Section 10: Meaning of useful

An invention, so far as claimed in a claim, is **useful** if the invention has a specific, credible, and substantial utility.

**Meaning of useful**

1. For an invention to be patentable it must be novel over what is already known from the prior art base. Assessment of novelty of a claimed invention is based on whether all of the features of that claim are known from a single prior art document, see for example Ammonia’s Application, 49 RPC 409. A mosaic of more than one document to find lack of novelty is not permissible, see for example British Ore Concentration Syndicate v Mineral Separation Ltd, 26 RPC 124 at page 147, and Lowndes’ Patent 45 RPC 48 at page 57. Where it appears that a combination of more than one document would anticipate a claimed invention, then it is possible that these documents could be combined to find a lack of inventiveness i.e. the invention is obvious.

2. Useful is defined in section 10 of the Patents Act 2013 as having a specific, credible and substantial utility. The claimed invention must also actually achieve what is promised by the patentee. Patents should not be granted for inventions that are not useful: that is, that have no practical application or do not work.

**No clear statement of utility**

3. The useful purpose of many inventions is self-evident, well-established within the art or may be implied in the specification (e.g. a motor vehicle). In such circumstances no formal statement of utility is necessary. In addition, if the skilled addressees could appreciate the utility of the claimed invention, using their knowledge of the art without undue burden, the invention will satisfy the requirement that it is useful.

**Specific utility**

4. A specific utility refers to a utility that is specific to the subject matter claimed and can provide a well-defined and particular benefit to the public.

5. In many circumstances, the specification will disclose a specific utility for, or application of, the invention and thus satisfy this requirement. However, if the specification only discloses a general utility or a utility so broad
that it merely indicates that an invention has been made without disclosing what that specific invention is, then a specific utility has not been disclosed.

6. For example, the following claims do not represent a specific utility/use:

   i. a class of chemical compounds may be stated to be “pharmaceutically active” without any explanation of the type of activity or

   ii. an isolated DNA sequence where the only stated utility is that it may be used as a “molecular marker” or “gene probe”.

7. Where no utility is described (implicitly or explicitly), the invention defined may be directed to a mere scientific curiosity, discovery or idea. In such cases, the specific utility requirement has clearly not been met and you should also consider whether the claims are directed to a manner of manufacture (s. 14(a)), as well as whether the specification discloses the invention in a clear enough and complete enough manner (s. 39(1)(a)).

8. In re Fisher 421 F.3d 1365, 1371, 76 USPQ2d 1225, 1230 (Fed. Cir. 2005) the application included five expressed sequence tags (ESTs) that encode parts of genes whose functions are unknown. Monsanto appealed the USPTO refusal to grant the patent to its assignees (Fisher and Raghunath) on the grounds that the ESTs have no specific utility; they can only be used to locate genes of unknown function, as can all other ESTs.

9. The United States Court of Appeals, Federal Circuit (CAFC) found “that substantial evidence supports the Board’s findings that each of the five claimed ESTs lacks a specific and substantial utility and that they are not enabled.”

Credible utility

10. To determine whether the credible utility requirement is satisfied, you should consider whether a person skilled in the art would accept that the utility recited for the claimed invention is logical and consistent with the state of the art. If, based on the facts of the case, it is clear that the invention cannot work as described in the specification, then the invention will lack a credible utility.

11. Inventions that contravene well established laws of nature and are therefore non-operable, for example perpetual motion machines or 'cold fusion', will not satisfy the credible utility requirement. However, if the logic and facts described to support a claimed utility would convince the person skilled in the art that the asserted utility is plausible or reasonably credible, then the credible utility requirement will be met.

12. Any objection under these grounds that the invention lacks credible utility should explain why the invention claimed has no credible utility and will not achieve the promised benefit. You should also consider whether other grounds of objection apply, e.g. lack of clear enough and complete enough disclosure.

13. Joseph Newman (Newman v. Quigg, 877 F.2d 1575, 1581, 11 USPQ2d 1340, 1345 (Fed. Cir. 1989); In re Harwood, 390 F.2d 985, 989, 156 USPQ 673, 676 (CCPA 1968)) invented a DC motor which he claimed would produce mechanical power exceeding the electrical power being supplied to it. He attempted to patent the device in 1979 but the application was rejected by the USPTO. When he appealed the rejection, US District Court Judge Robert Penfield Jackson ordered Newman to turn his machine over to the National Bureau of
Standards for testing. The NBS concluded that output power was not greater than the input and it was not a perpetual motion machine. The patent was again denied.

