

OPINION UNDER SECTION 74A

Patent	GB 2294790
Proprietor(s)	Mr Andrew David Lewis
Exclusive Licensee	
Requester	Mr Andrew David Lewis, on 9 May 2007
Observer(s)	The Sheffield Assay Office
Date Opinion issued	9 August 2007

The request

1. An opinion on whether the patent GB2294790 is valid was requested on 9 May 2007 by attorneys Franks & Co Limited on behalf of the proprietor Andrew David Lewis.
2. This follows an earlier opinion, 03/05, also requested by Mr Lewis, on whether the patent was valid and also whether it was infringed by actions carried out by the Sheffield Assay Office (SAO). That opinion, which was issued 3 February 2006, concluded that there was insufficient evidence provided by Mr Lewis or by the SAO, acting as observer, to come to a view with any certainty whether the patent was valid or infringed.
3. In an attempt to get this resolved, Mr Lewis applied on 27 April 2006 for a review of the opinion under section 74B. He supplied a statement and 13 exhibits as evidence. In response, the SAO provided a counter-statement and 11 exhibits, plus 4 sub-exhibits as evidence. Mr Lewis made observations on the SAO response. It was clear to the Office that these further submissions of evidence should take no part in the review of opinion 03/05, as they were not available to the examiner when forming that opinion. Instead, the Office suggested to Mr Lewis that, if he wished to pursue the matter, he file a new request for an opinion on the basis of the further evidence. On that advice, Mr Lewis withdrew his application for a review and filed the current request.
4. I have listed the documents accompanying the request in an Annex at the end of this opinion.

5. In the statement accompanying the request, Mr Lewis submits (in summary):
 - a. In 03/05 Patent Office found the patent to be novel and to contain inventive step
 - b. In terminated review proceedings, in which observations were filed by both parties, the patent is both novel and contains an inventive step having regard to those observations.
 - c. Having regard to all observations and submissions filed in both 03/05 and review proceedings, the patent in suit has novelty over the prior art and contains an inventive step.
 - d. The patent is valid
6. In essence these are all aspects of the same thing and I shall take this as a request under section 74A(1)(b) for an opinion as to whether the invention claimed in the patent is patentable having regard to all the prior art presented in the papers. In formulating this I shall consider all the evidence filed to date and come to an opinion on novelty and inventive step in the patent. I will not re-visit the discussion in opinion 03/05 to any great degree, save for any evidence present on that file which may have new light thrown upon it by subsequent arguments.
7. I shall take the application for review statement (identified as item 5. - Exhibit Three in the Annex) as the main argument of Mr Lewis, and I shall take the counter-statement by the SAO (identified as item 6. in the Annex) as the root of their observations.
8. Similarly, I shall take Mr Lewis' Observations on Counter Statement, Exhibit Four, as the observations in reply.

Further observations

9. In a letter of 10 July 2007, SAO's representatives, Irwin Mitchell Solicitors, confirm that the SAO's submission of observations relies on all arguments, evidence and documents submitted on its behalf in previous proceedings and as re-submitted in the requester's package. In addition, they make a further brief observation that the scope of claims 1 and 6 is extremely wide and that they are not limited to use within the hallmarking industry.
10. No observations in reply to this have been filed by Franks and Co Limited on behalf of Mr Lewis.

The patent

11. 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.
12. 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 in part to Figure 2 (over). 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.

