



1989 Technical Review Summary
by *Laszlo Mester de Parajd*

0554. & 0555.MOR

Igoudar & Tagadirt Hotel Complexes

Agadir, Morocco



Architect

Patrice Le Tixerant
Agadir, Morocco

Client

Société Bir Sahara
Agadir, Morocco

Completed

October 1981

I. Introduction

At a time when, in Morocco, everyone imitates the sumptuous architecture of 19th century palaces, with more or less good fortune, the Tagadirt and Igoudar hotels stand out as unusually sober and low-key. Their architecture is inspired by that of the *medinas* rather than that of the palaces. Instead of lavish ornamentation, often disguising architectural poverty, here smooth white walls are used. But this apparent simplicity is combined with a great wealth of volumes, semi-public or private spaces. Here the architect has recreated an "architecture without architects".

II. Context

a. *Historical Background*

In 1505, a Portuguese gentleman built a fort called Santa Cruz de Cap de Gué just north of the present city. This fort, sold in 1513 to the King of Portugal became the centre of a region under Portuguese rule. A port, mainly used by European traders, was developed there. It was seized by the Saadian Sultan Mohammed el-Cheikh, in 1541. Under the Saadians, Agadir flourished through trade; cloths were imported and dates, wax, skins, gold, and, above all, sugar cane, were exported. In the 17th century, the decline in the sugar cane trade led to that of the city. In 1760, to punish the rebellious city, Sidi Mohammed ben Abdallah cut off Agadir from the trade with Europe and founded the rival city of Essaouira.

On February 29, 1960, 80% of Agadir (by then a city with a population of 35'000), was destroyed by an earthquake that claimed 15'000 lives. Today, the city with a population of 15'000, bears testimony to the vigour with which its reconstruction was conducted.

b. *Local Architectural Character*

There are three kinds of architecture in Agadir:

Traditional Architecture

To get an idea of the traditional architecture of Agadir one has to rely on old photographers or visit the nearby villages as the earthquake practically destroyed all traces of buildings prior to 1960. In the villages north of Agadir, traditional buildings present the following features:

- simple lines
- one or two-storey high buildings
- roof terraces
- small and simple openings
- little decoration as a general rule
- the materials used are stone and earth bricks or, in some places, pisé
- rammed earth roof on timber structure
- exteriors are white-washed near the sea and in the mountains are often left in natural earth colour with no rendering.

Reconstruction Architecture

Following the earthquake, a modern and functional approach was adopted for the town planning of Agadir. In a first period, a high quality architecture, relatively well-adapted to the climate, and strongly influenced by Le Corbusier, with no reference to Moroccan architecture, was developed, particularly by J.F. Zevaco. Progressively, this architecture gave way to increasingly commonplace buildings, directly influenced by the most widespread European building styles.

Modern Architecture Inspired by Traditional Moroccan Architecture

Over the past ten years, the architecture has increasingly been inspired by traditional Moroccan architecture. The architecture, while using conventional modern materials - concrete structure, cement block infill, concrete roof terrace - calls on a whole palette of traditional features: horse-shoe or perfect arches, *mashrabiyyas*, domes, mosaics, wood carvings, etc., from Marrakesh, Fez or Meknes.

c. Climatic Conditions

Situation

Latitude: 30°25' North
Longitude: 09°00' West
Altitude: sea level

Temperatures

Month	J	F	M	A	M	J	J	A	S	O	N	D
Maximum	20.0	21.0	23.0	23.0	24.0	25.0	26.0	27.0	27.0	26.0	24.0	21.0
Minimum	7.0	9.0	11.0	13.0	14.0	17.0	18.0	18.0	17.0	15.0	12.0	8.0
Average	13.5	15.0	17.0	18.0	19.0	21.0	22.0	22.5	22.0	20.5	18.0	14.5

Yearly average: 18.2°

Rainfall

Average annual rainfall of 360 mm, with major variations from one year to another.

Winds

The site is sheltered from prevailing west and north-west winds.

Sunshine

300 days of sunshine per year.

d. Immediate Surroundings of the Site

The Tagadirt Hotel is situated to the west of the town, next to the beach, in a district reserved for hotels. On the south-west it is bounded by the Boulevard du 20 Août. From this boulevard, the hotel is built on a hill bordered by a street leading to the Boulevard Mohammed V.

