry. The evidence does not unequivocally establish that the BAO had publicly used it before the priority date. Likewise it does not unequivocally establish that it had been used to test gold, let alone that the hallmarking industry was aware this had been done.
38. If the potential of XRF was not public knowledge within the hallmarking industry, it is difficult to see how it can have been obvious to combine an XRF machine and a laser hallmarking machine at the priority date. The SAOs argue that in common with all industries the assaying industry tries to take account of new technologies, but it is rather a large leap from that generality to saying that it would therefore have been obvious to them to use XRF.
39. However, what would be the position if the potential of XRF was public knowledge within the industry? The SAOs submit that combining an XRF machine with a laser hallmarking machine would not have been inventive and refer to *Williams v. Nye (1890) 7 R.P.C. 62* as supporting their argument. In *Williams v Nye* putting together two known bits of machinery that carried out successive operations in sausage making was held to be non-inventive. In reply, the requester in his paragraph 18, argues that there are a number of clear technical advantages in combining the elements of claim 1 and, in any case, the case law is out-dated and would have been considered by the Patent Office if found relevant.
40. There is, in fact, more recent case law relating to combinations: *SABAF SpA v MFI Furniture Centres Ltd* [2005] RPC 10, though I don't think *Williams v Nye* is in any way inconsistent with it. In *SABAF* Lord Hoffmann held that before you can ask whether the invention involves an inventive step, you first have to decide what the invention is. In particular, you have to decide whether you are dealing with one invention or two or more inventions. If two integers interact upon each other, ie if there is synergy between them, they constitute a single invention having a combined effect and one applies section 3 (inventive step tests) to the idea of combining them. But if each integer performs its own proper function independently of any of the others, and the claim is a mere aggregation or juxtaposition of features, then each is for the purposes of section 3 a separate invention and the obviousness test has to be applied to each one separately.
41. In my view, the combination envisaged here is clearly in the second category. The XRF and laser hallmarking machines each perform their proper function independently, and there is no interaction or synergy

between them. The technical advantages referred to by the requester relate to those provided by the XRF machine alone and/or are simply an aggregation of the advantages provided by the XRF machine and laser machine considered separately. As, under the hypothesis I am considering, each one is known, neither embodies an invention and nor does their combination. In short, if the potential of XRF was public knowledge within the industry, then in my view claim 1 is invalid for lack of inventive step.

42. Claims 2 to 5 are all appendant to claim 1. Neither side has made any specific case in respect of these claims. In its submissions, SAO simply lumps these claims in with claim 1, apparently in the erroneous belief that if claim 1 is invalid, all the claims appendant to it must also be invalid. Since no case has been made one way or the other, there is very little I can say about the validity of these claims. However, it would appear from his own submissions that the proprietor accepts that an XRF machine measures composition and includes a computer, and on that basis *prima facie* claims 2 to 4 will stand or fall with claim 1. The same cannot be said of claim 5, which requires means for producing a bar code label, because the observer has supplied no information about the use of labels, bar-coded or otherwise. Thus on the evidence available to me, all I can say is that at present I have no grounds for supposing that claim 5 is invalid.

43. Claim 6 , the only other independent claim, reads:

*“A method of labelling a goods article, the method comprising the steps of:*

- (a) sampling a measurable parameter of the goods article;*
- (b) identifying the sampled parameter;*
- (c) characterising the identified parameter in accordance with a common description or use of the article; and*
- (d) marking the goods article with a mark or label denoting the characterised parameter.”*

44. SAO say in their observations that:

“It will be noted that the method described in Claim 6 does not apply to the more traditional method of precious metal assaying by means of furnace burning within the SAO on the basis that no signal is derived from a sampling means, nor is one received by an identification means. It is understood that infringement is

alleged to occur only when use is made by the SAO of XRF testing and further, when testing occurs by exclusive means of XRF testing and not XRF testing in combination with furnace testing. Claims 6-15 will now be addressed in this regard in terms of their validity.”