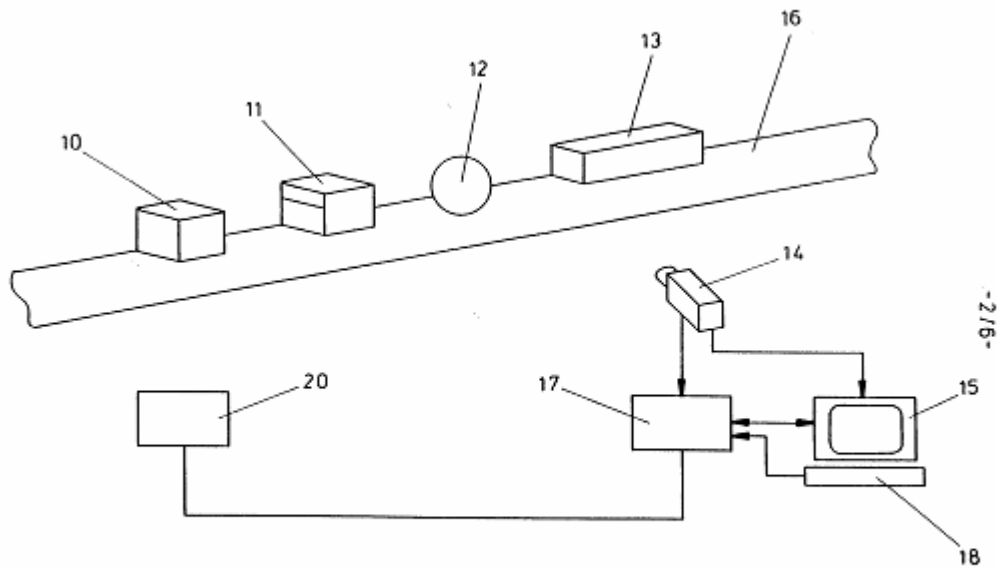


FIG. 2

13. In the Figure 2 embodiment, a plurality of goods articles on conveyor belt 16 pass a television camera 14 connected to monitor 15. An operator viewing the monitor determines the character of each article and types in one or more descriptive parameters, eg "gold", on keyboard 18. Computer 17 sends instructions to a printing or labeling apparatus 20 which applies a label to the article, the label indicating the descriptive parameters. This is just one embodiment of the invention; the claims encompass many more alternatives, including one where the characterising step is performed by technical equipment rather than an operator.

14. 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.”

15. As noted on the earlier opinion, when construing this claim, the words “labelling” and “marking” are interchangeable and taken to mean attaching a label, or making a mark on an article. The described embodiments include both. Moreover, “an apparatus” need not be a single item of equipment.

16. 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.”

17. Other than the issue of marking and labelling, there is no problem in construing what these essentially broad claims mean and what their scope is.

18. As I said earlier, I do not intend to go over the same issues that I did on opinion 03/05, but I will re-iterate its conclusions as they have bearing on how I handle this opinion. They are (using the same paragraph numbering):

55. Firstly on validity, the evidence available to me does not allow me to establish with a sufficient certainty whether the potential of XRF [= X-Ray Fluorescence] 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.

19. This conditional view was taken because a) there was uncertainty over whether XRF analysis was public knowledge or common general knowledge to a person skilled in hallmarking, b) no case had been made on whether traditional hallmarking techniques would render claim 6 invalid and c) no specific arguments for or against the other individual claims were made by either side.
20. I have to say that the statements supplied by the two parties in the review have not brought us much closer regarding c). I shall consider whether the new evidence provided is more enlightening. With regard to b) the SAO point out that Mr Lewis has not challenged that part of the opinion and also point out in their further observations that the invention is not limited to the hallmarking industry but do not develop that argument much further. In the main, the wealth of documentation provided is concerned at establishing point a): whether XRF analysis was in use by the hallmarking industry at the priority date. There is also a lot of discussion over whether the persons providing evidence in written statements and such were suitably qualified to do so and whether they were truly representatives of the industry and really “persons skilled in the art” I am not sure what else they would be, but I will come to that later, if necessary.

Assessment of statements and evidence

21. Most of the statements, evidence and affidavits provided by both sides are intended to show one way or the other whether XRF machines were in use in the hallmarking industry before the priority date, or, if not, whether it would have been obvious to use them.
22. In his review statement (Exhibit Three), Mr Lewis appears to have three main strands to his argument.
 1. The legislation for controlling the marking of precious metals did not refer to XRF testing as an authorized method of analysis.
 2. Any use of XRF testing prior to the priority date was for bullion and scrap metal purposes, not the hallmarking of jewellery and like articles.

3. XRF testing by the SAO was well after the priority date of the patent.

I will now examine these in turn, taking account also of the SAO's response.

