The Coptic Dome

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القبة القبطية

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Preface

Thanks be to God who has helped us to record the Coptic Architecture of the old churches and monasteries in Egypt by publishing the two Guides of Upper Egypt and Lower Egypt.

This book is specialized in the Coptic Dome as one of the important elements of which is the Coptic Architecture. The dome covers the most holy place in the church, sanctuary, and thus symbolizes Heaven.

As it has various shapes and many uses, we hope that the esthetic view of the Coptic Dome reaches you, it is what the Egypt have created in harmony and beauty.

Perhaps with the other structures of the Coptic church, neglected in Egyptian Architecture, these books will fulfill the Coptic chain, among the pharaonic, Greek, Roman and Islamic chain.

Our sincere thanks is intended to all who helped us in preparing this book. Our gratitude to Mr. Mina Al - Shamaa who translated the arabic text to English. Many thanks to our beloved Fr. Moritious who revised this English Text.

Bishop Samuel
Arch. Bade Habb
DEFINITION of the Coptic Dome

It is the esthetic architectural formation that gives the ceiling a curved shape in different forms. It is easy to be constructed without using forms that are usually used in building a roof.

In can be built by using a pulled rope beginning from the centre and directing the bricks towards it.

The shape of the dome depends upon the kind of material used for building and also according to the solidity of the soil.

The Coptic Dome is characterized as follows:

The changeable form of shadows through the day according to le Corbusier’s view.

The remarkable interior lighting.

The fine space.

Air ventilation that suits the hot countries since the form of the dome has psychologically influenced man.

The dome is the suitable cover for monastic buildings that suit the deep spiritual life of the monks and hermits. It confirms that the monastic building is an earthly heaven and a heavenly earth.

The dome is called “askina”. It represents the tabernacle of the old testament as it is a symbol of God’s dwelling with man.

The dome has a language with its own meanings and origins invented by Ancient Egyption.

تعريف القبة القبطية:

هو ذلك التكوين المعماري الجميل الذي يعطي سقفًا منحنىً بشكل مختلف سهلة النداء بدون شدة كالطرق التقليدية للتسقية فهي تبنى بخيط من مركز واحد مع تغير أطرافه وبناء الطابو في اتجاه المركز والشكل متوقف على نماذج تتحول مادة البيت، وکذا صلابة القبة وتحفظها. وتعتبر القبة بالاثناء الشكل المتغير طوال النهار وهذا يتفق مع رأي كوربيزي (فِي أن العمارة في اللعب البازار الدقيق الرائع بالكل التي ترى الضوء).

ويتعارض الإضاءة الداخلية المتضمنة...

الفراغ الدبيِع (فالعمارة هي التي تسمى بـ نسج منسج)،

التكييف الحراري المناسب للبلاد الحارة حيث يؤثر شكل القبة على الإنسان من الناحيتين النفسية والجمالية.

وهي العناية الحساسة في الشروطات (لباني الهبة) التي تتناسب مع النسج الرهباني والروحانية العميقة في صلة الحوائط الأرضية بالقبة السماوية فتكون انحناء الحوائط تكوين سقفًا وانحناء الأسقف القبلي على الحوائط تؤكد أن المباني الرهبانية هو سما، ارضية وارضية سماوية.

وهي العناية القترية في بعض الكلاسيس التي أحيانًا ما تغطي الساحة ككل.

وهي التي أطلق عليها كلمة إسكندر وهي خيمة الإجتماع في العهد القديم التي أطلق عليها قبة الزمان رمزًا لسكن الله مع الناس.

وهي اللغة التي لها صوتها ومفاهيمها ابدعها للصرريون القدماء، تتكلم بها العالم، وتلك الشكل الجملي المتغير تحت أشعة الشمس، شمس مصر المشرق، وهي التي، المتغير (والمتغير هو الشيء الحي)، أنها ليست فقط

شكل وتعبير ونسب بل نص يحكى قصة العمارة القبطية.
HISTORY of the Dome in Egypt

Across the ages the dome was known in Egypt in its different locations. At first the Ancient Egyptian legend indicated that the Goddess "Nut" (the dome of Heaven, Goddess of Heaven) spoke about the creation of the universe and how the life began in it. This Goddess was linked to a large dome in the form of a lady with her two legs and two hands supported on the earth, which resemble the supports of the dome, while her body was in the sky as a covered form with the sun and stars.

