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Munich, 10 October 2025

MOCK paper M4

A MOCK paper M4 is now available for testing and preparation purposes (see annex).

A model solution addressing the expected answers for all questions will be published in due course.

For the Examination Board
The Chairman

Jakob Kofoed

Mock paper M4

Today, 10 March 2027, you receive a letter from Ms Fast:

Dear attorney,

[001] I own the German ski boot manufacturer FASTER (F), where I design and manufacture cross-country ski boots. My main markets are Austria, Germany and Switzerland and my only factory is located in Germany. According to common general knowledge, cross-country ski boot soles (S) are made of polymer foam. Nanoparticles (NP) are particles of less than 100 nanometers (nm) and have generated huge interest in the scientific world. This inspired me to experiment with ski boot soles comprising nanoparticles in the polymer foam.

[002] During my research, I found out that all metal nanoparticles modify the foam structure of a ski boot sole, thereby improving its energy storage. Such ski boot soles return energy to the skier. In particular, I found out that copper nanoparticles of up to 40 nm increase the energy storage of ski boot soles by 200% compared to soles without nanoparticles. Copper is a metal. On 29 January 2026 I filed the European patent application EP-F1 at the EPO in German in the name of FASTER and without claiming priority. EP-F1 describes the effect of increased energy storage and claims a cross-country ski boot sole comprising copper nanoparticles up to 40 nm.

[003] Afterwards, I found out that all metal nanoparticles increase the energy storage of ski boot soles by 40% compared to soles without nanoparticles. If the size of the metal nanoparticles is up to 80 nm, energy storage is increased by 100%. I therefore filed the European patent application EP-F2 at the EPO on 9 March 2026. I filed EP-F2 in German in the name of FASTER and paid the filing fee and the search fee for EP-F2. EP-F2 contains the entire disclosure of EP-F1 and claims priority from EP-F1. EP-F2 describes the effect of increased energy storage, as well as describing and claiming a cross-country ski boot sole comprising metal nanoparticles up to 80 nm (claim 1).

[004] My most recent reasearch involves ski boot soles that comprise silica nanoparticles ranging from 35 nm to 45 nm (sole A). Silica is not a metal. Silica nanoparticles within that size range increase the energy storage of the ski boot soles by 300% compared to soles without nanoparticles. Such soles will give skiers a significant advantage! I have spent the last few months preparing for the mass production of these

soles. I want to start selling ski boots with sole A before the next ski season.
I filed EP-F4 in German which describes and claims ski boot soles comprising silica nanoparticles ranging from 35 nm to 45 nm. I received a communication under Rule 71(3) EPC in August 2026. As I forgot to reply to this communication, I received a notification of loss of rights on 15 January 2027.

[005] My Austrian competitor HIKE (H) is also active in the field of ski boots. HIKE's only factory is located in Austria. Last week, I performed a search on the internet and found an announcement which was published on HIKE's website on 10 February 2027 (announcement A). This announcement stated that HIKE would soon start selling cross-country ski boots with ski boot soles comprising silica nanoparticles ranging from 35 nm to 45 nm. What a shock! These ski boot soles have exactly the same composition as our sole A! In announcement A, HIKE also states that these ski boot soles are protected by HIKE's Austrian patent AT-H. I found out that AT-H was filed in 2023 and published in May 2025, and that the mention of the grant of AT-H was published in January 2026. AT-H is in force and describes and claims a cross-country ski boot sole comprising nanoparticles. AT-H neither specifies the material nor the size of the nanoparticles and does not mention the effect of increased energy storage either.

[006] During my internet search, I also found another announcement on HIKE's website, published on 4 March 2026 (announcement B). In that announcement, HIKE stated that they had bought the European patent application EP-H and that the transfer was registered with the EPO. HIKE further stated that they will soon produce and sell cross-country skiing ski boot soles comprising copper particles ranging from 70 nm to 80 nm (sole B), and that these soles are protected by their patent application EP-H. As mentioned, I also experimented with copper nanoparticles and there is no doubt that copper particles ranging from 70 nm to 80 nm can be mixed into any polymer foam to produce sole B. I have realized that the manufacturing process becomes simple and cheap when the ski boot soles have the composition of sole B. So I am very keen on manufacturing and selling ski boots with sole B!

[007] EP-H was filed at the EPO in Chinese by the Chinese company SNOWMAN in September 2024. EP-H was published in English on 4 March 2026 and was granted without amendments. The mention of the grant of EP-H was published on 3 February 2027. I checked the EP

register and no request for unitary effect has been filed to date. The granted patent EP-H describes and claims a cross-country ski boot sole comprising copper particles ranging from 70 nm to 80 nm. The only material described in EP-H is copper. I had the original Chinese text of the European patent application EP-H translated by a certified translator. The translator alerted me that the English publication of EP-H differs from the Chinese text, even though this is not obvious from the English text. The Chinese text of the patent application only mentions copper particles of from 70 to 80 micrometers (μm), and it does not mention nanometers at all. One micrometer equals 1 000 nm.

[008] By the way, I also filed a European patent application EP-F3 at the EPO in German in the name of FASTER on 12 February 2026 without claiming priority. The description of EP-F3 states that the addition of metal nanoparticles ranging from 35 nm to 80 nm increases the energy storage of ski boot soles and that any metal can be used. EP-F3 claims a cross-country ski boot sole comprising metal nanoparticles ranging from 35 nm to 80 nm. I intentionally never paid any fees for EP-F1 and for EP-F3 because I intended to file EP-F2. I received a notification of the loss of rights for EP-F1 in July 2026, followed by a notification of loss of rights for EP-F3 in August 2026.

I am very upset about the announcements on HIKE's website and urgently need your advice!

Please advise me on the following issues:

1. Outline the patent situation as it currently stands for the claims of FASTER's applications:

(a) EP-F2
(b) EP-F1
(c) EP-F3.
(d) EP-F4

2. As the situation currently stands, are FASTER or HIKE free to produce or sell the following products in Austria, Switzerland or Germany:

(a) cross-country ski boots with sole A
(b) cross-country ski boots with sole B?

3. How can you improve the situation for FASTER?