Authority for use

23. He argues in paragraphs 7-11, 27 that the potential of an XRF machine for use in the hallmarking industry had not been publicly recognised either inside or outside the industry at the priority date. He bases this on the absence of any mention in the Vienna Convention on the Control and Marking of Articles of Precious Metals (Exhibit 1) which held sway at the time, in the Hallmarking Act 1973 (Exhibit 2), or in Bradbury's Book of Hallmarks (Exhibit 3) a standard reference work for the industry. Indeed, in the 2002 edition of Bradbury (Exhibit 10), actually published by the SAO, there is still no mention. He also believes, paragraph 38, that "use of XRF was only accepted according to the revised convention at the earliest in 2003."
24. In its counterstatement, paragraph 13, the SAO point out that the marking of articles under the Convention and the Act is highly regulated and, as such, it takes many years of trial and experimentation before new practices become "approved". The technology had its difficulties and the laws did not allow for "negative tolerances". XRF technology in the late 1980s and early 1990s could not accommodate this requirement.
25. I think that this is quite a telling statement and indicates that in the early period before the priority date of the patent, use of XRF was still pretty experimental for hallmarking and there were problems. It obviously showed promise and potential, though, and perseverance has subsequently paid off.

Bullion versus hallmarking

26. Mr Lewis makes the point a number of times in his statement and in his observations on the SAO's counterstatement that there are two sides to the precious metals industry: the bullion (coins) and raw materials side and the hallmarking side. Indeed, the SAO itself is split up in this way and Mr Lewis gives the impression that the two sides do not communicate, so much so that the established technique of assaying precious metals using XRF testing would not cross the divide. This I find difficult to swallow. They are both involved in handling precious metals; they are both involved in assaying those metals and, in the case of the SAO and other assay offices, they are both managed by the Assay Master.

Establishment of date first used in SAO

27. To strengthen his argument, Mr Lewis asserts that there is no evidence to show that XRF test technology was introduced at the SAO any earlier than 1996. This seems to be borne out by the SAO 1997 AGM minutes (exhibit 5) which reported that new technology in the form of a Spectro X-test machine had been introduced in the previous year. Other evidence from later years: exhibits 6-9, 11, 12 and 13 do not provide any further enlightenment on the date XRF was introduced, so I shall not consider them further.
28. Some play is made by Mr Lewis that initial use by the SAO of XRF was only experimental and the potential was not realised until much later. I don't think this has a bearing on whether the invention is novel or involves an inventive step and this is the line adopted by the SAO in their counterstatement (paragraph 10).
29. More importantly, the SAO provides evidence that XRF testing was widely used in the assaying industry for analysis of precious metals. Hallmarking is a component part of that industry and it is inconceivable that a technique used with success in one branch of the industry should not be considered for use in the other and that is what happened.
30. Some of that evidence is provided by David Evans, Assay Master of the London Assay Office (LAO) since 1988. In his witness statement (SAO Exhibit 1), he provides his credentials, as a member of the British Standards Institute, the European Committee for Standardisation and the Association of European Assay Offices which has links throughout the world with other assay offices. The LAO has long been a member of the International Precious Metals Institute (IPMI) which published a document in 1991 giving XRF as one of a number of assaying techniques for precious metals (SAO exhibit 5). Another article published by IPMI in 1991, "The Application of X-Ray Fluorescence for Karat Gold Analysis" (SAO exhibit 4) refers in the abstract to "A compact, simple to use XRF system is described and tested for its suitability for jewelry and other precious metal applications" and refers in the Introduction to XRF being an attractive alternative to traditional techniques. This clearly directs the reader to its application to hallmarking. Returning to Mr Evans, he wrote an article on Assaying and Hallmarking in London, which was published by the World Gold Council in 1991 (SAO Exhibits 2 and DWE3). This specifically mentions XRF as a method of gold analysis. In the same issue, an article on assaying gold by the Swiss federal office concentrates on the centuries-old cupellation method of assaying gold for hallmarking and other purposes, but mentions XRF as a more modern if more expensive and no better method. Clearly in 1991, three years before the priority date of the patent in question, XRF was being used in assaying and being

considered for hallmarking.