Although not a strict rule, a great many of the hotel bedrooms and communal spaces enjoy a fine view of the sea, the harbour and neighbouring hills. The Igoudar Hotel, located near the Tagadirt Hotel, but slightly further from the sea, benefits from a very similar situation, and in particular from a similar pleasing view. The surroundings of both hotels bustle with tourist activity. A multitude of souvenir, clothes, and arts and crafts shops, as well as street cafés, add to this animation.

e. Topography of the Project Site

The land of both hotels slopes quite steeply towards the sea, i.e., towards the south-west. This feature is important as the architect was able to use it to advantage in his composition of volumes.

III. Description

a. Conditions Giving Rise to the Programme

Following the earthquake that destroyed Agadir in 1960, teams of town planners came from France to set up the reconstruction scheme for the town. This scheme was based both on the old colonial principles of separating the European from the "native" quarters of the town and on Le Corbusier's ideas of separating the different functions. Therefore, a city centre, a "native" quarter and a tourist sector were planned, which were voluntarily cut off from the rest of the town by the large boulevard Mohammed V and by a protective green belt.

Jacques Ohayon, a native of Agadir, was determined to discard this segregation scheme when he decided to build the Tagadirt Hotel: he wanted the hotel to be closely knit into the fabric of the town.

The problems encountered in the management of this hotel persuaded him to adopt a much more conventional model for the Igoudar Hotel.

b. General Objectives

Tagadirt Hotel

The architect was to design a hotel which could:

- encourage contacts between tourists and the local population;
- reflect traditional native architecture, not by imitating luxurious palaces but by recreating the atmosphere of the *medinas*.

Igoudar Hotel

Following managerial difficulties in running the Tagadirt Hotel, the objectives set for the Igoudar Hotel were the following:

- contact between tourists and the local population was no longer desirable. The hotel was to be closed to the outer world.
- however, like the Tagadirt Hotel, the Igoudar complex was to integrate with the local architectural tradition.

c. *Functional Requirements*

Tagadirt Hotel

In its initial version the Tagadirt Hotel comprised

- 92 one-room apartments
- 145 bedrooms
- 1 main reception hall for the hotel
- 3 reception halls for the apartments
- 2 secondary entrance halls
- 1 main restaurant seating 200 guests
- 1 Moroccan restaurant seating 60 guests
- 1 snack-bar seating 80 guests
- 1 night-club
- 1 swimming-pool
- 1 restaurant within the hotel but under separate management.

In its new version the hotel comprises:

- 247 bedrooms (total: 580 beds)
- 1 reception hall
- 1 main restaurant seating 250 guests
- 1 snack-bar seating 180 guests
- 1 restaurant à la carte seating 100 guests
- 1 reception bar
- 1 lounge bar
- 1 night-club
- 1 restaurant within the hotel but under separate management
- 1 swimming-pool
- kitchen premises
- utility premises
- administrative premises.

According to Moroccan standards the hotel is a 4-star class A hotel.

Igoudar Residential Hotel

The design concepts for the Igoudar Residential Hotel have changed very little since the beginning. At present it comprises of:

- 167 apartments (i.e., a total of 714 beds) divided into 1-room, 2- and 3-room and 4-room duplex apartments
- 1 reception hall
- 1 lounge
- 1 bar
- 1 TV room
- 1 children's club
- 1 swimming-pool
- administrative premises
- utility premises.

The residential hotel is placed in the first category that corresponds to a traditional 4-star hotel according to Moroccan standards.

Initially, the hotel also included:

- 1 restaurant
- 1 snack-bar

which were only open for three years.

d. *Building Data*

Both the Tagadirt and the Igoudar hotels are built on a hill which slopes down towards the sea and feature intermingled squares, courts, patios, malls, arcades, stairways, solid volumes and empty spaces, sunlit and shaded spaces, planted areas and stretches of bare stone, public and semi-public places and strictly private areas.

The overall effect is breathtaking since each viewpoint is radically different, each space has its specific value. To explore the hotel is to discover the most diversified and fascinating aspects of a *medina*. No incongruous decoration breaks the pure lines of this symphony in white.