In our view this was the first dome known by our grand, fathers the Egypt in the Modern kingdom, where there was not any special worship for the Goddess "Nut" except in Heliopolis.

The dome of the sky with its signs of the Zodiac, was known as the dome which existed at Dandara Temple, before it moved to the Louvre in Paris.

In the pharaonic era, the dome was found in the following sites:

- Tomb "Snb" near the big pyramid at Giza, where was see a mud brick dome carried on pendentives, we believe that this is the first pendentive in World History.
- Tomb of Mira at Dandara.
- Tomb of Abydos (12 cent. B.C.)
- Cemetery of Thebes of the modern kingdom.

At Memphis, Dafanneh & Neokratis (late middle kindom)

Like wise the dome was found in the Roman Era at Alexandria, Medinet Habu at Luxor, Elephantin Island, Aswan.

All these Ancient Egyptian & Roman domes are the strong beginning of the Coptic Dome.
In the twelfth century we find that "Abu Al - Makarem" in his manuscript referred many times to the existence of the Coptic Dome in the churches during this period.

Maqrizi (1444) & Vanseleb (1672) also referred to the existence of the Coptic Dome.
DEVELOPMENT of the Coptic Dome due to its PLAN

1. The simple design of the churches of the 4th cent. at Kellia, Marina (Alamen) & Shams Al - Din (Oasis) which had a narrow nave and aisles, indicated that the design did not allow the building of many domes.

2. In the 5th cent., the dome was often constructed among the three apses (conches) as seen now in st. Shenouta & st. Bishai monasteries at Suhaq. Where two domes cover the Well & the Ambon.

3. In the 6th, the dome was found above the area of the sanctuary which took the shape of a large apse. Churches of this type is found Dair Al Malak, Naqlun & Dair Abu Fana, Mallawi.

4. Churches of the 7th & 8th cent. especially in Nitru Valley were distinguished with the choir (chorus) surmounted by a larger dome than that of the sanctuaries as we find in Dair Al Syrian.

5. In the 11th cent., we can see twin domes covering the middle nave of the church as in Dair Anba Hadra of Aswan, Dair Al Azab, Dair Sadmamt and Dair Al - Hamam at Fayum.

6. In the 16th cent. most churches & monasteries of Akhmim were roofed with the domes of their own special style. The middle dome of the church was elevated higher than the other surrounding shallow domes and vaults.

7. In the 17th cent., a row of equal sanctuaries were constructed in the church while the whole of the church’s nave was covered with equal domes.

8. In the 18th & 19th cent., the churches were covered with twelve equal domes having different forms from one church to another.
Dar El-Hadidi, Akhmim

القرن 5 / 6
5/6th cent Triconch

6th cent
1 Dome

القرن 6
Qa'at Ama'm al-Hikla

Dar Al-Salib, Nakada

القرن 7 / 8
7/8th cent Choir

القرن 8 / 7
الخروس

Dar Amba Paula

القرن 11 / 12
11/12th cent Twirn Domes

القرن 12 / 11
القبتان القائمتان

Dar Al-Muharrak

القرن 14 / 15
14/15th cent Akhmin stylo

القرن 15 / 14
طراز أخميم

القرن 16 / 17
16/17th cent Many haikals

القرن 17 / 16
عدة حياكل

القرن 18 / 19
18/19th cent Twelve Domes

القرن 19 / 18
قبة
Uses of the Dome in the elements of the Coptic churches:

The dome has been used to cover the elements of the church’s structure. The dome covers the nave, where the faithful feel that they exist in heaven.

While the dome that surmounts the sanctuary transfers our mind to heaven where Christ’s throne is.

The roof of the baptistery carries the baptized one to the heavenly life, and that covers the ambon (Pulpit) which teaches us to venerate the heavenly canons.

We also find the dome above the choir where the elders and the deacons chant their heavenly hymns.

Also over the throne of the Bishop where he resembles our Lord, remembering us with his heavenly throne.