31. I think I need look no further in the evidence supplied by the SAO. Although there is further equally relevant information there, most of it, like a lot of Mr Lewis' evidence, is documentation internal to the respective assay offices or private communications and therefore not public knowledge.

Observations on the counterstatement

32. So far I have discussed the statement for the review provided by Mr Lewis and the counterstatement from the SAO. There are also the observations from Mr Lewis on the SAO evidence. In addition to his comments on the division between the bullion and hallmarking operations of the SAO, Mr Lewis calls into question the credibility of Mr David Evans, the LAO Assay Master and argues that an Assay Master is not a person skilled in the art of hallmarking. He states that Mr Evans is "talking about the bullion/high value scrap metal market and is not talking about the hallmarking industry". However, I do not accept this line of reasoning. It is hard to imagine a person in charge of the hallmarking division being ignorant of its operations and unable to recognise crossover possibilities to the degree with which Mr Lewis says he is. I therefore do not attach much weight to this point of view.

Other issues

33. As I pointed out in paragraph 36 of my opinion 03/05, there is no evidence of the use of laser hallmarking at the priority date of the patent, although it seems that Mr Lewis did not deny the SAO's view that the technique's potential was recognised in the industry. I do not think my opinion hangs on this issue so will not consider it further.
34. In their review counterstatement, paragraphs 29-31.2, the SAO raise the matter that XRF is not the only recent technology that was having an impact in the hallmarking industry at the priority date of the patent. Atomic Absorption Spectrometry (AAS) has also played a part and has been in use since the 1970s. It is a destructive technique like the traditional cupellation process, involving scraping samples from an article. An analysis of how this technique when used in hallmarking meets steps a) to c) of claim 6 - ie all except d) marking the article - is presented, arguing anticipation. Two web pages, SAO exhibit 11, explain AAS in more detail, but the only date of significance on them is the copyright of 1996 for the second one and this is after the priority date. Mr Lewis makes no comment on it in his observations, so I will assume that he accepts it as a statement of fact. I shall consider this also in my assessment of Novelty and inventive step below.

35. The SAO also discuss the position on infringement in paragraphs 32 to 35. As the opinion request is confined solely to the issue of validity of the patent, I shall make no comment on infringement.

Novelty and inventive step

36. In assessment of novelty, s. 2(1) of the Patents Act states that :

An invention shall be taken to be new if it does not form part of the state of the art.

As interpreted by case law, an invention defined in a claim lacks novelty if the specified combination of features has already been anticipated in a previous disclosure. There are two requirements for anticipation: prior disclosure and enablement. In general, prior disclosure means that the matter relied upon as prior art must disclose subject matter which, if performed, would necessarily result in infringement of the patent. For enablement, the previous disclosure must contain enough information for an ordinary skilled person to be able to perform the claimed invention. I shall analyse the evidence I have considered significant from both these viewpoints.

37. Before a detailed analysis of the evidence that has been presented to me, I would just like to make a comment about the scope of the claims. As previously observed in this opinion and in the earlier opinion, claims 1 and 6 are extremely broad, are not limited to hallmarking, not to the assaying of precious metals, nor indeed to composition analysis in general. It is quite possible that, at the priority date, the apparatus and method claimed were in use for other totally different purposes. This I do not know, so I can only consider the matter in the light of the evidence provided by both parties.
38. It is clear that the use of XRF technology had been well established in the assaying industry both here and abroad at the priority date of the invention. It was also recognised at the time as having potential in the hallmarking side of the industry, having been discussed in industry publications years before the priority date. I refer again to exhibit DWE3 (also SAO exhibit 2) Mr Evans' article "Assaying and Hallmarking in London". After describing the traditional fire assay or cupellation method as the reference method of gold analysis, Mr Evans goes on to say "As the hallmark is a guarantee of minimum gold content, using the reference method for all samples underwrites that guarantee. Other methods of gold analysis, such as coulometric, X-ray fluorescence and inductively coupled plasma spectrophotometry have been developed

within the industry over recent years.” This is prior disclosure of claim 1; performing the X-ray fluorescence analysis for hallmarking would infringe it and the document was published in 1991, 3 years before the priority date of the patent. It is enabling disclosure in that the known technique of X-ray fluorescence provides the sampling means for deriving a parameter signal, the identification means and the characterisation means of claim 1 and the hallmarking process, in which it is used, provides the marking means.