Tagadirt Hotel

- total site are	13'775 sq m
- total ground floor area	13'775 sq m
- total floor area	14'445 sq m

Igoudar Hotel

- total site area	10'180 sq m
- total ground floor area	10'180 sq m
- total floor area	11'595 sq m

e. *Evolution of Design Concepts*

It is obvious, when strolling through either of these hotels, that the prime concern of the architect was neither a rational approach satisfying access nor functional requirements, or a maximum view of the sea. Nor did the climate, particularly mild all the year round, call for any elaborate studies to adapt to climatic variations. The aim of the architect, which he has successfully achieved, was to create a wealth of circulation spaces between the residential units and a rich variety of "volumetric compositions" in both hotels.

f. *Structure, Materials, Technology*

Foundations

Reinforced concrete foundations.

Structural Work

Reinforced concrete post and beam structure. The construction is based on a 370x370 cm grid.

Infill

Cement blocks. Prefabricated opening frames.

Wall Facing

White painted cement rendering.

Floor Covering

- Plain concrete tiles
- dyed concrete tiles
- terra cotta tiles
- fitted carpet (in some bedrooms)
- marble (in the renovated entrance hall and restaurants of the Tagadirt Hotel).

Roofing

- Flat roofs which consists of concrete slab, thermal insulation and a multi-layer damp proofing. The damp-proofing is protected by concrete tiles in areas open to access and gravel in no access areas;
- reinforced concrete prefabricated domes;
- pyramidal roofs covered with glazed tiles.

Ceilings

- Cement rendering with finishing coat of white paint.
- In some communal rooms, painted wood ceilings using traditional motifs.

Metalwork

- Locally produced wrought iron window grilles displaying traditional designs.

Plumbing

- Imported products.

Goods Lift, Heating, Pool Regenerating System, Kitchen Equipment

- Imported equipment.

g. Origin of Technology, Materials and Labour Force

Technology

The building technique followed is European in origin. Here the use of reinforced concrete posts and girders, which world-wide is the most widespread building technique, has been optimised by the use of grid plan and prefabricated components.

Traditional crafts have been used for the finishings:

- ceramic tiles on floors and walls,
- wrought iron window grilles,
- some ceilings in painted wood.

Materials

Traditional materials produced in Morocco:

- glazed tiles,
- wood,
- marble,
- furniture,
- wrought iron,
- *mashrabiyyas* (simplified).

Modern materials produced in Morocco:

- cement,
- cement blocks,
- modern tiles,
- metalwork,
- furniture.

Modern materials imported:

- goods lifts,
- heating apparatus,
- bathroom furniture and fittings,
- kitchen equipment,
- swimming-pool regenerating system,
- light fittings,
- plumbing,
- telephones.

Labour Force

99% local.

Professionals

Architects:

- Patrice Le Tixerant, French architect who has lived permanently in Morocco since 1969. He is the author of both the Tagadirt and the Igoudar projects.
- Rioux and Collier, French architects: recent modifications carried out on the Tagadirt Hotel.

Decorators:

- Mrs. Patrice Le Tixerant, French decorator: initial decoration and furniture of both hotels.
- Jean-Cécile Sport, French decorator: decoration and furniture of the modified version of the Tagadirt Hotel.

Consultants:

- SAAR Ingénierie, a French engineering company for the Tagadirt Hotel.
- AXIS Bureau d'Etudes, an Agadir engineering firm for the Igoudar Hotel.

Contractors:

- AUXIMAG, a subsidiary of SAE France: for the Tagadirt Hotel.
- Entreprise de construction générale (ECG), a Moroccan firm of general contractors working under French supervisors from the AUXIMAG firm for Igoudar Hotel.

IV. Construction Schedule and Costs

a. History of the Project

1975-1976	First draft of the Tagadirt Hotel programme. First discussions with the architect. Study of Tagadirt Hotel.
1976	Foundation stone is laid.
1978 December	End of design work for Tagadirt Hotel. Beginning of construction.
1979	End of construction of the 1st phase of the Tagadirt Hotel.
1980	End of construction of the 2nd phase of the Tagadirt Hotel.
1980 April	Beginning of design work for the Igoudar Hotel.