14. Perpetual motion machines may also appear under other names such as “over-unity devices” or “zero-point-energy machine. In considering whether a purported utility is credible or not, consideration may be given to whether the utility of the claimed invention is of significant and presently available benefit to the public. Newman v. Quigg is cited as case-law giving the USPTO authority to reject perpetual-motion claims out of hand.

15. In the application re Harwood, 390 F.2d 985, 989, 156 U.S.P.Q 673, 676 (CCPA 1968) the United States Court of Customs and Patent Appeals upheld a rejection for lack of proof of utility because the applicant presented no evidence of inference that the claimed nitrofuran compositions would not sterilize all insect species as required by claims. In fact the examiner had supplied evidence that process would not be operative on a number of insects within the scope of the broad claims.

16. The court noted the practical impossibility of providing evidence the contemplated nitrofuran compositions would be operative to sterilize each and every insect species of the tens of thousands of known insect species. Quoting one of its earlier decisions, however, the court noted:

“when an applicant bases utility for a claimed invention on allegations of the sort made by appellants here, unless one with ordinary skill in the art would accept those allegations as obviously valid and correct, it is proper for the examiner to ask for evidence which substantiates them.”

17. The court affirmed the rejection of all the claims, stating:

“An inoperative invention, of course, does not satisfy the requirement of 35 USC 101 that an invention be useful. We think it was incumbent upon appellant either to limit his claims to the area where operativeness has not been challenged by appropriate and convincing evidence, or to submit representative evidence refuting the apparent suggestion of inoperativeness of the invention as broadly claimed arising from the references cited by the examiner. Appellant has done neither.”

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**Substantial utility**

18. To satisfy the substantial utility requirement, the asserted use for the claimed invention must correspond to a significant real-world utility.

19. If the specification describes an invention that can be viewed as providing a public benefit, i.e. the asserted utility is a desirable outcome based upon a concrete need in the art, the substantial utility requirement is satisfied. Where the invention claimed would require further experimentation to identify or reasonably confirm a real-world utility then the substantial utility requirement is not satisfied.

20. The USPTO Manual of Patent Examination Procedure (MPEP) 2107 gives the following explanation of what constitutes a “substantial utility”:

“Thus a “substantial utility” defines a “real world” use. Utilities that require or constitute carrying out further research to identify or reasonably confirm a “real world” context of use are not substantial utilities.”
21. For example, both a therapeutic method of treating a known or newly discovered disease and an assay method for identifying compounds that themselves have a “substantial utility” define a “real world” context of use. An assay that measures the presence of a material which has a stated correlation to a predisposition to the onset of a particular disease condition would also define a “real world” context of use in identifying potential candidates for preventive measures or further monitoring.

22. On the other hand, the following are examples of situations that require or constitute carrying out further research to identify or reasonably confirm a “real world” context of use and, therefore, do not define “substantial utilities”:

   i. Basic research such as studying the properties of the claimed product itself or the mechanisms in which the material is involved;
   
   ii. A method of treating an unspecified disease or condition;
   
   iii. A method of assaying for or identifying a material that itself has no specific and/or substantial utility;
   
   iv. A method of making a material that itself has no specific, substantial, and credible utility; and
   
   v. A claim to an intermediate product for use in making a final product that has no specific, substantial and credible utility.

23. The following is from the USPTO Manual of Patent Examination Procedure (MPEP) 2107 regarding re Fisher, 421 F.3d at 1376, 76 USPQ2d at 1233-34 (Fed. Cir. 2005):

   “The claims at issue in Fisher were directed to expressed sequence tags (ESTs), which are short nucleotide sequences that can be used to discover what genes and downstream proteins are expressed in a cell. The court held that “the claimed ESTs can be used only to gain further information about the underlying genes and the proteins encoded for by those genes. The claimed ESTs themselves are not an end of [applicant’s] research effort, but only tools to be used along the way in the search for a practical utility…. [Applicant] does not identify the function for the underlying protein-encoding genes. Absent such identification, we hold that the claimed ESTs have not been researched and understood to the point of providing an immediate, well-defined, real world benefit to the public meriting the grant of a patent.”

Does the claimed invention achieve the promised benefit?

24. An invention must have both a specific, substantial and credible utility that is disclosed in the patent specification and must actually achieve what is promised by the patentee. Generally, the test to be applied when assessing utility is does the invention do what it is intended by the patentee to do and is the end result itself useful? In Lane Fox v Kensington and Knightsbridge Electric Lighting Co (1892) 9 RPC 413 at 416 the question was asked: “Useful for what?” is a question which must always be asked, and the answer must be useful for the purposes indicated by the patentee.”

