

Examiners' Report on Paper B/1993 (Electricity/Mechanics)

1. Paragraphs 1. and 2. of the Paper A Report apply equally to the present report.
2. In Paper B, candidates are expected to revise the claims to the extent deemed necessary to overcome the objections raised in the EPO Communication and to demonstrate by argument that the thus revised claims meet the requirements for patentability. What these requirements might be can depend to some extent on the nature of the case considered and on the particular objections raised. In all cases however, both novelty and inventive step should be convincingly established.
3. The examiners aim to test not only skill in redrafting the claims without unduly restricting the monopoly rights but also knowledge as to how to present relevant arguments in a logical and convincing manner. Moreover it is not sufficient for a candidate merely to show that he or she is thinking along the right lines: marks can only be given for what the candidate has committed to writing in the form of a claim or claims plus a convincing argument in defence of at least the independent claim(s).
4. Claim formulation and argumentation are given equal weight in the marking schedule for Paper B, with the result that a high grading is obtainable only if both are done well. Moreover, candidates who revise the claim skilfully may nevertheless not obtain a favourable overall judgement if their argumentation is defective.
5. As was already mentioned in paragraphs 6. and 13. of the Paper A Report, the claims presented in Paper B this year were so drafted as to provide grounds for a totally negative EPO Communication, thereby requiring candidates to consider carefully what can be validly claimed in the face of the additional prior art of Document III.
6. Claim 1 as drafted can certainly be read onto the disclosure of Document III and hence the objection of lack of novelty is formally justified. However, although Document III discloses a reflector which anticipates the characterising feature of Claim 1 in a literal sense, the client's invention is manifestly distinguishable on the basis of function. Document III expressly states that "a microwave field is obtained ... which ... is a widely spread rotating microwave field which reaches practically the entire oven cavity". The client's disclosure is however concerned with ensuring the exact opposite of that, namely concentrating the microwaves into a particular zone within the oven cavity, thereby avoiding reflections on the side walls thereof.
7. It follows that novelty can be readily established by re-expressing the characterising clause of the given Claim 1 in sufficiently precise terms to make this essential difference clear. Probably the best solution is to specify that the concave reflector is so shaped and so disposed in relation to the antenna that radiation is concentrated upon the goods to be heated and inhibited from impacting the cavity walls. Such a claim would be clearly new and readily demonstrable to be inventive and would cover all conceivable embodiments of the inventive concept. It is even arguable that simply specifying that the radiation is concentrated (as opposed to the "widely spread" microwave field of Document III) makes a sufficient distinction: this makes amendment of Claim 1 easy but places greater demands on the candidate's skill in argumentation.

8. The examiners accorded high marks to any well drafted solution in appropriate functional terms.
9. A second-best line of solution would be to specify with greater precision the physical shape of the reflector. It is cone-truncated but so is that of Document III. However it cannot be said of Document III that the cone-truncated form is of such dimensions as to cause concentration of the microwave field in the manner required by the invention. Hence cone-truncated form plus concentrating function still provides quite a good solution.
10. Weaker, because it restricts the scope still more, but nevertheless in principle acceptable, is to specify also the range of values for the angle α (which is the inclination angle of the cone-truncated part of the reflector).
11. In short, any solution which safeguards protection for the client's special reflector is considered acceptable and the highest marks were accorded to those candidates who succeeded in defining the aspect given in paragraph 7. above without restriction to any particular geometric form of reflector.
12. All other solutions were regarded with less favour. Of course, any of the subsidiary features set out in paragraph 10. of the Paper A Report (use of waveguide as air conduit; multiple use of the air flow; form and/or method of construction of waveguide) provide valid distinctions from the cited prior art. However, candidates who restricted their amended main claim to any one of these, abandoning protection for the client's principal innovation of a radiation-concentrating reflector, lost marks heavily.
13. Candidates who overcame the objection based on Document III in the manner summarised in paragraph 11. were not faced with any necessity to propose divisional applications and were not penalised if they made no such proposal. However, candidates whose main claim was to any of the alternatives mentioned in paragraph 12. could retrieve some of the lost marks if they indicated that a divisional application could be filed in respect of the form and function of the reflector.
14. Claims to the alternative solutions mentioned in paragraph 12. are for subject-matter which has nothing to do with the reflector and it is tempting to leave the reflector out of such claims. However, the presence of the reflector in the only independent claim of the application as first filed makes it at least questionable whether a claim to a device lacking such a reflector offends against Art. 123 (2) EPC. Candidates who omitted the reflector were therefore expected to show that Art. 123 (2) EPC was not infringed, and lost marks if they failed to do so.

