



Mock Certification Exam for  
Patent Information Professionals 2011

**PATENT INFORMATION ANALYSIS CERTIFICATION**

# **MOCK EXAMINATION**

## **Sample Answers**

**Paper B (Patent Analysis)  
Engineering**

Please note: it is to be understood that the sample answers provided in this document are intended to serve as a guide and by no means represent definitive answers. It is entirely possible that additional answers not specifically disclosed in this document could be considered as satisfactory answers.



## Part 1. Quick questions

### Part 1. Quick questions

1. In a world-wide perspective, is the following patentable? Explain
- a) Computer Programs

Computer programs as such are patentable in US and JP. A computer program may be indirectly protected in other jurisdictions such as Europe as part of a system contributing a further technical effect.

- b) Methods for doing Business

Business methods as such are patentable in US and JP. A business method may be indirectly protected also in other jurisdictions such as Europe as part of a system that contributes a technical effect and complies with the patentability criteria.

- c) A vase with a nice shape without further technical contribution

No, a vase lacks technical effect, thus not complying with the patentability criteria. Shapes are covered by design protection.

- d) Anti-personnel mines

No, inventions offensive to public morality are not patentable.

- e) A cosmetic treatment involving surgery or therapy

In most jurisdictions, except for inter alia the US, processes for surgical or therapeutic treatment or diagnostic methods carried out on humans or animals are excluded from patentability, if the purpose is medical.

However, the non-invasive portion of a diagnostic method may be patentable as such.

Additionally, substances or compositions and apparatuses used in such methods are also patentable. If the purpose is directed to purely cosmetic treatment of a human by administration of a chemical product, it may be considered patentable.



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## Part 1. Quick questions

2. What date determines the term of a patent if
- The patent has a priority date from a previously filed patent application?

The filing date of the patent in question.

- The patent is a divisional patent claiming priority from a previously filed patent application?

The filing date of the parent application.

- The patent originates from an International patent application (PCT application)?

The international filing date.

- The patent is a U.S. patent filed in 1994?

There was a new Act in 1994 changing the US patent term period. Thus, the patent term is either 17 years from the issue date or 20 years from the filing date of the earliest U.S. application to which priority is claimed.

3. Which patent claim has the broadest scope of protection? Explain your reasoning.
- Apparatus characterized by features A or B
  - Apparatus characterized by features A and B

Claim i) is broader as any of feature A or B is covered, thus two non-overlapping scopes of protection. Claim ii) cover features A and B together, hence both are required which constitutes a narrower claiming scope.

During a novelty search you discover two relevant documents. The first document discloses an apparatus with feature A and the second document discloses an apparatus with feature B. Argue for each claim i) and ii), whether it is novel and/or inventive starting from each document that you discovered.

Claim i) is lacking novelty in the light of both documents.

Claim ii) is novel but may lack in inventive step in the light of the combination of the two discovered documents.



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## Part 1. Quick questions

4. What is a Provisional Patent Application?

A Provisional Patent Application allows filing without any formal patent claims, oath or declaration, or any information disclosure (prior art) statement.

It allows the term “Patent Pending” to be applied.

A provisional patent application provides the means to establish an early effective filing date in a non-provisional patent application.

An applicant who files a provisional application must file a corresponding non-provisional application for patent within a 12 month pendency period.

Provisional patent applications are only possible in some jurisdictions e.g. the US, CA and AU.

5. A screwdriver, with a handle made of rubber, is previously known. Are the following screwdrivers novel? Explain your reasoning.

a) A screwdriver with a handle made of polyurethane rubber.

The screwdriver is novel. Although polyurethane rubber is a type of rubber if it was not specified in a disclosure, it would make it novel.

b) A screwdriver with a handle made of an elastic material.

The screwdriver lacks novelty. The previously known screwdriver has a handle made from rubber and rubber is an elastic material.

6. Which are the main differences between a utility model and a patent?  
Possible responses include:

A utility model cannot be obtained in some jurisdictions/countries; whereas a patent can be obtained in such jurisdictions/countries.

The subject matter claimed in a utility model can be restricted to certain application areas or technical fields (e.g. a utility model in China cannot be granted for a process).