25. This does not mean that an invention must equate to a commercial product in order to be useful, rather it must achieve the utility promised by the patentee in the specification. Where claims do not achieve or fulfil what is promised by the patentee, the examiner should also consider whether a lack of clarity objection applies.
Assessing claims for lack of usefulness

26. At first report, the examiner need only determine whether a lack of usefulness objection is prima facie reasonable. However, compliance with the usefulness requirements is a question of fact. At further report stages the examiner should consider arguments that an invention is useful on their merits and assess any submissions or evidence provided by the applicant using the balance of probabilities considerations. A mere assertion by the applicant that an invention is useful would not be sufficient.

27. When construing the claims for the purposes of usefulness, they must be construed from the perspective of a skilled addressee in a common sense way, and not in such a way that the addressee would appreciate would lead to an absurd or unworkable result.

28. However, if a claim, properly construed, includes within its scope means that will not produce the desired result, even if a skilled addressee would recognise which means to avoid, then the claim will lack usefulness. That is, everything falling within the scope of a claim must have a specific, substantial and credible utility.

29. The following matters may require particular attention:

   i. Dependent Claims: In most cases, if an independent claim meets the usefulness requirements, a dependent claim will also meet the requirements. A possible exception is where the utility specified for the invention defined in the dependent claim differs from that of the independent claim.

   ii. Alternatives in a Claim: Each alternative in the claim must be useful.

   iii. Numerical Ranges within a Claim: The subject matter claimed should be taken to satisfy the useful requirement, unless there is good reason to question whether the promised benefit would be achieved across the whole of the claimed range.

   iv. Broad Claims: If there is reason to question whether the asserted utility could be achieved across the full scope of the claim, then the subject matter will lack usefulness. For example, where the claimed invention relates to a broad class of chemical compounds and the examples within the specification demonstrate that only some of the claimed compounds produce the desired result.

30. Where no utility has been explicitly described or is not implicitly apparent then the specific utility requirement has clearly not been met. Furthermore, it is likely that a defined invention without a specific utility is directed to a mere scientific curiosity, discovery or an idea. In this case, a manner of manufacture objection may be warranted.

31. In addition, a usefulness objection the examiner may consider whether the complete specification discloses the invention in a clear enough and complete enough manner as required by section 39(1)(a).

32. Generally, the test is “does the invention do what the patentee intends it to do and is the end result itself useful?”. Everything within the scope of a claim must be able to attain the desired result.
33. Pharmaceutical inventions (such as claims for Swiss type use or pharmaceutical compositions) are subject to the same legal requirements for usefulness as inventions in other technologies. The examiner should be mindful of what evidence is provided in specification in support of an asserted therapeutic or pharmacological activity. There should be a reasonable correlation between the stated activity of a compound or composition and the asserted utility.

34. An applicant can establish the existence of a reasonable correlation between an activity and the asserted utility by relying on data documenting the activity of the compound or composition, arguments or reasoning, documentary evidence or any combination thereof. Factors that may be considered supportive of an asserted therapeutic or pharmacological activity in the complete specification include:

   i. Evidence of structural similarity to a compound known to have a particular therapeutic or pharmacological utility.

   ii. Data from in vitro or animal testing that the person skilled in the art would accept as being reasonably predictive of an asserted utility.

   iii. Human clinical data.

35. The applicant is not required to prove that a correlation exists between a particular activity and an asserted therapeutic utility as a matter of statistical certainty, nor provide evidence of efficacy or success in treating particular animals/humans where such a utility is asserted.

36. The examiner should determine if the asserted utility for the invention is credible based on the information disclosed in the specification. Where there is some doubt that the evidence provided in the specification is sufficient, evidence from experts in the art indicating that there is a reasonable expectation of success, or submissions supported by sound reasoning, may be sufficient to establish that an asserted utility is credible.

37. Where claims to pharmaceutical inventions do not meet the requirements for usefulness, the examiner should also consider whether a lack of support objection applies, see Prendergast’s Applications [2000] RPC 446, El-Tawil’s Application [2012] EWHC 185.

38. Claims to the pharmaceutical inventions must be supported by evidence, in the application as filed, that the substance or composition is (or at least is likely to be) effective for the specified utility. In Prendergast’s Applications [2000] RPC 446, it was held that tests showing that the known substance or composition works in the proposed new circumstances are an essential part of the description if second medical use claims are to be adequately supported.