

Research (01)

The Structural Action in the Nature

Towards development the light weight structure systems as a type of future building

Periodical magazine: Sciences & Arts ... Research & Studies, Helwan University

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ABSTRACT

The cultural and technical changes has an effectiveness and reflections on human requirements about future buildings, searching for the most stronger, beautiful and suitable structure. Therefore, the human never found better than the natural forms causing of, it acts an ideal source for structural treatments that depending on; unity, strength, economy and suitability.

Whereupon, the problem of research has not only passing the realization of visual pretences of structural forms in nature, but also analyzing the structural action of these forms and realizing the bases and fundamentals that get them stable equilibrium.

Therefore, the aims of this research is analyzing the action of structure in the natural forms, and pointing to the most important opinions that trying to explain it, and take this as a base to put systematic vision for developing lightweight structural systems. This analyzing, limitation and suggest vision were been achieved through three points: first, studying the effect of action of structure on function, form and balance. Second, explaining the act of action of structure in the nature through four studies: action of forces, Economy of means, Tensegrity and Fractal Geometry. Third, analyzing the deference and similar aspect between natural structure and lightweight structure and suggesting systematic vision to develop the lightweight structural systems. Finally, the research has included some results and recommendation that related with the subject of research.

مؤلفات
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Research (02)

THE RESOURCES OF FORM IN LIGHT WEIGHT STRUCTURES

From : Form Follows Function To Form Follows Information Technology

Helwan University, Faculty of Applied Arts: First International Conference in Applied Arts
24-25 March 2008, 1st Topics | GENERIC DESIGN – Design Epistemology

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ABSTRACT

The Relationship between form and elements like function, technology and landscape has caused many discussions, which led to generating many trends looking for new forms - especially in lightweight structures- depending on one or more of those elements. Accordingly, some designers have accepted some principles such as: "Form follows Function", "Form follows Technology", "Form follows landscape", "Form Follows Fiasco" ending with "Form Follows Information Technology".

Whereupon, the research has dealing with that relationship as a problem could be solve, by trying to answer these questions: What are the trends take issue with the form resources. , What is the nature of relationship between the form and its resources which had been taken issue with?, what are the basics of built form in every trend? And If these trends affect in the development of structural forms in lightweight structures?

So, the aim of this research is to study the steps of transformation in form's resources from: "form follows function, to form follows IT". And analyze the basic principles of some trends, whose deal with that resources. in addition to derive the effect of that transformation on developing form in light weight structures.... All of these studies were statement through four points as follow: the study of trends takes issue with function as a first resource of form, trends take issue with technology as basic resource of form, trends take issue with landscape as resource of form. Trends take issue with IT as resource of form. Finally, the research included some results and recommendation.

مخططات ابحاث الاستاذ المساعد
Dr. Ahmed Hamed Mostafa El Maallawy



Research (03)

The Symbolic Semantics of Metal Structural Systems and Expressional Aesthetics

**Helwan University, INTERNATIONAL SCIENTIFIC CONFERENCE FOR CENTENNIAL OF THE FACULTY OF
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3rd topic: SOCIETY AND THE ENVIRONMENTS, Fine Arts Role in urban upgrading
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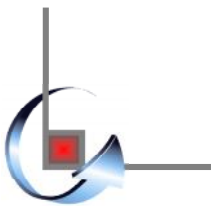
ABSTRACT

The metal structures not only aim at achieving functional requirements for the user but also they must have symbolic aesthetics that offer visual and perceptive enjoyment for the beholder. Thus, this research pays attention to expressional aesthetics in these structures and calls for dealing with them as structural texts written in distinguished languages.

The problem of research lies in answering several questions like: are expressional aesthetics necessary for forming metal structures? Is it a language that has symbols, meaning and structural accent? What are the symbolic semantics for its structural alphabet? And how can these structures a means of communication for the receiver?

The aim of the research is analyzing the symbolic semantics of metal structural systems and expressional aesthetics. The analysis and the answers of problem have been achieve through three points: first, study of expressional aesthetics in metal structures. Second, analysis The symbolic semantics for the structural treatments and elements. Third, stating the ways of symbolic expression about the aesthetics of structural formulas.