The dome has been constructed above the monastic buildings for its simplicity and to make the monk feel that he is existing in Heaven.

It also surmounts the entrance of some churches called “doxar” where we feel entering the heavenly throne.

We may also see the dome covering the towers of the churches and the tombs as a symbol of heaven, where the human soul finds rest after its departure.

The dome is also used to cover the water wells, tanks and the Pigeon Lofts.
The MATERIALS used to construct the Coptic Dome:

Many materials were used to build the Coptic Dome such as Rubble stone, Ashlar stone, Red bricks, Mud bricks and Wood.

We have noticed that many of the Coptic Domes were built from mud bricks due to its low cost and as it is the proper building material for the desert.

It is also a good insulator of heat since mud contains humidity. We can see many mud dome in the Nitrun Valley, Kellia, Bagawat and in most of the churches of Upper Egypt.

On the other hand we can observe that the baptisteries and the epiphany tanks were built with burnt bricks.
Methods of CONSTRUCTING the Coptic Dome, transforming the quadrato to a circle:

There has been many styles for building the Coptic Dome according to the builder. The shape and material of construction is as follows:

THE PENDENTIVES:

Here the dome was built on a quadrilateral foundation upon four arches erected with four pendentives supporting the dome. We have found them in the tomb of Snb. Also in Bagawat we see the inclined wall in the Ancient Egypton style. Likewise the pendentives supported the dome covering the crypt of Abu Mina in his church in Maryut.
THE HORIZONTAL BRACKETS

They were used as an element to transform the quadrato into an octagon and then easily into a circle, until the dome was completed. The horizontal triangle is cornered with decorated ornaments, as we may see in Dair Abu Maqar and Dair Al-Syrian.

Domes of KELIA:

(The Turtle’s back and the dome of the triangles)

The dome at Kellia region near Damanhur city is famous for the dome of the Turtle’s back. It could be built on any square or rectangular area. Building the dome began from the pendentives of the corners until it was completed.

In Egypt unique and rare domes with upright & overturned pendentives have been revealed. These domes were also built of mud bricks.
(4) the squinches: wooden brackets were placed upon, where the squinches were built. Mostly these brackets were visible in some churches. The shapes of the squinches obviously differed from different periods and places. They were the beginning of the stalactizes.
THE STALACTITES:

They were small niches decorating the squinch which reduces the load and the stress upon the single squinch.

(و) القرنصات: عبارة عن حنامات ركنية كثيرة لخفية الحنبة الكنية وانتقال التحميل على حنبة ركنية واحدة.
A DOME OF INTERSECTED VAULTS:
This form of dome is clearly found in Nitrün valley, as those directed above the refectory of Anba Bishoi Monastery. Also the church of Iskhirun Al - Qallini in Abu Maqar Monastery where the width of the dome is seven metres wide.

A DOME IN THE SHAPE OF A SEMI DOME:
Allowing the indirect light to penetrate the semidome thus lighting up the sanctuary, as seen in the Monastery of Abu - Seifin of Tammouh, Giza.
The BEAUTY of the Coptic Dome:
The beauty of the Coptic Dome is characterised in the following aspects:

a) Texture  
b) Openings  
c) Lighting  
d) Decoration  
e) Colour.

a) Texture:
The building material can be seen in the domes of Al - Temsaheyyah church, Qucia, Asisut. The dome may be covered with plaster resembling man’s skin.
B) OPENINGS:
The opening in the Coptic Dome has many shapes. Some of them are small rounded holes, representing heaven. Others are windows in the dome’s drum for lighting & ventilation as we can see in the following examples:

1. At Bani Ady church, Manfulut the numerous openings symbolize the stars of the sky.
2. In Abu Fam church, Tima, Suhag; we see the holes in the shape of the cross.
3. The three holes of Dair Al - Syrian symbolize the holy Trinity.
4. The vertical openings of Dair Al - Azab, Fayum reduces the load of the dome and prevents the rain coming in.
5. In Dair Sitt Dimiana, Bilqas, the four openings symbolize the Cross.
6. In Damanhur City the windows in the drum of the dome has beautiful stained glass.

