

## Material Destruction in D'Aronco's Works of Art

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**ABSTRACT:** Italian origin Raimondo D'Aronco (1857-1932) produced several works one more interesting than the other in Istanbul which have preserved their characteristics until now. Being one of the most important representatives of Art Nouveau movement in our country towards the late 19th century, made quite a name for himself with 1902 international Torino Exhibition. He was born in Gemona at Udine region by 1857 and died in Napoli by 1932. Having received classical education in Venice Academia, D'Aronco came to Istanbul to prepare the projects for the Ottoman Exhibition in 1894 and was appointed as the head architect by Abdulhamid II in 1896. He has worked between Turkey and Italy during 1896-1908. Particularly he produced several works one more interesting than the other in Istanbul including the Imperial School of Medicine known as Mekteb-i Tıbbiye-i Şahane (Haydarpaşa High School) in company with Alexandre Valluury, some sections of Yıldız Palace, Italian Embassy in Tarabya, Nazime Sultan Mansion in Kuruçeşme (demolished), Karaköy Mosque (demolished), ŞeyhZafir Mausoleum in Beşiktaş, and Botter Apartment in Beyoğlu the Library and Fountain of which shall be studied.

**Keywords:** Botter Apartment, D'aronco, Material

Date of Submission: 25-09-2017

Date of acceptance: 14-10-2017

### I. INTRODUCTION

Botter Apartment - İstiklal Street 473- is the first significant urban scale example of Art Nouveau (new art) architecture in Istanbul. The apartment has taken its name from Dutch origin J. Botter who was the official tailor Abdülhamit II and the palace. Jean Botter was a famous fashion designer in addition to being the official tailor of the Sultan. Sultan Abdülhamit decided to build Botter Fashion House in Pera in order to display his appreciation to him. The famous Italian architect Raimondo D'Aronco was selected for this task. The building has become the most famous construction of Pera in a short time. European fashion was being introduced here and fashion shows were organized for upper class of Istanbul. Botter Apartment is a masonry building composed of 2 Basements+ground floor+4 normal storeys+a half storey (Figure 2). Construction date is 1900. The typology that has been applied was constructed on a narrow long parcel and that is a building typology where residence and commercial functions exist together (ground and first floor were Botter's office, and the upper floors were designed as residence) and has a facade facing to the street. The building has received the concept of coexistence of two functions from Europe. Two functions had existed separately in the Ottomans beginning from 18th century except those built by non-moslem communities.

The facade width of Botter Apartment is 11 meters and its depth reaches up to 42 meters. As the typical examples of Art Nouveau architecture, rose figures were used abundantly on the facade of Botter Apartment. This is apparent on the pattern taken into a frame on the entrance door, finish embossments of plasters on the lateral facade and occasionally on window embossments. The Art Nouveau effect culminated on cast irons of the balcony. The balcony interlocked to the building with 4 curvilinear cantilever arms.

### II. DETERIORATIONS OCCURRED IN BOTTERAPARTMENT

The balcony that is currently a designing wonder is actually safety-critical. A wide eaves was constructed in front of the ground floor shop because of the falling hazard at any moment. The eaves which was made by 2001 is still existing and casts a damper over architecture aesthetic.

Having been the beaten track of Istanbul high society once upon a time, the famous architect RiamondoD'Aronco's piece Botter Apartment is now in a ownerless and unattended situation because of inheritors who showed up later and the lawsuit with the Treasury. The ceilings of 4th and 5th floors are collapsed and the others are in danger of collapse.

Metal wings of the entrance door lost their strength while trying to preserve their originality, corrosion is peaking and component breakages started (Figure 3).

All traces of deterioration mechanisms are apparent on the stone material at the facade. One of the most important problems here is degradation, namely wearing down occurred on the natural stone material used and the fact that material started to disappear by losing its properties (this is also defined as disintegration in some literatures). Degradation results from atmospheric conditions (exposure to atmosphere effect - weathered), it may be distinguished with the lack of mineral binder (legante) in stone materials and less level of compactness (tightness solidness) compare to a proper stone at deteriorated areas caused by this and higher level of porosity. In cases the measures necessary for protection of natural stone material against external effects not only aesthetic but also structurally significant problems emerge as in the case of this building. The surface formation called Patina is visible on the Facade Stone Material and a black color layer is seen on stone surfaces particularly those which are not washed with rain.