مذخرات ابحاث الاستاذ المساعد
عبدالمعز احمد مصطفى



Research (04)

The Olympic Games as an recurrent event for doing Constructive prosperities in Metal Structure Systems ... Beijing National Olympic Stadium as example

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ABSTRACT

The Olympic Games is considering as a big recurrent sport event, because it has a very big value that leads to living in peace and development for humanity. It also a recurrent meeting that present the sides of deference and creation between the Olympic Cities. This shows the best of human creations in many fields such as Architecture, Lightweight structure, Media and Communication. This meaning can be clearly explained by presenting the nearest example of Olympic Games: Beijing 2008, which need a deep study of one of its most important metal sport structures: The Beijing Olympic Stadium, which known (Bird's nest)

Whereupon, the research has dealing with that subject as a problem should be solved, by trying to answer questions that including the relationship between recurrent meeting of Olympic Games and making constructive creations (form & techniques) in metal structures systems, these questions are: if the building and updating in Olympic Games settings reflect on developing constructive forms of metal structures systems? How could we use the recurrent of Olympic Games to develop these systems? if the design of Beijing Olympic Stadium will make a revolution in metal structures systems?

Therefore, the aim of the research is to study the relationship between recurrent meeting of Olympic Games and making constructive creations in metal structures systems. The answers of problem's questions were been achieved through three points: first, beginning and developing of Olympic Games. Second, studies about idea and constructive specification of Beijing Olympic Stadium. Third, analyzing of structural modeling, Materials and Technologies, Green feature and installation of the stadium. Finally, the research has included some results and recommendation that related with the subject

مخطبات ابحاث الاستاذ المساعد
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Research (05)

A systematic mechanism to control the quality of product design as an Input for the development of metal furniture industry

Periodical magazine: Sciences & Arts ... Research & Studies, Helwan University

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ABSTRACT

Any operation to develop products in general, the producer of metal furniture, in particular, determined the ability of the industrial establishments on the continuation of their products in competition within the local and international markets. Through this hypothesis emerged the idea of this research, and began by asking. Is the development and improvement processes that take place on metal furniture products are made according to a systemic approach that deals with all the parameters necessary to develop products To be a continuous process able to accommodate with usability, engineering, economic, environmental changes or not ?

Whereupon, The aim of the research is to study the mechanisms of application of the methodology for quality control within the process of product design as an input for the development of metal furniture industry. To achieve this aim has been raised several questions about: What is the concept of quality? how it evolved and job quality? Who is responsible for quality system? In addition, how can apply it within the design process?

The answers of questions were been achieved through three points: first, study of the Quality Function Deployment (QFD) in product design. Second, analysis phases and steps to implement the quality system. Third, (case study) applying the matrix of quality function deployment within metal furniture design process. Finally, the research has included some results and recommendation that related with the subject.

ملخصات ابحاث الاستاذ المساعد
د. احمد حامد مصطفى المايلوي

Research (06)

Methods of Increasing the Creative Abilities and Constructive Sense To the Designer of Metal Furniture and Structure

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ABSTRACT

The creation has been considering as special human behavior and activity that leads to resulting most new ideas and solutions. Usually there are some elements that effects on the creation such as: general culture atmosphere, social life..., in the same time creation based on continuous bank balance of skills, knowledge and experiences to designer who represent the power of development process. In the field of metal furniture and construction design, the creation becomes the main job of designer. Because it connected with the core of design process, which leading to find a new creative ideas and solutions, by using systematic steps of mental and procedure processes. In these processes, the designer depends on creative abilities related with constructive sense and composite skills, and this make him able to dealing with many of structural vocabularies and relations to built system or product.

So, the aim of the research is to find the effective methods which helping to increase the creative abilities and structural sense to the designer of metal furniture and structure, especially in primary stages of creative practice. Whereupon, The research has dealing with that subject, as a problem could be solved, by trying to answer, questions like: what are the reasons behind the weakness of ideas and solutions which presented by designer? What are the methods and techniques to increase designer's creative abilities and structural sense? How could the designer use the creative abilities in several design's situations? The answers of questions were been achieved through three points: first, studies about the entrances of preparing the creative abilities. Second, limit the requirements and stages of increase structural sense. Third, result methods to increase mental and skilled abilities. Finally, the research has included some results and recommendation that related with the subject.