(2) الفتحات:
اختفت الفتحات في القباب القبطية ما بين ثقوب صغيرة مستديرة تملأ نجم السماء وبين شبابيك في بدن القبة مغطاة بقوس وبين شبابيك في رقبة القبة.

1. الفتحات الكثيرة في قباب بني عقيب
أحساساً أكثر برغبة النجوم في السماء.
2. ثقوب مثلما أعلنت الإحساس بالصلب في شكل مربع هندي
- غالبًا القباب الثلاثة في دير السريان أعلنت رمزًا للثالوث.
- ثقوب أيضًا بالقوس في اللوحة الدائرية تأكيدًا لذات القبة مع تخفيف الاحمال ومنع دخول الماء الأمطار.
3. الثقوب الأربعة في دير السريان على شكل مصلى تؤكيد رمزية الصليب.
4. الثقوب الكثيرة في دير المشرقي باخميم على هيئة صليب مزخرف أعمى جمالاً ناصعاً.
5. الثبابيك في دمياط في رقبة القبة بها زجاج معشق بالبلاستيك رؤية في الجمال ( أعمال المهندس رجسوس وصا واصف ).
C) THE LIGHTING:
INTERIOR & EXTERIOR:

- الأضواء في القبة القبطية من الداخل
من الخارج:
برع الصور الساحرة، اجنداننا في استقلال طبيعة
الإضاءة في مصر وحالة في:
أ - روعة دخول الضوء إلى مثال رمسيس الثاني
يتم بها رده وينتهي
ب - دخول الضوء في شبابيك معبد الكرنك من
( الكلاسترا )

كذا استقل الأقباط الإضاءة التاجية عن القبة حيث
تتنوع من أعلا ( من الثقوب أو الفتحات أو رقاب
القباب ) فلا تأخذ انتباه المصلين ولا تشتعل
افكارهم وترتكز في الصلوات بما منجية من رمية
وبضوء وخصوصا عندما يرفع بين الدعا إلى
السماء فيرفي نور القبة.

وبعده الضوء من الزجاج الملون احيانا في
زهرة الفتحات في القبة القبطية مما زادها جمالاً
وروعة

كما استقل الأقباط الإضاءة في معرفة الوقت حيث
ترى الأزنة بدر السيران.

الأضواء في متحف حبيب جورجي ورمسيس
وبيص واصف: ركز الوجوب في متحف الفنان حبيب
جورجي بالتحرير الذي بناه المهندس رمسيس
وبيص واصف تأثير من الإضاءة القبطية الغير
مباشرة في توزيع الإضاءة على التماثيل من
الفتحات لا يراها المشاهد إلا من فوق أو من
الجوائب. كما لعبت الأضواء دوراً رائعاً في
تسلوان نور الضوء في متحف الفنان رمسيس
وبيص واصف للنسيج حيث يسقط الضوء من فوق من
القباب والقبوب مستقبلاً في كل ركن من تطبيق
الفتحات بزجاج متلون يبنى اللون على هيئة
محورين لتوزيع ضوء الشمس ودم تركيزهما مما
ساعد على نجاح عرض رواج النسيج البديل
القبطي.

وقد قال كوريبوزيو، إن الحضارة هي اللعب البازار
الذين يرافقون الكلاكتات التي ترى الضوء، ولكن
الثقة في كل مدتي طويل الليل وتهار فائق، وذك
هو الشكل الجمالى النسبي التدفق إلى أشعة الشمس
مصر الشرقي، فالشيء هو الشيء الذي
إن بلتنا مصر منهما الله إضاءة طويل العام (وفي
ثابتة في الاتجاه البحرى).
C) THE LIGHTING: INTERIOR & EXTERIOR

Our Egyptian grandfathers excelled in making use of the natural light. This has been shown in Abu Simbel Temple, when the sunlight shines on the statue of Ramsis II on his birthday and the day of his crowning.

Also the light coming from the clear-story windows at Karnak Temple in Luxor.

We notice that the indirect light coming from the openings of the dome gives a peaceful atmosphere thus allowing the congregation to concentrate during the service. The light also passes through the stained glass (window) in the Coptic Dome increasing its beauty.

