総合理工学研究科 Graduate School of Science and Technology 建築・土木コース Structural Engineering

床材の性能評価および適正施工労力



Performance evaluation of floor finishing material and proper construction labor

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Keyword: 建築仕上材料, 性能施工

Topics: Building finishing materials, Construction for performance

本研究室では、建築部位の中でも床を対象に、材料に関する研究をしています。床は、壁や天井などと比較して、使用者が触れている時間が格段に長いため、床材に求められる性能も多岐にわたります。テーマは、大きく2種類あります。

一つ目は、床材の性能評価方法の設定です。 無数に有る要求性能のすべての観点から優れ た材料を実現することは、現実的には不可能で す。そこで、用途や使用者の層、嗜好などに応 じて重要視する項目としない項目を取捨選択 し、それぞれの項目に目標を設定することとな ります。これを合理的に行うためには、個々の 項目ごとに性能評価方法を整備しておく必要 があります。

二つ目は、床材の性能を十分に発揮できる適 正な施工労力に関する研究です。近年の建築施 工情勢は、工費圧縮・工期圧縮を第一義として います。無駄を切り詰める際、必要な労力まで 削ってしまい、完成後の不具合が後を絶ちませ ん。性能と施工労力の関係を定量的に示し、無 駄を合理的に判定しなければ、ならないので す。

| 1600 | 1400 | 1600 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000

In my laboratory, floor finishing materials are investigated. The time that users touch to floor is greatly longer than the time of touching to wall, ceiling, etc. Therefore, the performance requested to floor materials is various. There are roughly two kinds of my themes.

The first is to set evaluation methods for performances of floor finishing materials. It is realistically impossible to develop an excellent material from all viewpoints of innumerable demand performances. Then, it is necessary to select necessary items according to the usage, users' attribute, taste, etc. And, it is necessary to make objectives for each item. For this, the first thing to do is to maintain the evaluation method of each performance individually.

The second is a research on a proper construction labor that it is made demonstrating the performance of the floor material enough. At construction sites in recent years, the cost cut and the shortening of a construction are valued most. But too much costs and times are cut down, even a necessary labor is cut down. Then, troubles after construction keep happening. It is necessary to investigate relations between performances and construction labors, and to judged reasonably what are surpluses.



上:床コンクリートの施工にかける労力と完成後の凹凸の関係の実験

左: 育児中の姿勢・視界変化にともなう

床の安全間隔の変化の実験

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