The duration during which a utility model protects a claimed invention is shorter than that of a patent, and varies from country to country. Usually the protection period is between 7 and 10 years, without the possibility of extension or renewal.



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## Part 1. Quick questions

Depending on jurisdiction, only a set number of claims may be permitted for a utility model.

Utility models are generally less expensive to obtain and to maintain.

Examination of utility models often less stringent; e.g. only needing to satisfy a novelty standard (and possibly only a local novelty standard) is required. In many jurisdictions, patent applications are subject to substantive examination in which the patent claims must satisfy a novelty, inventive step (non-obviousness) and industrial utility requirements among other requirements.

A utility model can be published within a few months of filing; whereas a patent application, in most jurisdictions, is only published after 18 months from filing.

It takes a shorter period of time for a utility model to be granted than a patent. The registration process is often significantly simpler and faster, taking, on average, six months.

Publication kind codes for a utility model are different than the publication kind codes for a patent publication.

Protection for utility models is often sought for innovations of incremental character which may not meet the patentability criteria.

7. During a novelty search you discover a document with the number DE 9406143 U. What does the kind code “U” indicate?

That DE 9406143 U is a utility model.

8. An EP-patent with application date on February 2000, is claiming priority from a Canadian patent with application date on April 1999. What date should be considered during an invalidation search? Please comment why.

If the priority date is valid for one or more claims then the relevant date is April 1999 for those claims.

If the priority date is not valid for one or more claims then the relevant date is February 2000 for those claims.



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## Part 1. Quick questions

Potentially relevant EP patent applications that were published after February 2000, but that validly claim a priority date earlier than April 1999 could also be cited if relevant to novelty.

9. What are the possible grounds for invalidation of a patent in force?

**Lack of Novelty:** can be demonstrated by prior art that discloses all of the claimed features.

**Lack of Inventive Step/Obviousness:**

- if it can be shown that a person skilled in the art having read the disclosure of a single piece of prior art would have thought the claimed invention would be obvious in light of the disclosure.
- if a person skilled in the art would have combined the disclosures of typically two pieces of prior art to arrive at the claimed invention.
- if it can be shown that a person skilled in the art would arrive at the claimed invention by combining prior art with information within the common general knowledge of the technical field to which the claimed invention pertains.

**Lack of enablement:** can be demonstrated if a person skilled in the art is unable to make and use the claimed invention as described in the patent specification without undue experimentation.

**Lack of support (e.g. lack of written description):** can be demonstrated if the scope of the claims is broader than the disclosure provided in the patent specification.

**Lack of entitlement:** in which a patent is granted to an unentitled inventor or patent assignee

10. What are some of the major differences in patent office practice before the USPTO and the EPO? Name at least three.

Prior art document should preferably be available in English. E.g. under article 102(e), a WO document has to have been published in English to be considered prior art.

Before the enactment of the recent America Invents Act, US patent application had to be filed in the name of the inventor(s).

In Europe a post-grant opposition can be filed within 9 months of the date of



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## Part 1. Quick questions

grant of a European patent. After the enactment of the recent America Invents Act post-grant review is also available in the US.

An Information Disclosure Statement must be filed in respect of a US patent application that lists all prior art known to the applicant.

A 12 month grace period is available in the US in relation to inventor derived disclosures of the claimed invention, whereas in EP a six month grace period applies in only limited circumstances (evident abuse and disclosures at officially recognized exhibition).

After grant of an EP patent it has to be validated in each Member State to obtain the patent right for that State.

In the US, the patent applicant must disclose the best mode of the invention in the patent application.

11. Except for printed published documents, what is considered possible public availability to be used as prior art?

Show of general use may be constituted by e.g. producing, offering, marketing or otherwise exploiting a product.

Demonstrations of claimed products or processes during an exhibition, at a specialist training course or via the television can also render the product or process publicly available.

Availability to the public in other ways is also possible via the internet, CD, streamed films or other technological means.

A disclosure during a commercial meeting, if the meeting is not covered by a Non disclosure Agreement (NDA) between the participating parties.