39. I would say the same also in regard to the AAS technique, if it could be proven that a signal is produced by the sampling means. Since I do not know if that is true, I shall dwell on it no further with regard to novelty.
40. Claim 2 falls with claim 1 as the XRF test apparatus is a means for measuring composition amongst other things. Claims 3 and 4 also fall with claim 1 as a computer is part of the XRF apparatus for example as disclosed in “The Application of X-Ray Fluorescence for Karat Gold Analysis” (SAO exhibit 4).
41. As before, claim 5 is considered to be novel; the production of bar code labels has not been disclosed in the evidence provided.
42. Claim 6, the other independent claim, is effectively the method carried out by the apparatus in claim 1, except that there is no requirement to produce a signal in the sampling step (a). By the same token as for claim 1, the XRF technique performs steps a) to c) and the hallmarking process, step d) and is anticipated. Moreover, unlike claim 1, it is also anticipated by the traditional method of assay/hallmarking using the cupellation method, and, from what the SAO say, by the Atomic Absorption Spectrometry (AAS) method.
43. Claims 7-19 are largely concerned with the type of information the measurable parameter relates to and how it is recorded. With the exception of claim 9, the features of these claims are not disclosed in the documents presented to me and cannot be impugned for lack of novelty. Claim 9, on the other hand, specifically includes composition of the goods article as the measurable parameter. This is what XRF analysis determines, so claim 9, like claim 2, is not novel.
44. With regard to inventive step, I have to put myself in the position of a person skilled in the art at the priority date of the patent and impute to him the common general knowledge at that time. The broad scope of the claims leads to that person being skilled in the inspection and analysis of goods articles and able to identify characterising parameters and mark or label them correspondingly. Moreover, the common general knowledge at his command covers a wide range of industries, not just the precious metal assaying and hallmarking that we have

focused on so far.

45. As claims 1-4, 6 and 9 are not considered to be novel, I only need to consider the remaining claims.
46. The difference between claim 5 and the prior art is the application of a bar code label to an article identifying its properties. This is well established in a number of industries and would without doubt be known to the skilled person as a suitable method to employ. That claim therefore provides no inventive step.
47. Claims 7, 8 and 10-19, in so far as they relate to the type of information that is captured as opposed to any technical details, would also appear to be obvious, as no ingenuity is required in choosing what is to be collected. I can express no opinion on omnibus claim 20, as its scope has not been determined.

Opinion

48. In summary, I conclude that, on the basis of the evidence provided on the original opinion 03/05, in the statements, counterstatements, observations and evidence filed in relation to the application for a review of that opinion and the statements filed subsequently in support of the request for the current opinion:
 - Claim 1-4, 6 and 9 are invalid through lack of novelty.
 - Claims 5 and 7, 8 and 10-19 are invalid through lack of inventive step.

Application for review

49. 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.

