

Introduction

The invention concerned balancing oil and ballast in a tanker. Although the technology was simple enough, there were some challenges in the question paper, partly because the application had both apparatus and method independent claims, and partly because there were many possible distinguishing features, often interlinked. The Examiners found that, even if candidates did not get the answer suggested, many alternatives were presented that were sensible, and with corresponding argumentation, still achieved a pass.

One general point may be made: quite a few candidates did not make their amendments clear in the claims (no underlining or tracked changes). It is helpful to have the changes underlined and, if the changes are many, a clean copy in addition does not go amiss. To this end, changes should not be shown in “balloons” because they obscure the margins and make marking difficult. (The examiners receive only PDFs and so cannot alter the document settings.)

Independent Claims

Possible distinguishing features include the following:

- The collapsible container is in the upper part of the tank (lower in D1, sideways (?) in D2);
- Oil is supplied from above (arguably also present in D1, p16/12);
- The oil is in the collapsible container, rather than surrounding it as in D1 (though D2 is rather ambiguous on this point);
- The container has the same diameter/volume (when expanded) as the tank;
- The container is removable;
- The container is a concertina but unlike D1 has no reinforcing arrangements;
- Oil and water are filled/emptied simultaneously, in contrast to D1 (but not D2, see p5/6-9).

(Oil/water here is used as shorthand for cargo/ballast).

It will be evident that some of these features are more suited to a method claim than an apparatus claim, and *vice versa*. Candidates did not always treat this point carefully. For instance, simultaneous filling and emptying is harder to use as a distinguishing feature for claim 1, or a claim dependent thereon, and would probably need mention of a control system, e.g. p10/8f.

A consequence of having the collapsible container in the upper part of the tank is that, ideally and as implied by the client's letter, it should be filled/emptied at the same time as the ballast portion is emptied/filled, which is one instance of the interplay of features. However, the apparatus claim in particular does not need to state this, except perhaps

that it is possible.

From the client's letter, an importance feature of the invention is the ability to avoid the oil container being only part-filled with oil. This cannot be done with D1, at least if the ballast is in the flexible container, but arguably D2 could be operated this way, so care is needed in defining both apparatus and method to distinguish over both prior-art documents.

There was no non-unity objection in the examination report, but candidates who considered the matter (e.g. in the memo) showed themselves aware of possible issues.

Quite a few candidates broadened the claim 1 to a "tank", rather than a "tanker". This did not seem to be called for by the scenario, because the tank has no use, and possibly no independent existence, without the tanker, but is a point worth considering, along with whether such an amendment is supported.

Dependent claims

Most candidates also provided a useful amplification of the set of dependent claims, though an alarming number added no dependent claims at all, despite the many available.

Response

In the letter to the UK IPO there were as usual few difficulties in defending the amendments made to the claims. Many points were overlooked when discussing novelty, however.

For instance, not many candidates dealt with the Examiner's objection in point 5 about the possibility of considering the container to be the "inverse" of the actual container in D1. Also, as noted above, p5/6-9 implies that D2 shows simultaneous filling/emptying, so that feature on its own is not sufficient.

Quite a large number of candidates seemed to address novelty and inventive step only as regards Claim 1, ignoring the other independent claim in their novelty and inventive-step analysis and therefore not gaining marks available for dealing with previous Claim 8. The presence of more than one independent claim is common enough in all fields and candidates are expected to be able to deal with such claims. Some awareness is shown by stating "similar arguments apply for claim 8", but more detail, taking account of particular method features, is needed for high marks.

A small number of candidates discussed novelty and inventive step of each dependent claim, which is not usually necessary and this time could probably have been better used elsewhere.

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On inventive step specifically, there were some good arguments as to why it would not be obvious e.g. simply to detach the container of D1 and move it to the top. Most candidates outlined the likely common general knowledge fairly, e.g. as set out on page 4; conversely, the client's letter says that D2 is a "one-off", implying that it probably does not represent the CGK.

Notes for Report

Nearly all candidates presented some notes "showing their working", as it were, and some had perceptive comments about how likely they thought their arguments were to succeed, and what further avenues were available.

Few marks are awarded for merely re-writing what is already in the UK IPO response letter.

A few candidates considered the usefulness or otherwise of the method claim, because filling and emptying would be carried out in different jurisdictions. Some enterprising candidates separated the method claims into filling and emptying operations, which demonstrated a good awareness of the nature of the invention, though it was perhaps more of a bonus point.