12. A “product” has been presented orally by the inventor at a commercial meeting with a customer. This presentation was not recorded, nor included in a published paper. 9 months later a PCT patent application describing the “product” is filed by the inventor at the WIPO designating EP. Could you use testimony of this presentation to invalidate the final EP patent? Explain your answer.



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## Part 1. Quick questions

If the commercial meeting is covered by a Non disclosure Agreement (NDA) between the parties and if the Parties has followed the prescriptions of this NDA, the presentation would not be considered as 'publicly available' and could not be used to invalidate the patent.

If there is no NDA then it may be possible to invalidate the EP patent on the basis of the disclosure during the presentation.

13. What kind of documents should be included in a Freedom To Operate search?

Only patent documents in force and pending patent applications for the jurisdiction in which Freedom To Operate has to be considered.

Utility models if applicable in the jurisdiction of interest.

14. Which parts of a patent document are of interest for an Freedom To Operate search and why?

One must look at the claims, because the claims define the monopoly granted or sought. Although in many jurisdictions, the claims are interpreted only in light of the application as filed, under US law, the file history of a US patent can be used to interpret the scope of the claims, so the file history is also important to consider when assessing US patent publications.

Look at the front page to determine if the document is a published patent application or a granted patent (detectable by looking at the kind code or INID fields for example).

Determine the legal status of the patent publication. If the document is a granted patent one would need to check if the patent could still be in force in that particular jurisdiction and if any post grant amendments have been made. If the document is a published patent application one would need to check if it could still be ending. Thus, in addition to considering the patent publication itself, it is important to obtain its current status (Pending? Under re-examination? Under opposition? Currently in force? Expired? Ceased?).

Check for corresponding patent rights in other jurisdictions of interest. If a relevant document retrieved in a search is a published PCT patent application, for example, check to see if the 30/31month date has lapsed. If so, check to see if national or regional phase entry has occurred in the jurisdictions of interest. Similarly, in the case of a regional patent application, such as a European patent





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## Part 1. Quick questions

application, consider whether the jurisdictions of interest have been designated and if designation fees have been paid.

15. Which documents of which patent authorities do you have to include if you have to do an infringement search for Germany?

German laid open applications  
German patents  
German utility models  
European laid open applications  
European patents  
PCT-applications

16. A client contacts you and has a product release within short time and a he has a limited budget. The company acts in Europe and the intention is to sell the product in the whole of Europe. If you have to limit your Freedom To Operate search due to budget constraints, what would you recommend the customer to focus on?

The client should be advised to start with a restricted geographical region such as e.g. FR, NL, DE and GB patents since those are the countries where infringement cases are most likely rapidly brought to court

Restrict the scope of the search to those countries where the actual launch or manufacturing will take place.

Restrict the search to only main competitors

Restrict to countries where competitors have production or R&D since there is a higher patent activity in those countries

Restrict to countries with the largest markets

Restrict the scope of the search to the main core features of the product, which are difficult to invent around.

Restrict the scope of the search to the features that are not included in an existing product on the market

Restrict the search scope to latest 20 years of patent filings



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## **Part 1. Quick questions**

In light of the time and budget constraints, the client may ask you to conduct a search for patents or non-patent publications in the hope that you will identify a single piece of prior art that discloses every feature of the client's proposed product. Although this search can be conducted, you must inform the client that this is no longer a freedom to operate (FTO) search, but rather a patent infringement defence search. A freedom to operate search is a search for patents and published patent applications that are in force or pending in the jurisdictions of interest to the client. The purpose behind a FTO search is to identify possible patent infringement risks. It is not a search for prior art that may provide a possible defence to patent infringement. As a professional patent searcher, it is important to inform the client of this distinction to ensure that the client understands that if you proceed on the basis of the client's instructions to search for prior art, you will no longer be conducting a FTO search.



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## Part 2 Case 1 - Patentability

Company Z wants to continue the prosecution of a patent by filing a European Patent Application for an invention, validly claiming priority from a French Application with a filing date of 27 November 2007. P works in the R&D department of company Z and is under obligation of secrecy according to his work contract. However, P is informed that he/she will not be promoted and he/she decides to leave the company in February 2008 and harm it.