مخطبات ابحاث الاستاذ المساعد
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The evolution of forms and techniques Of connecting systems that used in metal double layer space structures

Periodical magazine: **Sciences & Arts ... Research & Studies, Helwan University**
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Keywords:

(Space structures, prefabricated units, connecting systems, structural members, Joints)

ABSTRACT

Double layer space structures are composed of structural components, that used for creating three-dimensional grids, so it are considered as assembling system between prefabricated parts and elements. thus, they need to connecting systems to organize, assemble and fix structural components, by using separate joints and members or using standard units. Then the problem of research stems from: The structural forms and prefabricated techniques of connecting systems ware, and still is, one of critical points in designing space structures, for the following reasons:

- the space structures are including many structural members which distributed in three-dimensional space, and should be assembled in specific points. These points will be responsible for achieving stability of building through transmission, discharging of stress to basis.
- The connecting system has a huge important in determining the final cost of the space structure. The decrease or increase of final cost depending on many aspects such as: prefabrication techniques, precision of manufacturing and assembling, and the ease and speed of erection.
- In addition, the flexibility and simplicity of connecting system are a basic element in increasing the structural efficiency and competitive value of the system as a whole.

Accordingly, the main aim of the research ware based on studying and analyzing of: The evolution of forms and techniques of connecting systems that used in metal double layer space structures. This aim has achieved according to Inference analytic methodology that contains four topics: 1st concepts and terminology, 2^{ed} Evolution connecting systems used in space structures, 3^{ed} Classification, characterization and analyzing of connecting systems and 4th analytical comparison between connecting systems. the hypothesis of researcher has been formulated as follows: if the designer of furniture and metal constructions has a knowledge about the most types of forms and techniques of connecting systems, these will help him in: choosing, development or creating the suitable connecting systems for his designs. At the end, the research has concluded with some relevant results.

Research No. (08)

The Spatial Economy of Metal spiral stairs And safe design requirements of its users

9th International Conference of The Faculty of Fine Arts, Minia University, March 2012
(The Art and Culture of the Other Conference), 1st Topics: digital Architecture

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No. of papers (17) from (P.01 - P.17)

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Keywords

(Spatial economy, metal stairs, prefabricated systems, Spiral stair, design for save)

ABSTRACT

The metal spiral stairs are vertical communication systems, used as an indispensable means to move between levels and roofs of buildings, especially with limited spaces or with secondary or emergency Uses. The spiral stairs have seen many changes in the steady materials and technologies in order to improve the functional and structural values. However, spiral stairs lacks the safe use due to: improvisation in the process of design, planning, fabrication and installation, In addition to the lack of clear constructive rules control the minimum and maximum dimensions of the components and parts, and that this may constitute a danger to the safety of their users and exposing them to fall.

Then, the research problem stems from the question about what are the rules and considerations to achieve a safe and comfortable transition for users of prefabricated spiral stairs that saving space? Accordingly, the research aims to provide an analytical study on the spatial economy of metal spiral stairs and result the design requirements for the safe using of metal spiral stairs, depending on the analysis of the related constructive requirements such as: location, planning of space, the capacity of the loads, building codes and requirements for fabrication and installation.

To achieve that aim of research, it will use of descriptive and analytical methodology ware based on two points: first, determine the properties and classification of metal stairs, second analysis the spatial economy of spiral metal stairs, and result the safe design requirements of its users. Finally, the research has included some results that related with the subject, such Concludes mathematical formulas and identify structural requirements for save using and space economy of spiral staircases, as following:-

$700 \text{ mm} \leq \text{radios} \leq 1200 \text{ mm}$	$114 \text{ mm} \leq R \leq 220 \text{ mm}$	$468 \text{ mm} 2R + G \leq 660 \text{ mm}$
$650 \text{ mm} \leq \text{wide of steps} \leq 1125 \text{ mm}$	$220 \text{ mm} \leq G \leq 240 \text{ mm}$	$354 \text{ mm} \leq R + G \leq 440 \text{ mm}$
$630 \text{ mm} \leq \text{wide of platforms} \leq 1125 \text{ mm}$	$12 \leq \text{no. of Goings} \leq 24$	$0.0 \text{ mm} \leq G - R \leq 126 \text{ mm}$

مذخرات ابحاث الاستاذية

Research No. (09)

Structural Steel

And the Considerations of Sustainable design of light weight metal buildings

13th International Conference of The Faculty of Applied Arts, Helwan University, Oct 2012
(Design between Innovation & sustainability), 1st topic: Sustainable design

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Keywords

(Structural Steel, sustainable structure, sustainable design, deconstruction, reusing & recycling)

