English for Architects 27 March

Level : Semester two

Weekly hours : 1h45

Meeting time : Friday 9-10.45

Instructor : Pr.K.Saadani

GLASS/ STEEL/ ALIMINUM/ PLASTER/ STONE/ COPPER……..ETC

There are two primary areas that must be evaluated in selecting appropriate materials and assemblies.

1/ MATERIAL COMPATIBILITY WITH CLIMATIC, CULTURAL, AND AESTHETIC CONDITIONS

Climate is one of the most important factors to consider in material and assembly selection. Too often we see buildings that have not taken local environmental conditions into consideration, by either replicating the same prototypical design from Alaska to Arizona, or by designing a building for a specific site that ignores climatic issues. The result is a building that performs poorly—failing to keep inhabitants comfortable without excessive energy expenditures and near complete reliance on mechanical systems to rectify poor construction decisions). Materials also must be compatible with specific regional and local cultural and aesthetic conditions. For example, the Southwestern adobe and flat roof residential construction would not export well to New England, where the widespread use of wood framing, clapboard siding, and pitched roofs is climatically appropriate, as well as culturally embraced.

2/APPLICABILITY OF MATERIAL TO OCCUPANCY AND SIZE OF BUILDING, INCLUDING DURABILITY, STRUCTURAL, AND FIRE PROTECTION REQUIREMENTS

Material choices are often legally limited by the building type and size, in order to protect public health, safety, and welfare. For instance, a detached single-family house has far fewer limitations than a high-rise office building or a federal courthouse, from which hundreds of inhabitants must be evacuated in case of emergency. In general, buildings with large occupancy numbers (especially assembly occupancy such as theaters, lecture halls, and restaurants) and greater enclosed square footage require more fire-resistant construction and more complex fire protection systems.

B. Physical Properties

A number of physical properties must be taken into account in the material selection process. While certain properties are inherent to the material and unchangeable, other qualities can be determined in the fabrication or finishing process. The following outline lists only primary considerations, since each material possesses a unique combination of properties.

1/STRENGTH : STEEL, MASONRY

Material strength quantifies resistance to compression, tension, and other types of loading on a given material. For instance,……. performs most effectively as a load-bearing or compressive material, while…….. is a more suitable choice for greater spanning and tensile requirements.

2/ ***MASS AND THICKNESS : AESTHETIC-THICKNESS***

After an initial material selection is made, the dimensional…… of each material must be based on requirements for durability, strength, and…… considerations.

3/ PHYSICAL AND VISUAL DENSITY : LIGHTNESS-HEAVINESS

Often a particular tactile density is desired, ranging from…… to ……in degrees of opacity, or transparency.

4/TEXTURE : ROUGH-HARD-SMOOTH-SOFT

Many materials may be finished to different textures, either during off-site production or while finishing materials on-site……..to…….., …… to…….., and a range of surface finishes—matte, satin, polished, and so on—are possible.

5/COLOR : POLYCHROMATIC-MONOCHROMATIC-COOL-WARM

Selection of a building color palette must consider the surrounding context, as well exterior and interior light qualities under which the colors will be viewed. Colors may be light absorptive or light reflective,…… or……, while the palette may be ……or……..

6/TEMPERATURE : COMFORT OF OCCUPANT-THERMAL CONDUCTIVITY

The tactile qualities of architecture are of utmost importance, especially those surfaces that building inhabitants touch on a regular basis, such as door hardware, work surfaces, and floor materials. Metal surfaces quickly register temperature change, while stone more slowly absorbs ambient temperatures and retains temperature much longer. Thus, material …….. is an important consideration in the……...

7/PATTERN : BUILDING FACADES-MATERIAL

Material patterning must be designed at two scales: the individual elements themselves, such as bricks or glass panes, and the composition of these elements into larger assemblies. For example, at the individual element scale the inherent patterning of wood grain or stone marbling must be considered. The creation of larger patterns occurs when the…… is assembled into ……..

Practice Complete these sentences giving advice and suggestions.

1-It's a good idea …… the objectives, requirements and budget of a project.

2- ……. to consult with other professionals about design.

3.- It's possible …….. feasibility reports and design proposals to the client.

4.- It´s unreasonable ……. to advise the client on the practicality of their project.

5.- ……. to use IT in design and project management, specifically using computer-aided design software.

2.- Gerund or infinitive form

-Verbs using the gerund form: Admit, advise, avoid, can´t help, can´t stand, consider, dislike, enjoy, feel like, finish, go on, keep, look forward to, recommend, remember, suggest, understand.

- Verbs using a gerund or an infinitive form: Begin, continue, hate, intend, like, love, prefer, start, stop.

- Verbs using an infinitive: Afford, agree, appear, arrange, ask, care, decide, expect, fail, forget, hope, learn, manage, mean, offer, plan, prepare, promise, refuse, remember, seem, want, wish.

Fill in each space with either the gerund ("– ing ") or the infinitive (to…) form of the verb.

a) Architects suggest (plan)…….. the new construction of building.

b) They intend (design)……..modern structures.

c) Landscape architects refused (work)……with others.

d/ I love…… detailed workings, drawings and specifications. (produce)

e. They are not allowed ……. tender applications and presentations. (prepare)

f-She couldn't help ……..with contractors and other professionals. (negotiate)

g-. We enjoy ……. up tender documents for contracts. (draw)

h- He expects people ……. problems and issues that arise during construction. (resolve)

i-My friend advised me …….…… that the environmental impact of the project is managed. (ensur

ACTIVITY FOR NEXT WEEK

Many projects of varying sizes reach undesirable end results, such as structural collapse, cost overruns, and/or litigation reason; how would you avoid all these problems to ensure a positive outcome.