Examiners' Report – Paper B (Electricity/Mechanics)

1. General Considerations

1.1. Paper B is a test of the candidate's skill in revising the claims to the extent necessary to overcome the objections raised in a communication of the European Patent Office with regard to the cited prior art documents, and in drafting a letter of response to the European Patent Office in which according to the "Instructions to Candidates", arguments in defence of the revised claims should be presented.

1.2. According to the English and French version of claim 1, the second annular spring portion (16) is arranged coaxially **around** the first annular spring portion (14), ie. the first annular spring portion has to be located inside the second annular spring portion. Inadvertently, the German version of claim 1 requires only that the second annular spring portion be arranged coaxially with respect to ("**zum**") the first annular spring portion. Any consequence of this difference were taken into account when marking. For simplicity, this report will continue on the basis of the English and French versions.

2. Claims

2.1. Independent claim

The most important aspect of the application is the snap transformation which ensures a predetermined minimum switching force for making switching contact. Both DII and DIII describe switch control devices comprising first and second annular spring portions, the second annular spring portion being arranged coaxially around the first annular spring portion, wherein, on depression, one of the annular spring portions is activated before the other. Starting from DII or DIII a preamble containing at least these features was therefore expected from candidates.

2.1.1 **A good solution** starting from DII is the following:

"A switch control device (10) comprising first and second annular spring portions (14,16), the second annular spring portion (16) being arranged coaxially around the first annular spring portion (14), wherein, one of the annular spring portions (16,14) is configured such that upon depression of the device it is activated before the other (14,16),
characterised in that the other annular spring portion (14,16) is configured such that, upon further depression, said other annular spring portion (14,16) undergoes a snap transformation to ensure a predetermined minimum switching force for making switching contact."

Candidates should have recognised that original claim 1, line 2 in combination with page 4, second paragraph, provide sufficient basis for the generalisation to the **"other** annular spring portion" in the characterising part. Consequently the annular

spring portion which operates second, undergoing a snap transformation, o
either the first or the second annular spring portion.

2.1.2 **Equivalent Solutions:**
A claim having a similar preamble and further specifying that the switch control device is configured for a snap switching action for making switching contact is also considered to be a good solution.

A good claim could also start from DIII.

2.1.3. **Inferior solutions** which do not respect the wishes of the client attracted fewer marks, eg solutions having a characterising portion directed to a particular shape of spring portion.

2.1.4. **Amendments not supported by the application as originally filed, Art. 123(2) EPC**

Amendments which offend against Art. 123(2) EPC lost significant numbers of marks. These amendments fall into two categories; those which would be recoverable in opposition proceedings and those which would not be recoverable due to the Art. 123(2) / 123(3) trap. The latter "trap" inadmissible amendments were more severely penalised.

2.1.5. **Lack of novelty**

As in previous years, claims lacking in novelty were heavily penalised, eg candidates were expected to have realised that the term "switching" can mean both making and breaking a switch contact.

2.1.6. **Lack of clarity**

Some candidates lost marks due to lack of clarity in the claim, eg by the inclusion of "switch contacts" in a claim directed to a "switch control device".

2.1.7. **Unnecessary limitations**

The deductions were dependent on the severity of the limitation and took into consideration which potential embodiments were excluded from protection.

Examples of major unnecessary limitations include:

snap action by S-form deformation of the first spring portion,
restriction to one or the other spring portion (eg inner spring portion)
presence of protrusion
elastomeric pad
membrane
key
switch housing

Examples of minor unnecessary restrictions include:
particular upward/downward movements
central portion
annular abutment

2.2. Dependent claims

2.2.1. After amendment of the independent claim candidates were expected to retain those original dependent claims which remained valid. Candidates were further expected to introduce new dependent claims representing improved fall-back positions, such as the features indicated in 2.1.7.

3. Argumentation

3.1. Source of the amendments

3.1.1 When identifying the source of amendments made, the examiners looked for a correct citation. In the case of amendments which were explicit in the application as originally filed, a citation was considered sufficient to prove compliance with Art. 123(2) EPC. Amendments which defined features which were to some extent merely implicit in the application as originally filed required arguments to justify why these features should be allowed. Candidates who only provided a citation for such implicit features lost marks.

3.2. Arguments concerning novelty over the available prior art documents.
In principle, for a given prior art document, it is sufficient to identify a feature which is not disclosed therein to justify novelty of a claim. To attract full marks the identification was expected to be presented clearly and precisely. If there was any doubt about the presence of a particular feature a more elaborate argumentation was required.

3.3. Arguments concerning inventive step

3.3.1 Identification of the closest prior art

The candidate was expected to provided convincing reasons for the choice of the closest prior art. As already explained under 2.1.1. and 2.1.2., for the preferred solution either DII or DIII could be used. DII is considered closer as far as the problem addressed in the application is concerned, whereas DIII has in common with the application the feature of a snap action, but with a completely different technical effect. The candidates were expected to recognise these facts when establishing their starting point.

3.3.2 Derivation of the problem and its solution

It was considered appropriate for candidates to apply the problem solution approach, see examiner reports of previous years. In particular it is noted that

candidates were expected to derive the problem from the document chosen as the closest prior art.

3.3.3 **Arguments** as to why the prior art would not lead the skilled person to the invention.

The examiners looked for good arguments as to why the skilled person **would not combine** the chosen closest prior art with the remaining prior art.
Eg such arguments could include that there is no mention of the derived problem in another prior art document being discussed.

A full answer should also include reasoning as to why, **even if the prior art were to be combined**, the combination would not lead to the claimed invention. For example, such arguments could include that a hypothetical combination of DII with DIII would lead to a switch control device in which the snap transformation is for the breaking of switch contacts and not for the closing thereof.

4. Presentation

It should always be clear which arguments were considered by the candidate to be relevant to which issue. Consequently candidates lost marks if their arguments were muddled, illogical, not consistent with what was actually claimed or not well structured.

Candidates should be aware that merely providing a formalistic approach based on guidance given in previous reports will not necessarily lead to a satisfactory result. The appropriate substance must always be present.

EXAMINATION COMMITTEE I Candidate No. .....

Paper B (Electricity/Mechanics) 2001 - Schedule of marks

Category	Maximum possible	Marks awarded		Marking by further examiners if any	
		Marker	Marker	Marker	Marker .....
Claims	50				
Argumentation	50				
Total	100				

Sub-Committee for Electricity/Mechanics agrees on .....marks and recommends the following grade to the Examination Board:

❑ PASS
(50-100)

❑ FAIL
(0-49)
COMPENSABLE FAIL
(45-49, in case the candidate sits the examination for the first time)

Berlin, 29 August 2001

J. Combeau - Chairman of Examination Committee I