**Figure 1.** Botter Apartment [1] **Figure 2.** Botter Apartment, (S.O.Hattap)

Air pollution, some particles such as smoke, fume etc. on the atmosphere, sulfur oxide materials have reacted with substances which include limy calcium and calcium sulphate-gypsum was formed. Surface erosion occurred by disintegration occurred on the material by combination of mineralogical structure of Stone Material and some deterioration mechanisms in rain water such as acids and salts.

### III. PROTECTION RECOMMENDATIONS

Once the factors which cause deterioration of the natural stone material and general characteristics of material are determined, such factors should be moved away from the material or some efforts should be taken for protection against them. The stages of these efforts may be defined as;

- Preliminary reinforcement
- Cleaning
- Cementing and filling
- Reinforcement
- Preservation
- Periodical maintenance.

No matter how qualified the natural stone material used in the structure is, changing atmospheric conditions and environmental parameters of today require to take special measures for protection of such materials. Ensuring the control on contact of materials with harmful external effects is the primary one among these measures. For this reason, intended use of material protectors being produced is to minimize or eliminate

if possible disintegration occurring on stone material and avoid from damaging the stone while doing this. The most important point to be considered in implementation of material protectors is primarily to determine the factors which damage the stone by means of necessary empirical studies and attempt to eliminate or minimize the effect of these factors, then to implement protectors.



**Figure 3.** Deflection and material loss occurred by reason of usage at marble step (S.O.Hattap)



**Figure 4.** Occurrence of disintegration-surface erosion on the material by combination of mineralogical structure of Stone Material and some deterioration mechanisms in rain water such as acids and salts (S.O.Hattap)

The “GinoBozza” center (National research Council) in Milan performed classification and degeneration diagnosis of stones as follows in direction of NORMAL RECOMMENDATIONS (Normativa Materiali Lapidari – Stone Material Standards) in 1987:

- Classification of the nature of stone materials,
- Determination of the degree of surface situation,
- Determination of protection status,
- Identification of the reasons for degeneration.





Figure 5-6. MSFAU Vocational School Botter Apartment in the Architectural Restoration Program and Beautiful Beyoğlu Project of Beyoğlu Municipality -2001

#### IV. CONCLUSION

The referred procedures should be exactly implemented for stone materials which have been mostly damaged in Botter Apartment. Wrong practices such as sandblasting held to clean facade, dredging (mechanical cleaning) result in detail and material loss. It would be right to use laser as the cleaning method for such a valuable work of art. Even though it is expensive, particularly rose patterns would not get highly damaged with this method. This significant this here is to determine reflection range carefully in the laser method, painting works performed on the stone in the name of repair give rise to irremediable faults.

A preliminary experiment should be carried out before implementation for the chemical cleaning method to be used on stains. The same rule is applicable for the materials to be used in laboratory reinforcement, preservation and periodical maintenance.

Metal materials should also be reviewed and reinforced, then some measures should be taken against corrosion. Disappearance of Botter apartment will be unavoidable if the process of taking measures and re-functioning is delayed as in the case of doomed works of art.

Prof. Dr. AfifeBatur also states that the building is a highly significant structure in terms of architecture and recommends to turn Botter Apartment into a research center to examine social life, dressing and fashion world of the latest period of the Ottoman Empire or a social history museum with the topic of dressing. Indeed this would be the most suitable function for the intended construction of the work. Regaining Botter Apartment with a letter-perfect repair and life is a responsibility towards the past, present and future.

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Born in Istanbul. She is an architect and restorator. She is working at the Mimar Sinan Fine Arts University. She completed her doctorate at the Structural Physics and Material in MSFAU. She developed “Protective Test Performance Device” in order to research the effects of chemical and environmental factors and protection of Stone-like materials used in historical buildings while she was working on her doctorate thesis. She earned a mention award from the Invention Competition. Asst. Prof. Dr. SibelOnatHattap who attended many seminars and cultural events is also a board member of Icomos and Turkish Historical Houses Association. She is still working at

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Sibel Onat Hattap. “Material Destruction in D’Aronco’s Works of Art.” American Journal of Engineering Research (AJER), vol. 6, no. 10, 2017, pp. 136–140.