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.*

Mike Prescott
Examiner

Annex

Documents accompanying the statement

1. Exhibit One: Copy of the observations by the proprietor in the original request for an opinion (03/05) on GB2294790 B – “Overview of Apparatus”
2. Copy of the observations made on behalf of the SAO on opinion request 03/05
3. Exhibit Two: Copy of the observations in Reply on behalf of the proprietor on 03/05.
4. Opinion 03/05 dated 03/02/2006.
5. Exhibit Three: Application under section 74B for review of opinion 03/05. Includes attachments:
 - Exhibit 1 – Convention on the Control and Marking of Articles of Precious Metals, Vienna November 15 1972
 - Exhibit 2 – Hallmarking Act 1973 schedule 1 part II, paragraph 7
 - Exhibit 3 – Bradbury’s Book of Hallmarks, 1987, cover sheet and pages 5, 8, 9, 30, 31
 - Exhibit 4 – 1 sheet document from Analytical Services, Sheffield, dated 28/01/1994
 - Exhibit 5 – Minutes of annual general meeting of guardians of SAO dated 03/09/1997
 - Exhibit 6 – Departmental control sheet (origin?) 16/06/1998; XRF Hallmarking records (origin?) 16/06/1998
 - Exhibit 7 – Agenda of annual general meeting of guardians of SAO dated 05/10/2001; minutes of half-yearly meeting 21/02/2001; Assay Master’s presentation 05/10/2001
 - Exhibit 8 – Training record sheet for Stephen Bedford, 24/05/2001; 07/06/2001; 03/07/2001
 - Exhibit 9 – BS EN ISO 9,001:2000: Overview plus assorted pages relating to training/sampling/retrials/private assay procedures at SAO
 - Exhibit 10 - Bradbury’s Book of Hallmarks, 2002, cover page and pages 4, 5, 8, 9, 30, 32-37
 - Exhibit 11 - Training record sheet for Stephen Bedford, 24/07/2003; 19/20/2003; 14/10/2003
 - Exhibit 12 – Letter from SAO to Mr A D Lewis dated 18/06/2004
 - Exhibit 13 - Letter from SAO to Mr A D Lewis dated 12/08/2004
6. Counterstatement contesting the Application for Review on behalf of the SAO by Irwin Mitchell 19 June 2006. This refers to:

- Exhibit 1 –
Copy of witness statement of David Winston Evans, Assay Master of London Assay Office, dated 21/06/2006
Further copy of witness statement of David Winston Evans, Assay Master of London Assay Office, undated but otherwise appears to be identical in content to the above.

Exhibits accompanying the witness statement:

- Exhibit DWE1 – unconfirmed minutes of discussion meeting – Association of European Assay Offices, 25/10/1991
- Exhibit DWE2 – Association of European Assay Offices: list of members and observers, dated (in manuscript) “2005”
- Exhibit DWE3 – Gold Technology, Caratage Control, Issue No 3, January 1991, pages 1-8
- Exhibit DWE4 – LAO minutes of meeting of Assay Office Management Committee, 16 March 1989
- Exhibit 2 - Gold Technology, Caratage Control, Issue No 3, January 1991, pages 1-8 “Assaying and Hallmarking in London”
- Exhibit 3 - Gold Technology, Caratage Control, Issue No 3, January 1991, pages 1, 19-20 “Assaying Gold in Switzerland”
- Exhibit 4 – “The Application of X-Ray Fluorescence for Karat Gold Analysis” , Ching and Woster, Proceedings of the Sampling and Analysis seminar held 10-12/03/1991 (International Precious Metals Institute) pp 73
- Exhibit 5 – “Determination of the Precious Metals” Science and Technology” ©1991 (International Precious Metals Institute)
- Exhibit 6 – Handwritten account of “Visit to ARL by MJD 5th Nov 1992 to assess new techniques”
- Exhibit 7 – Machinery or Equipment Takeover Record relating to Spectro X-test equipment apparently from Czechoslovakian Hallmarking Authority + English translation Includes various dates 11/10/1993 to 11/08/1994
- Exhibit 8 – Letter from Peter Hutcheson (Sales and Marketing) of K X Technology Ltd to C D Jarvis SAO, 11/05/1994.
- Exhibit 9 – Marketing product sheet for SPECTRO X-Test equipment with hand-written date 22/08/1994

- Exhibit 10 – Article from AJM (Authority on Jewellery Manufacturing) February 2002 “X Ray Vision”
- Exhibit 11 – (i) webpage <http://www.castleviewuk.com/Frameless/Analysis/AAS.htm> - Atomic Absorption Spectroscopy dated 14/06/2006; (ii) webpages <http://elchem.kaist.ac.kr/vt/chem-ed/spec/atomic/aa.htm> Atomic Absorption Spectroscopy © 1996

7. Exhibit Four – observations by the proprietor, Andrew David Lewis, on the SAO counterstatement (6. above).

8. Decision BL O/007/07 relating to awarding of costs following the withdrawal of the request for review of opinion 03/05