We could see the indirect light upon the statues in Habib Geogy Museum and the stained glass in the domes in Ramsis Wasef Museum distributing the sun rays on the carpets and the Batik.
D) DECORATION:
The copts decorated their domes by:
1 - Exterior brackets added to reinforce the dome as in Sitt Dimiana and Subk Al - Ahad.
2 - Black and red bricks were used to construct the domes of Akhmim and Esna symbolizing the time of Martyrdom.
3 - Architectural decorations were used on the exterior in the domes of Manhari, Minya which resemble those of Aswan Fatimide Tombs.

(4) الزخارف:
استخدم أقباط مصر الزخارف بانواعها وإحجامها واشكالها المختلفة للوصول إلى كل رائحة الجمال في تشكيلة في النقوش والصور تعكس شكلًا متميزًا.
فُقد أضيف للقبة عوارض خارجية لل mócوية كما في سبك والأسد نبانيه.
كما أضيفت مواد اشكالية للقبة لزخرفتها (طوب أحمر وإسود) كما في المزراء باخيم.
وقد استُخدمت الزخارف المعمارية خارج القبة مثل قباب مدافن أسوان التي ظهرت أيضاً في
وهي بوضوح زخارف القبة برسومات المقرنصات والحيبات في دير السقورة، أخميم.
E) THE COLOURS:
As the Copts are the sons of the Pharaohs, the colour played an important part in the structures of the dome both within and without side it.

Inside Colours:
1 - Painting of OUR LORD in the position of blessing his people surrounded by Angels, the four Evangelists or the twelve apostles.
2 - Decorated crosses at Dair Al - Maymoun, Beni Suef.
3 - Ornamented intersected crosses at Dair Al - Barsha, Mallowi.
4 - Plant ornaments at Sendebris, Qalyub.
5 - Paintings Symbolize the Holy Communion in the old testament in the wooden dome covers the altar in exmmim and old cairo.
6 - The cherubim in the triangles of Abu Maqar church.

Outside Colours:
1 - The mud - brick domes left in the open air due to the dry weather and having the continuous colour of the earth, as shown in Upper Egyptian domes.
2 - The blue coloud domes of Al - Fakhoury Monastery inspires the viewer to see the heavenly sky.
TEMPERATURE INSIDE THE DOME

From many experiments in Morina Villas at Hurghada, we noticed that the inside temperature of the dome was less about 14°C than the outside air temperature.

The holes in the upper surface of the dome allows the circulation of the hot and cold air inside the rooms.

القبة ودرجات الحرارة:

بقت من التجارب العملية التي اجريت في قرية مورينا السياحية بالغرفة ان فرق درجة الحرارة داخل القبة وخارجها حوالي 14° درجة مئوية وذلك لوجود تكيف طبيعي في الشكل الداخلي للقبة حيث يصعد الهواء الساخن إلى أعلى ومنزله في درجة حرارة أقل وفي الشتاء تغلق الفتحات في القبة فتبرد الهواء الساخن إلى اسفل نتيجة لاستدارة السطح ليصبح نوع من التنفيلة الطبيعية الموضحة.

منحنى (1)

يقلل العلاقة بين درجات الحرارة داخل غرفة النوم الطيلة على التراس ودرجة حرارة النوم ومنه يلاحظ أن درجة الحرارة عند النوم كانت 29° بينما كانت داخل غرفة النوم 31°.

منحنى (2)

يقلل العلاقة بين درجات الحرارة داخل غرفة النوم الطيلة على الحديقة ودرجة الحرارة في الحديقة ومنه يلاحظ أن درجة الحرارة في الحديقة أقل قليلاً 2° وداخل الغرفة أكثر قليلاً من 28° عند الساعة الواحدة ظهرًا.
FORMS OF DOMES