ABSTRACT

Recently appeared many of the trends and concepts that are based on the achievement of the principles of sustainability in the metal construction sector, through the use of new methods and new techniques in design, manufacturing, construction, using, so as to face the environmental, economic and social challenges that cast a shadow on the various sectors of construction. Because of a general trend confirms the re-using and recycling of materials, the steel is one of the most important building materials that achieve sustainability, Because of the possibility of recycling repeatedly, without any deterioration in its performance or its properties. Additionally, high durability to weight ratio, great flexibility to adapt to complex shapes, long spans and wide spaces, the speed of construction that provides attractive forms. Besides the long life, contribute to the lowering of the energy needs of the origin and the need to conserve limited, and its construction will be more savable and stable. These characteristics reducing any potential impact on the surrounding environment during construction, operation, and partially offset the risk of emissions and waste resulting from it's production processes. Steel is also used in designs have the ability to long service and that makes it the friendly environment material with a high competitive value.

Because construction is a major consumer of many natural resources and the source of many of the waste, the challenge facing the metal construction industry, is to provide the origin of economic maintains or improves the lives of its usersm, at the same time reduces the impact of social and environmental burdens imposed on them. Accordingly, the research problem stems from two key questions are How to benefit from structural steel to achieve sustainability? What are the requirements for sustainability in the design of lightweight metal buildings? Then, the aim of the research was a study on the structural steel and requirements of sustainable design of light weight metal buildings. This aim is been achieved according to descriptive analysis method that based on three basic themes: first sustainable construction, Concepts and properties. Second, structural steel and the requirements of sustainability thirdly sustainable design considerations light weight metal buildings. At the end, the research has concluded with some relevant results.

مذخبات ابحاث الاستاذية

Suitability between Erection Processes Effectiveness and Safety Requirements In the Metal Construction Projects

Al-Azhar University, Faculty of Engineering, Al-Azhar Engineering Twelfth International
Conference (AIEG 2012) Topic: CIVIL ENGINEERING (Construction Management)
Al-Azhar University Engineering Journal, JAUES

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Keywords

(Metal lightweight structures, processes effectiveness, structural erection, cladding installation,
safety construction)

ABSTRACT

The variation in the form and construction of the lightweight metal structures and its behavior under the influence of stresses has led to the development of methods and procedures for construction, and prevented the appointment of a specific set of rules and procedures of erection. This imposes the erector to adapting procedures of construction process: preparation, fabrication, storage, installation and inspection, without regard to the efficiency of operations and safety requirements in the work environment. Thus, any system of metal building, no matter how well designed, it may become a continuing source of problems if erect incorrectly, which requires pre- planning to coordinate human and material resources, to: achieve the effectiveness of the construction, provide safety requirements, determine the responsibilities and access to a minimum of consumption in: wages, time and effort.

Then the search starts from two fundamental questions: how to achieve procedural effectiveness for the erection of metal buildings? At the same time, How to provide a safe working environment are available and the safety requirements? Based on that.. The research aims to prepare an analytical study on the planning of erection processes in lightweight metal projects. This achieves the processes effectiveness in a sound, logical, sequential, and the lowest cost, according to specific individual responsibilities for all participants, and ensures at the same time completing the procedures in accordance with the requirements of safety allow working in a safe environment. To achieve this aims.. it will used an analytical and descriptive approach that based on three points: first Metal erection process .. documents, parties and stages, secondly the processes effectiveness and safety requirements in the procedures of metal pre-erection, Third processes effectiveness and safety requirements during metal erection procedures. Finally, the research concluded some results that related to the subject.

Research No. (11)

The use of digital media in the early stage of design education Between a total ban and aimed availability (Analytical study to develop the curriculum of metal buildings design)

Mansoura University, Faculty of Specific Education, Annual Conference (Arabian No.8 – international No.5) .. Exploring the future of education in Egypt and the Arab world
2ed Topic: The quality of education.. The aim and mean

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No. of papers (27) from (P.1130 - P.1158)

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ABSTRACT

While recognizing of recommendations of many studies and research into the importance of using these media to develop the skills and creative outputs of designer, but the timing and the gradual using these media in the early stage of design education becomes important things to be studied carefully and stand on its reflections on the intellectual and skill construction of the student, Because the un improper recruitment of those media in the early stages of design education, may negatively affect on the creative preparing, and make him lose basic skills usually acquired in ways that traditional education. On this matter, it has varied trends on using of digital media in the early stage of design education between: Some concern on total ban of the traditional method to development a way of thinking, and provide students with the technical skills, Some other tends towards total availability in using digital media at all stages and levels of design process, And third group calls for mixing between the ex methods and taking the pros of them.

