

JASSY ACHIEVEMENTS REGARDING THE CASTING OF ART PIECES FOR ARTIFICIAL LIGHTING IN ORTHODOX CHURCHES

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ABSTRACT

In this paper are presented some art pieces, used in orthodox religion for artificial general lighting. These pieces, realized at SC RANCON SRL Jassy, present a special importance, because they join harmoniously the functionality principle with the artistic and architectural concepts. Thus contribute at the achievement of sobriety, equilibrium and solemnity ambiance from spiritual service realized in Moldavian orthodox churches.

KEYWORDS: art pieces, casting, orthodox religion

1. Short history

"God has said: To be light! And has been light." (Genesis 1.3 – The Old Testament). The human life, marked by two important events the birth and the death, it's indissoluble linked with light, by this divine alternative to darkness, which is associated to the sleep or the death.

The men have beginning from the very old times to use the solar light for the lighting of interior spaces, but in the interim has appeared the necessity to use both the day and night times of a new lighting sources, which can to be controlled and manipulated after the moment necessities.

In Pre-Christianity, the spiritual meetings have been interdicted by Romans and Jews, because the Christianity adepts have been regarding as the members of one dangerous sect for stability, religious, social and political interests of the Roman Empire. In these conditions, the religious cult has forced to manifested only night, in the underground conditions and consequently have appeared the necessity of the artificial lightning.

In Christianity, evening and morning prayers represent the oldest Mosaic tradition of the first adepts, recruited from Jews, as moments similar to evening and morning sacrifices prescribed by the Old Testament (Exit 29.39; 30.7; 30.8). The succession and the time of evening and morning prayers, related to those destined for Sacred Liturgy, have been systematized during the first three centuries, and in the IV-th century the hours for evening and morning prayers have been established officially through rigorous dispositions of some synods. In the manifestation of divine public orthodox cult, at

evening, midnight and, sometimes, early services have been used the artificial lighting with candles fixed in chandeliers or in mural supports, candlesticks, but this method not provide a good illumination, thus in semidarkness the interior architecture has been loosed from the his artistic value of space organization. As the electrical light has become a main factor in socio-economic life the correctly choice of the illumination technique and of some adequate sources specific to each purpose has imperious necessary.

The communism period, in which the liberty of cults has just a constitutional stipulation with formal character, has mean practice a cessation of the production by lighting objects destined to orthodox cult. On the industrialization content, the artists and artisans from this domain has disappeared gradually, and the designers of lighting objects for home use have going in conceptual deadlock, given the mean attention to functionality and adaptability to industrial production. Thus has been diminished the artistic component of the creation, the beautiful industrial concepts being subordinated to the principle of products utilities, which has carried out to the adoption of an esthetic inexpressive trace, uncertain, accentuated through the using of the cheap materials with small durability. In reality, has arrived at the artistic depersonalization of the ambiance, and many interiors have acquired suddenly a slightly public aspect.

2. Illumination principles of the interior cult dwelling

The choice of the artificial lighting objects request refinement, perfect functionality, maximum

illumination efficiency, stylistic harmony and a accurate arrangement. In the case of orthodox cult dwelling the artificial illumination must assure an adequate amount of light without to tire the eye, to decorate the interior, to give him life, heat and personality, to create a specific and elaborate ambiance. This ambiance predetermined, necessary for meditation and praying, must to introduce the man in the universe of belief and love to God, to contribute at the assurance of inside equilibrium and at temporal abandonment of daily problems, to impress the man through grandness and solemnity of the religious act, through artistic images and adequate music. For the *presentation surfaces*, disposed in vertical plane and on arch, on which are exposed icons and mural paintings, must be used a constant illumination, focalized, without shades, which make evident all details, especially that the clothes of saints have usually dark colors or nuances which absorb the light. The artificial illumination from church uses a combined system to lead the light, namely a general illumination realized by chandeliers and a local illumination with the mural objects. The first kind of illumination are extended through natural sources during the day, but the windows are somewhat reduced as surface and sometime with strained-glass windows, respectively with dark colors on the interior faces, this make frequently that the light of the day to be not enough.