The following claims will be filed before the EPO on the day before priority expires:

- Claim 1: Product.
- Claim 2: Product of claim 1 comprising feature A and preferably feature B.
- Claim 3: Method of making the product.
- Claim 4: Method of claim 3 comprising step C.

The priority application contained only a description of the product and the product including A and preferably B. In view of general common knowledge the priority application was enabling for the product.

Company Z turns to you and requests a patentability search and analysis to be done. This occurs one month before filing before the EPO. Company Z tells you that P was involved in the development and that P left the company in February 2008.

After performing the searches, you discover the following documents:

- D1, a European patent application, filed in March 2007 and published in September 2008, disclosing the product and the method for making the product.
- D2, a sales document showing the product, distributed at an annual conference in April 2007.
- D3, a document published by P at an annual conference in March 2008, describing the product in which feature A was added and details of the method for making the product including the feature A and which method included the steps of claim 3.
- D4, patent application, published in September 2007, disclosing the usefulness of feature A for a class of products including but not mentioning the product of claim 1. It also described the effect of step C in the technical field of the method, showing embodiments different from the method of claim 3.

## Questions

Argue for each claim, whether it is novel and/or inventive departing from each document that you discovered.



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## Part 2 Case 1 - Patentability

### Identification of effectives dates of the EP patent application filed by Z

#### Claims 1 and 2:

Since the product and the product including the feature A and preferably the feature B were disclosed in the priority document in an enabling way, claims 1 and 2 have the same effective date of 27 November 2007.

#### Claims 3 and 4:

However, Claims 3 and 4 will have the latest effective date of 27 November 2008, which is the day before the priority expires, which is the filing date of the European patent application.

### Claims analysis

#### **CLAIM 1** (Independent, effective date 27 November 2007)

- D1 is a prior right that may be relevant to the novelty of claim 1, because it disclosed the product and because it was filed before the effective date of claim 1 and published after that date
- D2 may be relevant to the novelty of claim 1, since it was published before the effective date and because it disclosed the product

#### **CLAIM 2** (dependent on claim 1, effective date 27 November 2007)

#### Note on claim structure

- The feature “preferably B” in claim 2 is non-limiting and therefore is disregarded. Expressions like “preferably”, “for example”, “such as” or “more particularly” are to be considered carefully to ensure that they do not introduce ambiguity. Expressions of this kind have no limiting effect on the scope of a claim; that is to say, the feature following any such expression is to be regarded as optional.
- D1 does not disclose the feature A.

#### Detailed analysis

- Since D1 is a prior right, it can only be cited on the basis of novelty. Thus a combination of D1 and D4 for an inventive step is not allowed.. D1 does not appear to be relevant to the novelty of claim 2, because it does not disclose feature A.
- However, the combination of D2 and D4 may be used to argue that claim 2 lacks inventive step.

#### **CLAIM 3** (Independent, effective date 27 November 2008)

- D1 may be relevant to the novelty of claim 3, since it was published before the effective date of claim 3 and it discloses the method of making the product



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## Part 2 Case 1 - Patentability

- The publication of D3 is an evident abuse, within the meaning of Art. 55(1)(a) EPC since it appears to be an intention to harm. For the calculation of the 6-month period referred to in Art 55(1)(a) EPC, the relevant date is the actual filing date of the European Patent Application. The date of priority is not taken into account in calculating the period. D3 was published earlier than 6 months preceding the date of 27 November 2008 and therefore D3 may be relevant to the novelty of claim 1, as Art 55(1)(a) EPC does not apply.

### **CLAIM 4** (Dependent on claim 3, effective date 27 November 2008)

- Although it appears that none of the documents retrieved by the search disclose the subject matter of claim 4, an argument may be raised that claim 4 may lack inventive step in light of the combination of the disclosures of D1 and D4, since both D1 and D4 were published before the effective date of claim 4.
- The combination of the disclosures of D3 and D4 may also raise an inventive step argument in relation to claim 4, since both D3 and D4 were published before the effective date of claim 4



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## Part 2 Case 2 – Invalidity / Presentation & Questions

In this paper, the candidates should assume that a European patent has been granted with the three (3) independent claims presented.