1980 October	End of design work for the Igoudar Hotel. Beginning of construction for Igoudar Hotel.
1981 October	End of construction of Igoudar Hotel. Beginning of occupancy of Igoudar Hotel.
1982	The Moorish Café incorporated in the Tagadirt Hotel is closed down because it was too noisy.
1984	Sale of the Jardin d'Eau Restaurant built within the Tagadirt Hotel.
1987	The Tagadirt Hotel is closed down for renovation work.
1989 March	Opening of the Tagadirt Hotel after completion of considerable renovation work.

b. Total Cost and Main Source of Finance

Tagadirt Hotel

- total cost	MDH 30'389'700 including taxes, i.e., US\$ 6'813'800
- cost per sq m	MDH 2'103 including taxes, i.e., US\$ 472
- financing	35% private funds 65% public funds

Igoudar Hotel

- total cost	MDH 25'810'300 including taxes, i.e., US\$ 5'786'200
- cost per sq m	MDH 2'225 including taxes, i.e., US\$ 499
- financing	35% private funds 65% public funds

Overall Costs for the two Hotel Complexes

- total cost	MDH 56'200'000 including taxes, i.e., US\$ 12'600'000
- cost per sq m	MDH 2'160 including taxes, i.e., US\$ 485
- financing	35% private funds 65% public funds

c. Comparative Cost

Judging from the complexity of the volume compositions, the cost per square metre of the Tagadirt and Igoudar Hotels appears to be very low. This low cost is due to the use of a grid plan and prefabricated components. In comparison with others of comparable quality, major savings were also made possible through the choice of very sober, yet refined, decoration and furniture.

d. Qualitative Analysis of Costs

In the cost breakdown, an important share was assigned to the structural work. It is clear that the emphasis laid on marked volumes entailed a great surface of walls and roofs, consequently increasing the cost. The relatively low height of the buildings, as can be seen by comparing the built-up area with the total floor area, indicates that the cost of water-proofing was relatively high.

Fortunately, the very plain facings of façades and interior walls, and simple floor coverings have compensated for these extra costs and kept the overall cost per square metre at a reasonable level. In addition, the very mild climate of Agadir did not call for a sophisticated and costly air-conditioning system, with corresponding savings.

e. *Maintenance Costs (Heating, Cooling, etc.)*

The very unusual layout of the Tagadirt and Igoudar hotels has also entailed an increase in maintenance costs. The large surface of façade walls has been mentioned above, and, at the Igoudar Hotel, for instance, the exterior façades are repainted once a year. The large number of communal spaces and the distances between them necessitate a large number of staff: at present 160 staff are working at the Tagadirt Hotel in its new version (in its former version when part of the Tagadirt Hotel was composed of one-roomed apartments, there was a staff of 170); the part of the Igoudar Hotel that is run as a residential hotel, has a staff of 80, a third of which are chamber-maids.

The very mild climate of Agadir does not call for air-conditioning, however, the Tagadirt and Igoudar hotels are heated throughout the year. The pools are heated from early November to the end of February. When the relatively high maintenance cost of the Igoudar Hotel is compared with its occupancy ratio (79% annual occupancy ratio for the apartments but only 45% annual occupancy ratio for the hotel beds), it is easy to understand the concern of the owner, Mr. Jacques Ohayon, who would like to change the Igoudar residential hotel into a classical hotel. As far as the Tagadirt Hotel is concerned, it has just opened in its new version following a long period during which it was totally closed; therefore it is too early to make any assessments on its profitability.

V. **Technical Assessment**

a. *Functional Assessments (Use)*

As mentioned earlier, a rational approach to functional requirements was not the prime concern of the architect. It would not be difficult to devise more direct and shorter access, in particular for staff. On the other hand, for the clientele, making their way through the hotel is a journey of discovery, opening up new vistas, various and charming places.

The circulation of staff, who generally must use the same access as the clientele, poses real problems:

- long distances from one point to another and time wasted,
- difficult working conditions in wet weather as the passage-ways are not covered,
- use of trolley is impossible because of the many stairways.

b. *Climatic Performance, Lighting, Ventilation and Acoustics*

Due to the particularly mild climate of Agadir, no ingenuity was demanded of the designer from the point of view of adaptation to climatic constraints. Therefore, the architect had little need to worry about orientation in the layout of the various residential units.

In all the rooms daylight is sufficient because of the clear weather. Artificial lighting, when required, is also quite satisfactory. Acoustics give satisfaction throughout, but the natural ventilation system provided initially proved inadequate and mechanical extractor-fans had to be installed everywhere.

c. *Choice of Materials; Level of Technology*

For the parts of the Tagadirt Hotel which remain in their original state, and for the Igoudar Hotel in general, the choice of materials and techniques was guided by the rule of simplicity and sobriety. The work carried out by architects Rioux and Collier and decorator sport is in total contradiction with this approach. Their contribution is overly luxurious and follows a modernism of international style:

- large lobby in white marble,
- overwhelming number of light fittings and ornaments in chrome,
- restaurants in white marble,
- modern metal furniture.