لالة الملاك قرية دركة
107 Al Malak, Doronka

أشكال القبة القبطية

Dair Bidaba, Zeleiten

Serberbay كنيسة الملائكة

Busat بسط

Samadun سمادون

Shbin al - Qanatir شبين القناطر
High domes, Maadi

Shallow domes - Dayrut al-Sherif

A small domes on a big dome Al-Batara, Balyana

An irregular shaped dome, Sitt Dimiana

Nubian domes, Aswan
A multi central dome, Dair Anba, Samuel

An oval dome, St. Anthony, Boash

Mishruji, Sawamaa

A dome with a shape of a semi-dome, Tamouh

Two equal domes above each other, Dair Sawada, Minya

A step pyramidal dome, St. Anthony, Mon.
Stresses in Domes

Domes are obtained by the rotation of a plane curve, called the meridian about a vertical axis laying in its plane, if the middle surface of the shell Roof is obtained by the rotation of a circular arc about the vertical axis through its centre, the resulting shell of revolution is termed spherical Dome. (See Fig I)

The slab thickness of a spherical Dome is very small compared to its diameter. The edge of the Dome is to be increased in thickness, and provided with circumferential Edge Tie resists the horizontal components of the Edge internal forces.

The external loads mainly consist of uniformly distributed dead and live loads per unit area of the curved surface. Domes are usually supported along the whole perimeters. For such loading and support conditions, the internal forces consist of direct forces acting in the plane of the shell membrane. No bending moments are created, except in the vicinity of the edges. Dome are economically used to cover large circular areas. Therefore, they are efficiently used in Churches and Exhibition Halls.

Analysis of the Internal Forces.

The element of the Spherical Dome shown in Figure II, is cut out by two adjacent meridians and two parallel horizontal planes. The position of the meridian is defined by the angle (θ) from a datum meridian plane. The position of the horizontal plane is indicated by the angle (dθ) from the vertical axis of symmetry. Under the effect of the uniformly distributed total external loads g per unit area of the curved surface, the element will be subjected to the following internal forces:

- Direct horizontal tangential forces \(N_x\) (Ring Forces) acting in the horizontal tangential direction X.

- Direct transverse tangential forces \(N\theta\) (Meridional Forces) acting in the meridian planes and in the tangential direction y. Both \(N_x\) and \(N\theta\) are considered positive when produce tension. From the assumed symmetry of shape and loading, \(N_x\) is constant at both the sides of the element. Therefore, there will be no direct shearing forces S acting on the four sides of the element.

The lengths of the two sides of the element meeting at θ, are: - R.dθ and R₀. dθ. Hence the surface area of the element = R. dθ. R. sin θ. dθ.

The Direct horizontal tangential forces \(N_x\) (Ring Forces) acting in the horizontal tangential direction & and the direct. Transverse tangential forces \(N\theta\) (Meridional Forces) acting in the meridian planes and in the tangential direction Y for a spherical Dome subjected to uniform distributed dead and live loads per unit area can directly calculated from the following equations and graphs shown in Fig III.

<table>
<thead>
<tr>
<th>θ</th>
<th>-g.R</th>
<th>(-\frac{1}{1+\cos\theta})</th>
<th>-g.R (-\frac{1}{1+\cos\theta})</th>
<th>(N_x) = +g.R (-\frac{1}{1+\cos\theta})</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°</td>
<td>-0.5000 g.R</td>
<td>-0.5000 g.R</td>
<td>-0.5000 g.R</td>
<td></td>
</tr>
<tr>
<td>15°</td>
<td>-0.5087 g.R</td>
<td>-0.5087 g.R</td>
<td>-0.5087 g.R</td>
<td></td>
</tr>
<tr>
<td>30°</td>
<td>-0.5359 g.R</td>
<td>-0.5359 g.R</td>
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The total tensile force \(T\) in the circumferential Edge Tie as shown in Fig VI is calculated using the following equation

\[ T = + \frac{g \cdot R^2}{1 + \cos \theta e} \sin \theta e \cdot \cos \theta e \]
One dome churches & Twin domes
12 Domes Churches

Hesset Ekwa

M. Antony Mon.

St. Antony Mon.
Harmony between Domes

تناسق القباب مع بعضها

117 Dair Abu Ishak, Abnub

26 Dair Bakhumios, Edfu

Deir al Azab

Hesset Elwa

Deir Shenouda, Suhag
Harmony between Domes & Vaults
Harmony between domes & Nature

تناغم القباب مع الطبيعة

Dair al-Mehareb

Dair St. Hermina

Dair Samuel, Calamun

Dair At Tod

St. Anthony
WORKS OF RAMSIS WESA WASIF

We sense the effect of the Coptic Dome in the beautiful masterpiece of Prof. of Architecture Ramsis Wesa Wasif and his student Badie Habib Georgy.