The following documents D1–D7 are provided by the Opponent.

D1: W096/41995 A

D2: Japanese Abstracts of Japan No. 06-238432

D3: US4250229 A

D4: EP0337102 A

D5: Chatterjee B, “Fabrication of fine apertures in metal foils by photoelectrochemical drilling”, Precision Engineering, Volume 8, Issue 3, 1986

D6: US4260666 A

D7: US4169744 A

### Question 1

Could you quote all the seven [7] features described in the independent Claim 1 (similar features appears in independent claims M and N of the invention). You could either use a separate paper or use the table 1 provided below.

<b>Feature</b>	<b>Features description</b>
<b>a)</b>	<i>A preformed article</i>
<b>b)</b>	<i>formed of an amorphous metal</i>
<b>c)</b>	<i>brazing foil having an irreversibly deformed, non-planar, three dimensional configuration</i>
<b>d)</b>	<i>including a primary planar face with at least one perforation passing there through,</i>
<b>e)</b>	<i>said article being adapted for use in the manufacture of an assembly having brazed joints</i>
<b>f)</b>	<i>said manufacture comprising the brazing of a plurality of tubes to at least one plate, and</i>
<b>g)</b>	<i>the brazing of said plate to a shell encasing said plurality of tubes and said at least one plate</i>



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## Part 2 Case 2 – Invalidity / Presentation & Questions

### Question 2

If possible, use the support of the document D1-D7 to find a way to invalidate the patent. For each argument please localize inside the document, using the line number, all the elements which support your opinion. The candidate should select the most suitable method to invalidate the claims of this patent in accordance with the EPO praxis. In order to justify his/her point of view she/he should select among the documents provided the most suitable elements for supporting his assertions and provide a detailed explanation of the invalidation process by employing standard X, Y & A categorization and associated arguments. However, no detailed attorney-like analysis is required.

If multiple alternatives for invalidation are identified, indication of all strategies that may support the invalidation based upon legal ground should be presented in order to achieve full marks.

### Identification of main headings

The following headings are regarded as items that needed to be addressed to obtain marks for this question.

- Selecting the main document to be used for arguing lack of novelty for claim 1, M&N
- Extracting the correct relevant parts from selected document and map them correspondingly to the defined features in the claim chart for claim 1, M & N.
- Correct analysis and discussions on how to use and relate selected documents in relation to the novelty for claim 1, M & N.
- Selecting the right combination of two documents for discussions on the possible lack of inventive step of claim N.
- Extraction of relevant parts and reasoning based on a patentability discussion with regard to inventive step by combining the selected documents in relation to claim N
- Discussions on patentability featuring the combination of D1 & D3 in relation to claim N



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## Part 2 Case 2 – Invalidity / Presentation & Questions

### Claim 1 – Novelty

Selected Document: D3-X

#### Feature analysis:

<i>Means</i>	<i>Invalidated features according to</i>
<i>a)</i>	Document D3 discloses a preformed article which is a ductile TMP (Transient Metastable Phase) interlayer foil for brazing (preformed article) which is formed of amorphous metal (see page 3, line 28 - page 4, line 12, especially page 4, lines 5-6).
<i>b)</i>	Document D3 discloses a preformed article which is a ductile TMP (Transient Metastable Phase) interlayer foil for brazing (preformed article) which is formed of amorphous metal (see page 3, line 28 - page 4, line 12, especially page 4, lines 5-6).
<i>c)</i>	In Document D3 it is explained that the interlayer foil is shaped e.g. by stamping, punching, bending. These shaping methods inevitably produce an irreversibly deformed, non-planar, three dimensional configuration. Punching produces perforations (see page 3, lines 16-18 and page 8, lines 5-9).
<i>d)</i>	In Document D3 it is explained that the interlayer foil is shaped e.g. by stamping, punching, bending. These shaping methods inevitably produce an irreversibly deformed, non-planar, three dimensional configuration. Punching produces perforations (see page 3, lines 16-18 and page 8, lines 5-9).
<i>e)</i>	This feature is also known from Document D3 because the interlayer foil of D3 is adapted for use in the manufacture of an assembly having brazed joints (see page 3, lines 30-35, also D1, page 4 relevant)
<i>f)</i>	<i>Does not add novelty regarding manufacturing conditions of a heat exchanger without defining any relationship between the claimed preformed article and the plates, tubes and shell of the heat exchanger.</i>
<i>g)</i>	<i>Does not add novelty regarding manufacturing conditions of a heat exchanger without defining any relationship between the claimed preformed article and the plates, tubes and shell of the heat exchanger.</i>