Then, the justifications of research start from the following inquiries: Can development the student's abilities and their creative skills using digital media only? If using digital media in achieving good creative outcomes is evident to success of design education process? And, how and when can achieving the digital, skill and knowledge construction of student in a gradual and cumulative without leaps? Based on that, The aim of the research is Studying the use of digital media in the early stage of design education, and analyzing opinions that justify the ban or adopting accessibility, in order to reach the solution allows the absorption of past experience, modern techniques and suit the needs of the future, then analyze and evaluate the views of students and stuff about the best approaches that allow use those media to achieves the gradient and integration in building knowledge and skills of the student. Then take advantage of that to develop the curriculum of metal buildings design. The aim of research has been achieved according to theoretical and analytical approach. The research contains three points: first education and design in the digital revolution, second: the methods of use digital media in early stage of design education, and third analytical study to develop the curriculum of metal buildings design. Finally, the research concluded some results and recommendations that related to the subject.

مذخعات ابحاث الاستاذية

Research No. (12)

The logic of exposed structure and how to take advantage of it in enhancing the space vividness in lightweight metal buildings

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Keywords

(Metal Structure, Structural Exposure, Space Vividness, Transparency, Structural Reading/Sense)

Abstract

The metal construction as the embodiment of the material and technical developments which reside structural formulations are strong and fit, and space forms emphasize exposure and dynamic. because of its reliance on that structure is described for building and visually dominates of its form, The logic of exposed structure appeared in the search for abstract style emphasizes the aesthetic language of construction and the constant quest towards easing building block to introduce widely communication through the achievement of the inverse relationship between both the size of the space and the amount of mass that determined it, And the pursuit of gradual reduction of the percentage of non-transparent solids that used to contain the space.

Therefore, the structural trend contributed towards structural exposed of metal skeleton and use of transparent cladding in the appearance of space vividness term: that means construction of minimum weight and larger reduction communication with the outdoor, and achieve structural economy through the development the issues of mass, extension and support. This trend has contributed quantum leaps in traditional structural templates and moved them from formulate rigid blocks to create wonderful exposed structures.

Then research problem is trying to answer the following questions: What is the logic of exposed structure? How used that to enriches form? How benefit it in promoting space vividness of metal buildings? And what are the implications for the structural characteristics of lightweight building? The aim of the research is studying and analyzing the principle of exposed structure and make use of it in space vividness of light metal buildings. The hypothesis of the research is that the achieve space vividness in those buildings as structural trend reflects the rapid technological changes and provides a structural language with a lower construction differentiated express exposure and opening multiple meanings forms. To achieve that aim, the researcher will use descriptive and analytical approach based on three main points: 1st: form, structure and exposed logic, 2ed: conservatory metal structures and space vividness, 3ed: ways to enhance space vividness in lightweight metal buildings.

مخطبات ابحاث الاستاذية

Research No. (13)

The Free forms of lightweight metal structures between constructional Economy and Structural flexibility (Tensioned fabric structures as model)

**Alexandria University, Faculty of Fine Arts: The 4 th Scientific International Conference
(CULTURE OF LIBERTY IN VISUAL ARTS AND ARCHITECTURE)**

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Keywords

Metal lightweight structures, structural membranes, structural economies, form finding, flexibility

Abstract

Like most systems of lightweight metal structures, tensioned fabric structures are offering diversity has no boundaries in solving many of the problems of conventional construction. Because the design methods of their are often not constrained, and this allows them the ability to Adaptation with many variable dimensions and functions. This allows providing creative structural forms to cover large areas with minimum material possibilities and higher structural flexibility. Thus the importance of tensioned fabric structures based from the integration of two main characteristics. First, the constructional economy, which regards in: economy of materials and saving of mass, energy, Technicians, transportation and time construction, as well as take advantage of natural lighting, weathering resistance and ease of maintenance. The second: the structural flexibility that relate to: lightweight accompanied by a durability, the possibility of the jawing and re-using, structural efficiency of loads transmission and envelope of space, as well as Providing structural solutions to large areas and long span that used in many purposes. These characteristics are what make the tensioned fabric structures real physical models of the purest form of structural efficiency and architectural expression.

