

受験番号 : 28IPM001

問1

[0003] However, even if an object has a smooth surface, air resistance cannot be ignored, and in the case of the transportation objects exemplified above, fuel consumption, acceleration, maximum speed, stability, and the like thereof are adversely affected. In particular, the problem of fuel consumption directly relates to an energy resource problem and environmental problems such as pollution, acid rain, global warming, and the like, and is becoming increasingly significant with recent increase in transportation energy. Further, objects flying at ultra-high speed have a problem of frictional heat (aerodynamic heating) with air. For example, a space shuttle reaches a speed as high as 7.6 km/s at the time of reentry into the atmosphere, and therefore the surface thereof partially reaches a temperature of 1400°C or higher due to frictional heat. Therefore, development of heat-resistant materials and heat insulation structures is difficult and is considered as a big issue. Also for durability and the like, new ideas are expected in the future and it is urgent to produce such new ideas.

[0004] The present invention has been made to solve the above problems and an object of the present invention is to provide a novel object surface fluid resistance reducing structure that achieves innovative technology dramatically improved from the conventional level so that: on the basis of a new fluid dynamics theory, the fluid resistance of the object surface can be reduced as compared to the case where the object surface is smooth; properties such as fuel consumption, acceleration, maximum speed, and stability can be improved for various transportation objects, for example; in particular, improvement efforts regarding energy saving and environmental problems can be addressed in a worldwide level; and for objects flying at

ultra-high speed, frictional heat and various harmful resistances are reduced to make improvements in durability, cost, and the like of heat resistant materials and heat insulation structures.

## 問2

Next, as shown in FIG. 2, each of the bell-shaped cores 1 was placed at a predetermined position in a cavity in a mold for final hollow molded product.

The mold included three molds A, B, and C indicated by 20, 30, and 40, respectively, in FIG. 2. The mold A had projections 22 and 23. The mold B had projections 32 and 33. The mold C had a projection 41.

In particular, the upper projection 11 of the core 1 was in contact with the projection 22 of the mold A and the projection 32 of the mold B, and in the through hole 12 of the core 1, the projection 23 of the mold A and the projection 33 of the mold B were in contact with each other and were located so as to be separated from the inner wall of the core 1. Further, the projection 41 of the mold C was inserted into the recess 13 of the core 1 so that the core 1 was disposed at a predetermined position in the mold cavity.

Through an injection port 21 shown in FIG. 2, outer shell resin (B) 5 was injected to each part around the cores 1 placed in the mold, under the injection molding temperature (320°C), to perform injection molding, and then the mold was cooled to obtain a core-integrated molded body.

Good No cracks or fissures were visually observed in the outer shell resin (the core-integrated molded body was obtained without deformation of the core).

Fair Cracks and/or fissures were visually observed in the outer shell resin (the core was slightly deformed at the time of injection molding of the resin (B)).

Poor Cracks and/or fissures were visually observed to a considerable extent (the core was considerably deformed at the time of injection molding of the resin (B))

1. 「該金型はそれぞれ、凸部22と23、凸部32と33、凸部41を有する。」の個所では、金型A、金型B、金型Cのそれぞれについての英文を作成して表現しています。
2. ○、△、×はそれぞれ Good, Fair, Poor として訳出しております。
3. 本問は、実際に作成した例であると考え、基本的に過去形で訳出しております。原稿の日文が構成の記載など一部で現在形表記となっており、私の担当するクライアントの中でも、原文の現在形に合わせることを希望されるクライアントと、すべて過去形で訳出を希望されるクライアントがありますが、今回はすべて過去形と致しました。

### 問3

[Claim 1] A simple-type zoom lens mechanism that allows movement of each of two movable lens groups of a lens barrel along an optical axis (L), the lens barrel having fixed lens groups at both ends and the two movable lens groups at an intermediate part between the fixed lens groups along the optical axis (L), one of the movable lens groups being configured for zooming so as to be capable of varying a photographing magnification for an object to be photographed, another one of the movable lens groups being configured for focusing so as to be used for focus adjustment, the simple-type zoom lens mechanism comprising:

- a main driving shaft (5) and a passive shaft (6) disposed in parallel to the optical axis (L), around the optical axis (L);
- a main driving body (8) integrated with a frame of the movable lens group (4) for focusing, the main driving shaft (5) being inserted into the main driving body (8) such the main driving body (8) is slidable; and
- a passive body (9) integrated with a frame of the movable lens group (3) for zooming, the passive shaft (6) being inserted into the passive body (9) such that the

passive body (9) is slidable,

wherein the passive body (9) on the passive shaft (6) is configured to be driven by driving of the main driving body (8) on the main driving shaft (5), so as to allow movement of the movable lens group (3) for zooming and the movable lens group 4 for focusing along the optical axis (L).

1. 「他の1つ」: クライアントの中には、「他の1つ」が確定的な場合にクレームであっても the other を許容されるクライアントもありますが、今回は、過去の知財翻訳検定の採点基準から判断し、the は用いておりません。

2. 「前記主動軸5には・・・主動体8が・・・挿嵌されている」: 図示の構造上、「主動体8」に「主動軸5」が挿入されているとして訳出しています。「受動体9」も同様です。