3. Execution technology of the artificial lighting objects

Chandeliers realize a light oriented to the top and are used to emphasize of some decorative structure and to enlarge the space through the illumination of the arch and reflection of the light by this. The great chandelier are fixed on the arch of the church (nave) by a casting "ochet" (special link), through four chains disposed in cross. The light of the great chandelier from nave symbolize the divine light which take down from the sky over all participants to the holy services of the church and to the Saint Liturgy, which stand in the middle of the public divine cult.

At S.C. RANCON S.R.L. Jassy are realized besides bells and other cult objects, the illumination objects for Orthodox Church new built in our country.

The chandelier with two levels (fig. 1) supply for artificial illumination of church with middle dimensions, because those 12 light (which symbolize the number of year months) can not assure the more lightness intensity. Sometimes such chandelier can set in pronave or in administrative interiors.

Each level is formed from disc (1) on which are fixed six ornamental arms (2) in the form of letter S. This arms, remind by Régence style (1715-1724), taken from the Rococo (1725-1800) style, thus are

reloaded the style is characterized through the suppleness and elegance of the sinusoidal line with vegetal motives, render evident the admiration of the anonymous artist for the beautiful of the nature created by God.



Fig. 1. The chandelier with two levels and 12 lights.

The arms (2) are casting from brass, in horizontal position, and the form are realized with monolithic cast box form aluminum, which impose the utilization a one false cast box. Between the levels are disposed the intermediate pieces (3), horizontal molting, with inside core for ulterior setting on a steel rod, respective the disc (4). These pieces, molding similar from brass, are lathed, finished and polished on felt at exterior. In the bottom part the chandelier have a little cross (5), which symbolize the Christian belief and the sacrifice of the Savior.

The cross, molding in horizontal position and worked mechanical on the both faces and finished, are fixed through the thread M10 with the pick (6) from massive metal, obtained through processing from one raw bar. The other end of the pick is also threaded for ulterior assembled with the steel rod which sustains the entire assembly.

The sphere (7), symbolizing the earth illuminated by God, is realized with an interior gauge, being formatted from two hemispheres, which are merged in equatorial plane through a threshold. The sphere is also mechanical processed at the exterior and finished. The sub-ensemble composed from the little cross (5) and pick (6) is fixed through the thread M12, situated at the inferior end of the steel rod. After are mounted the sphere (7), intermediate elements (3) and sub-ensemble formed from discs (4) and arms (2). Toward the superior ends are mounted the coronet (8), a cross disc (9) and the big cross (10), and the upper end of the threaded rod is disposed the clamping "ochet" (11).



Fig. 2. The chandelier with four levels and 42 lights.

The chandelier with four levels and six arms on the level (fig. 2) have 42 lights and realize an uniform illumination of the large spaces, because the multistoried and the disposing of electrical terminals follow the curvature of the arch and the acquirement of some identical light spots. In this mode are harmoniously joined the functional aspect with the artistic and emotional aspects, thus given to illumination object the grandeur and the brilliance imposed by religious service.

Also the chandelier underlines subtly the size of the room and of the presentation surfaces and help at the identification of the plastic message of icons and religious acts painted on the walls.

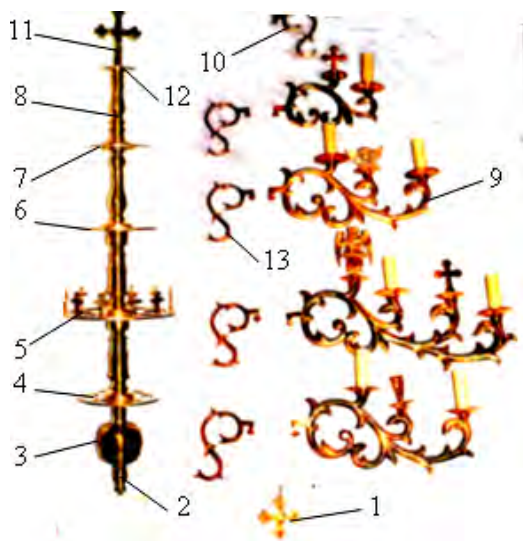


Fig. 3. The component elements of the chandelier with 4 levels and 42 lights.

