



جامعة الإسكندرية  
كلية الفنون الجميلة  
قسم الديكور

مستحدثات التصميم الداخلي طبقاً للتطور التكنولوجي وتأثيره علي  
الحيزات الداخلية للقطارات  
رسالة مقدمة

لقسم الديكور – كلية الفنون الجميلة- جامعة الإسكندرية  
ضمن متطلبات درجة

الماجستير

في

الفنون الجميلة – تخصص العمارة الداخلية

من

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كلية الفنون و التصميم

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## Thesis Summary

The Railway is considered the main pillars for the advancement of the country in all social and economic aspects to meet the needs of passengers. And the development and introduction of modernization of the age is a measure of progress of civilization of the peoples. The more elevated Nations peoples increased their needs and means of quick connectors.to keep pace with development of transport and communication to go hand in hand with the development rights. And transportation and conductors in general play an important role in conflict technological development has contributed to the provision of modern methods used in many departments of the railway around the world and that has become dependent on the units of design and efficiency better able to achieve the convenience of passengers and travelers.

### **Chapter I: The History of Trains and Studding the Technical, Structural and Kinetic Requirements.**

- Studding the importance of transport in the field of tourism, services, trips and travel purposes.
- Gives a brief history of the railway in England since the beginning of its establishment and the role played by inventors in development in addition examine the historical origination of the Egyptian Railway.
- The main stages in the history of train cars in Egypt.
  - \* Four-cars wheels (vehicles) on two axes.
  - \* Six- car wheel (vehicles) on the three axes.
  - \* mounted vehicles on the Boogies.
  - \* Eating and sleeping carriages and Pullman.
- Types and rail transport systems inside and outside Egypt, and such (monorail trains) magnetic train commentator.
- Deals with equipment and technical specifications and construction of the railway, including manufacturing processes, production, maintenance and private digital manufacturing and its properties. Besides dynamic movement on the rail, resistors encountered by trains.
- Human and its relation to the internal or external needs.
- And finally the overall coordination of the components of the train in terms of components of the internal environment of the trains and the needs to be produced.

## **Chapter II: The Basics of Aesthetic and Expediency for interior design in interior spaces of the trains.**

- Deals with the internal processors of interior design of the trains, and through the study of the design process of the principles and Basics of the interior design, as well as the design process concepts.
  - \* Harmony, unity, diversity and contrast.
  - \* Balance and symmetry and confirmation.
  - \* The relationship between things and their surroundings axes.
  - \* Rhythm and frequency.
- Determinants of the design process in the interior design of the space of functional factors, and Expediency and Aesthetic.
- Interior design and its Aesthetic elements.
  - \* Body shape and specifications.
  - \* Size and the scale and proportions.
  - \* Style and decoration.
  - \* Colors.
- Functional and Aesthetic and Expediency processors of interior spaces of the trains.
  - 1- Ceiling.    2- Walls.    3- Floors.    4- windows.
  - 5- Doors.    6- Curtains.    7 - Lighting.    8- Air Conditions and heating System.

## **Chapter III: The Ideology of Modern Interior Design of Trains.**

- Deals with the Study of Interior design Elements of the overall shape of the components of rail vehicles and classify it. (Internal Spaces of train components).
  - \* Entrances and Exits.
  - \* Stairs and Lifts and Slopes. (Ups and Downs Areas).
  - \* Lanes.
  - \* Seating areas.
    - A- Saloon or Club Cars.
    - B- The food Cars.
    - C- sleeping Cars (carriages), and illustrate the types of degrees of residency inside the cabins sleep.
  - \* Service areas.
    - A- Bathrooms (toilet)
    - B- Kitchen.
    - C- Bar.



D- Cabin crew Service

E- Luggage and Store bags.

#### **Chapter IV: The Impact of Technological Development and its Relationship to the Philosophy of Interior Design of the Trains.**

- Studying the knowledge and technological development features and dimensions.
- Know the impact of technology on modern interior design.
- Materials and their technology.
  - \* Natural materials:      - rock materials. (Marble)      - Organic materials. (wood)
  - \* Blended materials:      - Paints. (LuminOre)
  - \* Manufactured materials. (Plastics: Corian, polypropylene / Acrylic: Para pan).
  - \* Interactive Smart Materials. (Interactive information Screens and interactive lighting displays, Interactive floors, smart windows and Nano-coating).
- The implications of the technology revolution on the internal vacuum and external structure of the trains.
- Applications of Modern Technologies in the field of design and emptiness typical train units.
- Architectural and Technological influences applied in an attempt to achieve a cheerful visual pleasure trains in: Sustainability and Parametric Architecture, Biomorphic, Genetic, Topological and Fractal Architecture.
- Examples to try to keep up with the evolution and the role of technology in support and success to meet the requirements of passengers and travelers in Egypt and Saudi Arabia.