45. As with claim 1, this comment seems to me to be based on a misunderstanding of claim 6. I can see nothing in claim 6 to require the production of signals at any stage, or for there to be any mechanical or electrical link between the stages. This interpretation is reinforced by the description in the patent of the embodiment shown in Figure 2 of the drawings. In this embodiment, the article is viewed by a television camera and the picture is displayed on a monitor to allow the operator to determine the character of the article. The operator then types into a computer one or more descriptive parameters and the computer controls a printing apparatus or label applicator to mark or label the article with the descriptive parameters. Thus step (c) of claim 6 is, in this embodiment, simply the subjective assessment by the operator. If this is OK for one step, presumably it is OK for all the steps, and on that basis claim 6 appears to me to be anticipated by the centuries-old traditional assay procedure. Comparing the steps a)-d) of the method with those of the traditional process as described in paragraphs 5.1-5.5 of the SAO observations:

*Step (a) sampling a measurable parameter of the goods article;* is performed by steps 5.2-5.4. A sample is scraped from the article, weighed, mixed with silver, encased in a lead sleeve, placed in a furnace to burn off the lead sleeve and impurities, placed in a chemical solution to dissolve the silver, then weighed again.

*Step (b) identifying the sampled parameter;* is performed in step 5.4 by obtaining the proportion of the resultant gold to the original scraping to give a gold percentage value.

*Step (c) characterising the identified parameter in accordance with a common description or use of the article;* is performed by step 5.4 by applying the percentage gold value against pre-determined standards: the familiar ‘carat’ units.

*Step (d) marking the goods article with a mark or label denoting the characterised parameter* is performed in step 5.5 by adding a punched hallmark which includes an indication of the quality of the piece.

46. However, again I am conscious that this is an argument neither side has addressed, so I will go on to look at the argument advanced by the SAO. They say that claim 1 covers the use of an XRF machine in combination

with applying a punched hallmark. I agree, but whether claim 6 is anticipated by that combination depends, as with their argument on claim 1, on whether the potential of XRF was public knowledge within the hallmarking industry at the priority date of the patent. If it was, claim 6 is invalid for lack of novelty.

47. Claims 7 – 19 are all appendant to claim 6. As with claims 2 – 5, neither side has made any specific case in respect of these claims, so there is very little I can say about them. However, I would repeat my earlier comment: SAO is wrong to suppose that all the appendant claims necessarily fall if the main claim falls. Some may, but some may not. Likewise, in the absence of any case in respect of the final, omnibus claim, claim 20, I can express no opinion on that.

## **Infringement**

48. I will now turn to the question of infringement. This is not an issue in respect of any claims that are invalid, because the patentee has no rights in respect of invalid claims. What, though, if the claims are valid?
49. If claim 1, is valid, then the claim is infringed by the acts of the SAO, since they admit in paragraph 15 of their observations to using the techniques of sampling etc as specified in the claim.
50. The same applies to claim 2, with regard to measuring the composition of an article and claims 3 and 4 with regard to the use of computers.
51. Claim 5 is not infringed as the SAO does not have apparatus for applying a bar code label or mark to the article in the final step.
52. If claim 6 is valid, since this claim is broader than claim 1, then it would also be infringed for the same reason.
53. I don't feel I can express any useful opinion in respect of the remaining claims in the absence of any case from either side in respect of them.

## **Opinion**

54. In summary, my opinion on the issues raised is as follows.
55. Firstly on validity, the evidence available to me does not allow me to establish with a sufficient certainty whether the potential of XRF was public knowledge within the hallmarking industry at the priority date of the patent. If it was, claim 1 is invalid for lack of inventive step and claim

6 is invalid for lack of novelty. If it wasn't, I have no reason to suppose on the evidence available to me that claim 1 is invalid, but the same cannot be said of claim 6. There are, as I have indicated, arguments for saying this claim is anticipated by the centuries-old traditional hallmarking process. However, as I haven't received any arguments from either side on this point, my opinion on it must be regarded as tentative.

56. Secondly on infringement, if claims 1 and 6 are valid then I conclude that they are infringed.
57. As no specific case on validity or infringement has been made by either side in respect of the remaining claims, I can give no meaningful opinion on them, save to say that on both validity and infringement, claims 2 – 4 probably go with claim 1.

#### **Application for review**

58. Under section 74B and rule 77H, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

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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 Patent Office.*

Mike Prescott  
Examiner