Ramsis, Habib & Badie all believed that every human being has his glow for creation. This beauty can flow from his inner self, only if you give him the freedom & technique to express himself.

Ramsis believed that the successful dome is a part of nature.

أعمال المهندس رمسيس وصايف ووصف المهندس

يمنع هيب جورججي المتأثر بالقبطية الفنية تأثير الفن القبطية الواصل في جمال أعمال استاذ العمارة رمسيس وصايف ووصف وتمييز بديع هيب جورججي في لمساته نايفة حيث يلعب المشاهد الساخنة الخلوة وكاملها في أعماله.

جمال النحت واعجاز السامرة وسماحة الإبداع.

إن فن العمارة يحتوي الحياة بكلما يعيشها المهندس مع الساكن مع المادية الإنشاء. لم يختلف هيب جورججي وصمم كل اثاث من الفن الفنى الذي يمتلك كل أنواع الجمال. فالصوتيات لحبيب جورججي العالم الفذ أن هذا النوع وراءة الأزمان السالفة ضعفًا إلى ما يضفي الإنسان من خبرة في خلق القدرة التي يحياها. إن هذا الإنسان يخرج من داخله فن وإعمار بيته العالم.

كان رأي المهندس رمسيس وصفًا وصايف في العمارة أنها قطعة تحت رأس المصمم جمالهما ودفعته في تناسق تصميمه بسماحة وقوة وجمال يتمعن بهم المشاهد وتفتح معًا. هذا المهندس القبطي الفذ والممسك بمثابة أصيل قد اتبع في تصميمه وتنفيذ كنائس مار جرجس بصر القديمة والنظرة والزمالك وتحفة هيب جورججي ومياني الحراني.  

Zamalek Church

Old Cairo School
CHURCH OF ST. GEORGE, HELIOPOLIS:

Architect Ramsis has achieved a brilliant architectural solution in the churches rectangular area. The entrance of the church leads to the nave, the sanctuaries and the north, south, west aisles which we usually find in the Coptic Basilica.

It has a Coptic Bell tower like that of Abu Maqar monastery with its upper dome. He also chose the form of a Coptic dome covering the middle of the choir and is surrounded by the tri-conch similar to those of Dair Anba Shenouda and Dair Anba Bishai in Suhag.

CHURCH OF ST. MARY, ZAMALEK:

The entrance to the church, with its small dome inside the high entrance symbolize st. Mary and Christ the child. Although the church has no columns, the devisions of the nave and the two aisles are very clear in the ceiling. The two domes above the sanctuary and the altar which symbolize heaven, while the bell tower with its thin fine shape is a symbol of the Pharaonic sun.
THE MUSEUM OF HABIB GEORGY, HARRANEYYA:

The Museum innercourt includes a palm tree and a pot which symbolize the ancient Egyptian customs. The building and the floor of the museum are constructed of mud bricks.

The structure is covered with different domes and vaults in magnificent harmony. He worthily deserved the reward of Agha Khan in 1983.

The project is perfectly adapted to the environment enhancing the role of the earth as a building material and demonstrating innovation in the organisation of volumes and its subtle use of light.

The quality of the spaces, the generosity of the forms and the ambience created by light, all reflect high standards of architectural excellence.

CENTRE OF RAMSIS WESA FOR ARTS IN HARRANEYYA:

We can observe the beauty of building the centre with different domes and vaults. Also how the centre has used the local soil as a suitable means for material from the surrounding environment of the Egyptian village, to fill the centre with various kinds of arts: carpets, batik and glazed pottery.

OLD CAIRO INDUSTRIAL SCHOOL:

Its construction has been fully covered with the domes and vaults in Coptic style.
(Manshoubia) we see his true imagination as it was, he both used this design and forms of domes from the ruins of Kellia.

2 - In the tomb of Dus family at Helipolis, we see its high Coptic dome directed to heaven.