Then, the problem of research stems from trying to answer the following questions: What are the structural characteristics and Future Developments of the fabric membranes? How can benefit from analysis of those characteristics in achieving constructional economy and structural flexibility of tensioned fabric structures? And what are the basic considerations of design and erection of free forms of these structures? Accordingly, the main aim of the research is based on: analyzing of the characteristics of lightweight metal structures that related between constructional economy and Structural flexibility, and take tensioned fabric structures as model. This aim has been achieve according to descriptive analysis methodology that contains three basic points. First, the development of tensioned fabric structures, second the constructional economy and structural flexibility of those structures, Third: design and erection of free form of tensioned fabric structures. At the end, the research has concluded with some relevant results.

مذخبات ابحاث الاستاذية

Research No. (14)

Effect of the trigonometric filling for Polyhedral on supporting structural stability of geodesic domes ... analytical study

Al-Azhar University, Faculty of Engineering, Al-Azhar Engineering Thirteenth International Conference (AIEC 2014) Topic: CIVIL ENGINEERING (Construction Management)
Al-Azhar University Engineering Journal, JAUES

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Keywords

Geodesic Domes, Synergetic, structural Stability, prefabrication units, installation

ABSTRACT

In general, Energetic geometry (synergy) that meaning cooperation or working together, is the combined working together of two or more parts of a system so that the combined effect is greater than the sum of the efforts of the parts. This method involves geometric modeling, exploring inter-relationships in the facts of experience and the process of thinking. It also provides a method and a philosophy for problem-solving and design, and helps in the development of structural forms for geodesic domes that created from platonic solids. On the other side the ttrigonometric filling is producing from subdivisions of main polyhedral surfaces, in the form of regular triangles which their vertex are normalizing to the surface of spherical polyhedral. Continuing in this trigonometric filling will increase the geometrical complexity and structural resistance of the geodesic Dome, support the structural stability of it, make it more closer than material and geometry continuity of the spherical surface, make easy the process of designing, assembling and installation of geodesic dome, and finally this trigonometric filling makes the framing of huge curved spaces is very feasible.

Then the problem of research stems from trying to answer the following questions: What are the structural characteristics of Polyhedral? How the process of Trigonometric filling created? What is the effect of such filling in supporting the structural stability of the geodesic domes? In addition, what are the results of analytical study? Accordingly, the main aim of the research is based on: Preparation an analytical study to extrapolate the effect of trigonometric filling for Polyhedral faces on supporting the structural stability of geodesic domes. This aim has been achieve according to descriptive analysis methodology that contains three topics. First: the properties and history of geodesic domes, Second trigonometric filling and structural stability of Polyhedral and the third analytical study of some applications of geodesic domes. At the end, the research has concluded with some relevant results.

مذخبات ابحاث الاستاذية

Research No. (15)

Use of Paper Tubes Structures in Temporary Architectural Applications A Predictive Reading about the Future of Lightweight buildings

Damiatta University, Faculty of Applied Arts: The 4 th Scientific International
Conference (Applied Arts & future expectations (iv))

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Sciences magazine**

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Keywords

(Lightweight structures, Paper tubes, sustainability, recyclability, structural properties)

Abstract

There are rapid developments in the creating, processing and recycling of construction materials and techniques. Moreover, because they constitute the core of engineering applications, the awareness of the latest development of these materials and applications, constitute the indispensable need for metal buildings designer. For example: the use of a paper tubes structures in many experimental applications, that characterized by: economies of fabrication and construction, reduce assembly and operating Energy, use of environmentally friendly technologies, provide healthy environments both internally and externally, high degree of flexibility in the operations of construction, demolition and recycling.

Therefore, the problem of research stems from the need to provide innovative and reliable material alternatives for lightweight building applications, in order to uphold the principles of environmental sustainability and economics of construction. That problem including the following questions: Is there a point in the use of paper tubes as structural components in temporary architectural application? What are the structural factors that affect the efficiency of those components? and How to take advantage of their constructive characteristics in achieving requirements of environmental sustainability?

In addition, Will there be repercussions on the future of the lightweight buildings? Accordingly, the main aim of the research is based on: Study the possibility of Using Paper Tubes Structures in some Temporary Applications and a predictive reading about the Future of Lightweight Buildings. This aim will be achieve according to Inference analytic methodology that contains three topics. 1st The use of paper tube structures in the construction, 2ed Analytical study on the structural properties and environmental impacts for the use of paper tubes and 3ed predictive reading about the future of use paper in lightweight structures. At the end, the research has concluded with some relevant results.