### Claim M - Novelty

Selected Document: D3 - X

#### Feature analysis:

The method of claim M concerns the manufacture of any assembly with brazed joints. It is not restricted to the manufacture of a particular heat exchanger. This kind of method is disclosed by D3 (page 1, lines 15-17), which known method includes the process steps of:

- providing an interlayer foil (preformed article having the features (a) to (d) of claim 1 which are known from D3, (as explained above) in contact with one or more elements of the assembly, (see page 8, lines 7-13) and
- partially melting said preformed article in order to produce brazed joints between elements of the assembly (see page 8, lines 18-22).





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## Part 2 Case 2 – Invalidity / Presentation & Questions

### **Claim N - Novelty**

Selected Document: D3 - X

#### Feature analysis:

Claim N is directed to a heat exchanger or other assembly having brazed joints. It is not restricted to a particular heat exchanger but embraces any assembly with brazed joints. The claimed assembly is only defined by a method which embraces or does not differ from the method as defined by claim M, which method is regarded as known from D3 in the above paragraphs.

### **Claim N – Inventive Step**

Selected Document: D1 -Y, D3-Y

#### Feature analysis:

D1 describes a plate heat exchanger in which adjacent plates are brazed together by a thin foil (22) of brazing material illustrated in Figure 2C. The brazing foil has a non-planar, three dimensional configuration to match the surfaces of the plates to be joined and is also provided with perforations at its corners to match those of the plates (see page 5, line 33-40 & page 6, lines 14-21).

When the heat exchange plates are made of stainless steel, it would be obvious to form the brazing foil from amorphous metal in view of D3 (see page 3, line 28 - page 4, line 12, especially page 4, lines 5-6).

**Part 2****Part 2 Case 2 - Invalidity / Abstract and Claims of the delivered Patent****Abstract**

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Preformed articles of an amorphous metal foil which are particularly adapted to be used in the manufacture of an assembly having brazed joints, especially a heat exchanger. Methods for the manufacture of a heat exchanger or other assembly having brazed joints, which method includes the process step of providing a preformed article formed of a brazing foil composition of an amorphous metal alloy in contact with one or more elements of said heat exchanger or other assembly.

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**Independent claims of the Patent (3)**

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Independent Claim 1: A preformed article formed of an amorphous metal brazing foil having an irreversibly deformed, non-planar, three dimensional configuration including a primary planar face with at least one perforation passing therethrough, said article being adapted for use in the manufacture of an assembly having brazed joints, said manufacture comprising the brazing of a plurality of tubes to at least one plate, and the brazing of said plate to a shell encasing said plurality of tubes and said at least one plate.

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Independent Claim M: A method for the manufacture of a heat exchanger or other assembly having brazed joints, which method includes the process steps of: providing a preformed article formed of an amorphous metal brazing foil in contact with one or more elements of said heat exchanger or other assembly, said brazing foil having an irreversibly deformed, non-planar, three dimensional configuration including a primary planar face with at least one perforation passing therethrough, said preformed article being in contact with said one or more elements of said heat exchanger or other assembly during the fabrication thereof; and subsequently subjecting the heat exchanger or other assembly to suitable conditions in order to effectuate at least partial melting of said preformed article in order to produce brazed joints between elements of said heat exchanger or other assembly.

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Independent Claim N: A heat exchanger or other assembly having brazed joints manufactured by a method which includes the process step of providing a preformed article formed of an amorphous metal brazing foil in contact with one or more elements of said heat exchanger or other assembly, said brazing foil having an irreversibly deformed, non-planar, three dimensional configuration including a primary planar face with at least one perforation passing there through.

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