It would be hard to imagine a more clashing contrast between the medina atmosphere and the native architecture of the original part and the resolutely avant-garde style of the renovated part.

d. *Ageing and Maintenance Problem*

Some minor problems of ageing of materials should be noted:

- a few cracks had appeared in places, essentially due to poorly executed expansion joints. (At present these defects are no longer apparent);
- durability of the paint-work: at the Igoudar Hotel the exterior paint-work is renewed each year and the interior paint-work every three months;
- the *mashrabiyyas*, made of nailed wooden slats, do not wear well because of the poor quality of the wood and the thinness of the slats.
- some defects in damp-proofing were noticeable in the early stages of occupancy of the hotels.

However, these problems never interfered with a satisfactory management of the hotel facilities.

e. *Design Features: Massing and Volume, Articulation of Spaces, Integration into Site*

The architectural quality of these projects resides in the overall volume composition of both hotels and in the articulation of spaces. Despite the extreme simplicity and sobriety of each unit element, the architect has combined them to obtain a great volumetric wealth. The variation of spaces is such that the underlying grid plan is quite undetectable. The two building complexes seem to follow naturally the slope of the land and blend with the countryside, in perfect harmony with their environment.

VI. Users

a. *Description of Those Who Use or Benefit from the Project*

Type of Travellers

About 95% of the users are the clientele of package (guided) tours.

Countries of origin, in order of importance:

- Scandinavia
- Great Britain
- Germany
- Holland.

Age Group

The hotels are not recommended for the elderly or for the disabled. While young people are enthusiastic about the novelty and layout of the rooms, middle-aged guests are often discomforted by it.

Length of Stay and Regularity of Clientele

The average length of stay per guest is 11.42 days at the Igoudar Hotel. Many of the clientele have been regular guests since the opening of the hotel.

Social Class

While Marrakesh caters mainly for the upper-middle classes, the tourist clientele of Agadir is of middle class origin.

The clientele of the Tagadirt and Igoudar Hotels conforms to this rule. This is more or less confirmed by the pricing policy of these establishments:

- Tagadirt Hotel

Single room	MDH 275
Double room	350
Breakfast	40
Meal	110
Tax	5 per guest per day

- Igoudar Hotel

Apartment	One-room	Person 1	MDH 330
	"	2	330
	"	3	385
	Two-room	1	357
	"	2	357
	"	3	440
	"	4	520
	Three-room	1	522
	"	2	522
	"	3	522
	"	4	522
	Four-room	1	522
	in duplex version	2	522
	"	3	522
	"	4	522
	"	5	605
	"	6	687
Tax			3 per person per day

b. Response to Project (by Clients, Users)

Igoudar Hotel

The regularity of both individual guests and tour organisers proves that the originality of the hotel certainly appeals to a certain category of guests. The occupancy ratio of 79% for the apartments is an additional proof, despite the fact that the occupancy figure for beds is only 45%. In fact this

last figure shows that the breakdown between large and small-sized apartments does not correspond to the demand.

Tagadirt Hotel

As the hotel has just recently opened, it is too early to obtain significant data on the response of the clientele.

VII. Persons Involved

Owner/Developer

- Jacques Ohayon owner of the Tagadirt and Igoudar hotels. He is responsible for the very original design concepts of the project.

Design

Architects:

- Patrice Le Tixerant author of both projects.
- Rioux and Collier authors of the recent modifications carried out on the Tagadirt Hotel.

Decorators

- Mrs. Patrice Le Tixerant decoration and furniture of both hotels.
- Jean-Cécile Sport decoration and furniture of the new version of the Tagadirt Hotel.

Consultants

- SAAR Ingénierie engineering firm for the Tagadirt Hotel.
- Axis Bureau d'Etudes engineering office for the Igoudar Hotel.

Contractors

- Auximag (subsidiary of SAE France) for the Tagadirt Hotel.
- Entreprise de Construction Générale (ECG) for the Igoudar Hotel.

Laszlo Mester de Parajd
Saint Cloud, 20 April 1989