In this connection it is observed that it makes no difference whether the main claim in question is that of the proposed main application or the main claim of a proposed divisional application. A divisional application offends against Art. 76 (1) EPC (which includes the same requirement as Art. 123 (2) EPC) if it presents an inadmissible extension of the content of the parent application as first filed (cf. also the "Guidelines for Examination in the European Patent Office", part C, chapter VI, 9.4).

15. Candidates were also expected to revise the dependent claims in the light of any amendment made to Claim 1. Candidates who took the opportunity to improve on the existing dependent claims by adding claims to any of the items set fourth in paragraph 14. of the Paper A Report gained a few extra points. However, most (about 83%) of the available marks for the claims were reserved for the revision of Claim 1, this being the primary task.

16. As to argument, the examiners expected the candidates to:

(a) state clearly what amendments have been made and from which parts of the application they are derived (e.g. "Claim 1 has been amended by incorporating the feature(s) of original Claim(s) ... and /or the feature(s) mentioned on page ... of the description, lines ...");

(b) show that the subject-matter of the amended claim(s) is novel with respect to the available prior art, in particular to show that the new main claim contains at least one feature of distinction with respect to each of the prior art documents; and

(c) show that the subject-matter of the amended claim(s) involves an inventive step with respect to the available prior art.

17. As to an assessment of inventive step, as mentioned in previous reports, it should be noted that what the examiners are looking for is a logically developed chain of argumentation.

The favoured form of argument in this respect is the problem/solution approach which involves the following steps:

(a) establish which of the prior art documents is considered to constitute the closest state of the art for the amended claim(s);

(b) derive the problem to which the invention is addressed, taking into account the effects achieved by the differences of the subject-matter as claimed with respect to the closest prior art; and

(c) consider whether there is anything in the prior art that would prompt the skilled man faced with this technical problem to modify or adapt the closest prior art to arrive at something falling within the scope of the claim.

In view of the above step (c) candidates should have noticed that Document III actually points the reader away from the present invention and hence provides no possible basis for questioning inventive step.

It is not the full problem/solution approach when it is presented in the following way: the preamble of the amended main claim is discussed (whereby novelty is established), a problem is defined and next, advantages are held to justify an inventive step.

18. Although the application of the problem/solution approach outlined under paragraph 17. above would have provided a logical chain of argumentation, the examiners would like to point out that other ways of argumentation, e.g. a discussion as to why the available prior art, in particular a combination of the various documents, would not lead to the subject-matter of the amended claim(s) were also considered as an acceptable approach.

EXAMINATION COMMITTEE I

Candidate Number No.

Report by examiner No.

FORM, for use by individual examiners, in PAPER B

Schedule of marks

Category	Maximum possible	Individual marks awarded	Where grades awarded are not identical	
			Revision of marks/grade (if any)	Remarks*
Claims:	24			
Argument	24			
TOTAL	48			
CORRESPONDING GRADE				

Translation of marks into grades

	Grade
0 - 11	7
12 - 17	6
18 - 23	5
24 - 29	4
30 - 35	3
36 - 41	2
42 - 48	1

* to be filled in if both the following requirements are fulfilled:
(a) the grades awarded by the two individual examiners before their discussion differ by two grades or more;
(b) the marks awarded by at least one of the two individual examiners have been changed during their discussion.
If remarks are to be filled in, they should briefly explain **why** the examiner has changed his marks.