

contribution could not be recognised on the basis of this expectation if members of the class had already been shown in the prior art to behave in the manner disclosed in the application. The board added that if at least one Markush alternative was not novel over the prior art, the question of unity had to be reconsidered by the examiner, i.e. a posteriori (Annex B, Part I (f)(v) PCT Administrative Instructions in conjunction with PCT Search Guidelines; see now Annex B PCT Administrative Instructions, as in force from 1.1.2022, also PCT International Search and Preliminary Examination Guidelines, as in force from 1.3.2022).

The board also held that an objection of lack of unity could be raised a posteriori with regard to all categories of grouping of alternatives of chemical compounds. An a posteriori assessment of unity had to be made in all circumstances in the same way, since the legal requirement of R. 13 PCT was the same for all cases. Therefore, the a posteriori assessment of unity in cases of a functional relationship within a group of compounds had to be made in a manner corresponding to the assessment in cases of a structural relationship. This was appropriate for compounds related by their structure as well as for compounds related by their function. The structural relationship within the meaning of Annex B, Part I (f)(i)(B)(1) and the relationship within the meaning of Annex B, Part I (f)(i)(B)(2) and (iii) served the same purpose: both tests were intended to show whether the alternative compounds were of a similar nature, as was said in the introductory part of Annex B, Part I (f)(i). These tests were only tools in order to determine whether there was unity of invention as defined in R. 13 PCT.

Claim 1 in W 34/07 was directed to compositions for the coating of ceramic supports comprising micronised glass frits **and/or** nanosised zirconium hydroxide. The board concluded that the two claimed alternatives neither had in common express features not known in combination from the prior art nor represented two solutions to the same technical problem. The effects achieved by using either micronised glass or nanosised zirconium hydroxide were different and unrelated, although they might lead to "best results", i.e. when using a composition comprising both components.

## 6. Plurality of inventions – further search fees

If the search division or the ISA raises an objection of lack of unity, a further search fee is payable under R. 64(1) EPC (R. 46(1) EPC 1973) or Art. 17(3)(a) PCT, respectively, for each additional invention to be covered by the second report (for Euro-PCT applications in the European phase, see in this chapter II.B.6.2.).

In W 2/10 the board pointed out that in W 4/85 (OJ 1987, 63) and many subsequent decisions, the boards had decided that the requirement to give reasons in an invitation under Art. 17(3)(a) PCT was so fundamental that an unsubstantiated invitation could be regarded as legally ineffective. This was so in the case in question and therefore the additional search fees had to be refunded. See also OJ 2017, A20 for the provisional opinion now issued together with the partial search report.

If the fee is paid in due time applicants may select the single invention or group of inventions which they wish to retain in the (main) application. According to T 158/12, with