3 - In the church of St George at Qalub al Balad: he carried out different kinds of domes, vaults and arches which indicate his clear impression of the Coptic domes.

4 - In Harghada, he used the reinforced concrete arches instead of the thick walls.

5 - In Ramsis Wasef Museum at al Harraneyah: we can observe clearly the singing domes and vaults in many coptic designs. We can also notice that the building has been erected inside the Ancient Egyptian rectangular shape.

6 - In king Maryut, the two villas: he has used various Kinads of domes and vaults to cover the different rooms.

7 - Design of the center of christion studies in Michigan U.S.A. coptic style design was fulfilled by Bishop Samuel and arch. Badie, making clear the coptic spirit in the inner courtyard with numerous domes and vaults covering the whole structure.

8 - The entrance of Al - Azba Saqqara road. We can see the harmony of the domes as in the manasteries of Luxor (Al Mehereb - Al Shayeb).

9 - Villa of the Artist Adel Huzayyen Al - Harraneeyah the construction seems as a beautiful masterpiece of sculpture.

WORKS OF BADIE HABIB GEORGY

Through many studies in the ancient churches and monasteries of Egypt, we have noticed that Arch. Badie Habib has been influenced by Coptic designs in all his works:

Examples are:

1 - In the monastic building
How to BUILD a dome today

Today a dome is constucted with different materials of mud bricks, silt bricks, stone and reinforced concretes. Rarely the dome is built in a regular hemispherical shape for its great horizontal stresses, but it was built with different half dimeters, taking its final shape which somewhat higher than the hemisphere.

It has basic characteristics and is built without forms. Often a few gypsum is added to the mortar to facilitate directing the bricks towards the centre. The dome is plastered with cement mortar and is covered with insulated material.

Finally it is plastered. Mostly the dome is elevated upon different shapes of arches. Here are some examples of the modern domes in Egypt:

Al - Harraneyah:

Habib Georgy Museum was the first building in Harraneyah, where mud bricks were used in different shapes of shallow - domes on pendentives, a dome on a circular building and twin domes.

Then Ramsis Wesa and Badie have used burnt bricks and silt bricks to build the rest of the villas and Ramsis Museum of the carpets.

Domes with different shapes with different openings. Forms were used to build the arches which support the squinches and pendentives to construct several domes on rectangular rooms.

Villas of King Maryut, Fayed and Al - Hurghada:

They were built of burnt bricks with numerous forms of domes according to its plan and its use.

At Al - Hurghada a new system of construction has been adopted. It depends upon reinforced concrete arches to secure solidity of the building. These arches carry the different domes with their squinches.
The old monastic building in front of Dair Al - Syrian was covered with different domes according to the plan. This restoration of the Manshubia makes it a fine master piece of Architecture. The domes have been reinforced with horizontal prackets of old tree branches.

Churches of Heliopolis of Zamalek:
These domes were easily built by using reinforced concrete domes which was a very large diameter.
Forms of the Coptic Domes

اشكال القبـاء القبطيـة

MALAK, KAMULAH

BAKHUM, SHAYEB

INTERSECTED VAULTS

BOCTOR, NAKADA

THEODORUS, MEHAREB

SHALLOW DOMES

SITT MIRIYAM, SURYAN

WHITE. MONASTERY

SQUINSHES

SITT MIRIYAM, SURYAN

PENDENTIVES

KASR IBRIM
The Coptic Dome dates back to the Ancient Egyptians and traditionally used by the Early Christian Egyptians since 50 A.D. when St. Mark came to Alexandria until this present time. The dome represents Heaven and so it makes a covering for all churches, monasteries & tombs.

We hope you enjoyed the Coptic Dome in its spirituality, harmony, simplicity, variety and its beauty in our BLESSE LAND EGYPT.

Bishop Samuel
Arch. Badie Habit

Nous avons également été inspirés par la beauté et l'harmonie des temps anciens égyptiens. La coupole de la Cité Copte est un témoignage de l'art et de l'architecture religieuse dans le passé.

We hope you enjoyed our books about:
Ancient Coptic Churcherires in upper Egypt
Ancient Coptic Churcherires in lower Egypt
The Coptic Dome
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