The component elements of the chandelier (fig. 3) are realized from casting brass, and mechanical processing manually or through lathing and finished. Similar with the chandelier described anterior, in the upper part is evident the small cross (1) assembled in the pick (2), in which are executed a threaded gauge for the montage of the inside rod by $\varnothing 16$ mm from OL 37 steel. The sphere (3) is executed from two hemispheres with inner void, worked in equatorial plane with a threshold for a good closing. The discs (4), (5), (6) and (7) have the thickness by 10 mm and present six interradiial cuttings, for the diminish from the weight. These discs have the diameters much smaller proportional with the increasing of disposed level to upper. Between the discs are inserted intermediate elements (8), casting in horizontal position with inside void, which are processed through lathing and polishing with felt. The arms (9) have the different dimensions correspondently to the level which his occupied, thus the ensemble to look like as a tree. The arms from the inferior level present elements with forms like C and S letters and vegetal motives (leaf and buds) having gracious forms, without the possibility to join in geometry rigorousness.

The next raw by arms presents at the end of a decorative vegetal element a cross, and the arms from the level immediate superior have at the end floral elements each with a seraph, which are molding separately and assembly through a thread M6 on arm. The decorative S, molding individual has a square termination which enter in a configuration slot correspondingly to the discs (5), (6) and (7). At the superior end are mounted the ornamental coronet (10) apart casting, and the great cross (11), cross disc (12) and clamping "ochet" is fixed through the thread M16 with superior end of the steel rod.

The chandelier has the maximum diameter by 1500 mm (at the bottom level), the height by 2400 mm and the mass by 125 kg.

A chandelier such as dimensions, named *the great chandelier*, is suspended at a height by some meters with four chains. These chains manufactured in industry have not even decorative element and thus can diminish the aspect and the artistic value of the illumination objects. Recently, in Jassy the producers find a solution much better, realizing elements through molting for chain (fig. 4) with floral motive, similar to decorative elements of the chandelier.



Fig. 4. Chain element with floral motives.

At the chandeliers presented the central electrical conductor are situated inside of intermediate elements molding with interior void, and at the level of each level go off the insulated conductors, apparent, by yellow color, fixed on the arms with transparent adhesive tape.

4. Conclusions

Plastic and functional solutions adopted at S.C. RANCON S.R.L. Jassy for the production of these general illuminations objects, emphasize a careful preoccupation for the molting of the decorative elements components, the mechanical processing and the realization of the electrical installation, respecting the exigencies imposed by security technique of the participants at the public religious service.

The manufacturing art of the ecclesiastical ornaments and cult objects have been and is a continuous preoccupation of those believing men who understand to transform the metal in pastoral processed material and, not in the last hand, artistic. It's both a firm expression of the human talent and a adoration and respect form of the believed soul face to divinity, presents through permanently work in the human life from the earth.

References

- [1]. *** *Biblia sau Sfânta Scriptură*, Editura Institutului Biblic și de Misiune al B.O.R.. București, 1994.
- [2]. **Ene Braniște** – *Liturgica generală*, Editura Institutului Biblic și de Misiune al B.O.R.. București, 1993.
- [3]. **Vasile Drăguț** – *Dicționar de artă medievală românească*, Editura științifică și Enciclopedică, București, 1976.
- [4]. **Florin Diaconescu** – *Teoria și practica formării*, curs litografiat, vol. I și II, Rotaprint I.P. Iași, 1988.