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ADDING VALUE TO A COMPANY BY TRILOGY OF RESEARCH, CRAFT,
DESIGN

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ABSTRACT

Between the 14th and 17th centuries Nicaea, one of the most important cities during the Ottoman period, had a reputation with its tiles around the world. During the Ottoman Empire those tiles were produced with unique techniques and painted by craftsmen. In 17th century, as a result of stagnation period in Ottoman Empire, construction was paused and the need for tiles decreased (Atasoy & Raby, 1989). Consequently not receiving new orders made craftsmen move to other cities or close their workshops. Unfortunately the techniques for making those tiles kept as a secret by talented craftsmen, thus the techniques couldn't be used after they passed away.

In 1993, Iznik Training and Education Foundation was founded in Nicaea for discovering the secrets of craftsmen. As a result of many research and experiments the Foundation has discovered the secret of Nicaea tiles and has began to produce these tiles again (Dalli, 2010).

In this study, research on an old traditional craft and regenerating it with new design, whereupon its contribution to company will be handled. In this paper the Nicaea tiles, traditional techniques that were used for Nicaea tiles in early days and the new applications that are used by Iznik Training and Education Foundation will be studied in an historical perspective. The research was conducted by evaluating the findings that were gained from interviews, observation and photo shoots.

Keywords: research, craft, design, tiles, Nicaea

1 INTRODUCTION

In Nicaea, the art of tile making was an important craft especially for showing the level of technology and the Ottoman economic history in the 15th and 16th century. However, even those tiles were exported to China, -the country famous with its porcelain- that craft declined due to the reduced demand for major construction caused by the decline of Empire's borders in 17th century and not finding an ability to compete with low prices of similar tableware and ornaments that were imported from Europe. In the 18th century, Nicaea tiles almost lost its reputation, then tried to be produced in other places under the name of "Nicaea type production" (Atasoy & Raby, 1989).

Though Nicaea has an important place in tiles-making around the world until the 18th century, the production almost stopped and any atelier not found from this period to the end of the 20th century.

Since the second half of the 20th century, Nicaea tiles became a current issue which was achieved by various excavations and individual initiatives.

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2 NICAEEA TILES AS A REVITALIZED CRAFT

2.1 NICAEEA AS THE CENTER OF TILE MAKING

Nicaea, now called Iznik, was captured after the Battle of Manzikert and became the first Turkish capital city in Anatolia. The city gained importance as Ottoman land, developed to become a cultural centre and consolidated its cultural position with outstanding achievement in tile making and ceramics manufacturing after the 15th century (Altun and Arli, 2004).

Until the 18th century, the tiles used in architecture and home appliances, such as pots and pans, were named *kashi* and *evani*, respectively. The word "chini" is the name for Turkish kashi similar to Chinese porcelain in terms of quality (Kucukyilmazlar, 2006). Prior to the initiation of tile (chini) industry in Nicaea, the tile used in sanctuaries built in Bursa, Edirne, Istanbul, etc. were made by traveller tile makers in workshops that were set up next to construction sites (Journal of Turkish Ceramic Federation, 2008).

Professor Oktay Aslanapa (2004) performed excavations in Nicaea and, based on findings, proposed that the first Ottoman ceramics from mid-14th century onwards were made with monochromatic glaze in blue, green, dark or light brown and that they were decorated with convoluted branched Rumi motifs or stylized flowers rather than figures. In second-term Nicaea excavations, ceramics were found known as "Miletian," which is under-glazed, white undercoated ceramic made from red dough, decorated in colour and kilned with transparent lead glaze. The dominant colour in the ceramics is navy bluish dark cobalt blue, followed by turquoise, purple and green. Aslanapa (2004) proposes, towards mid-15th century, ceramics made from red dough were replaced by new ceramics made from white and hard dough with transparent, colourless, ultrathin, bright and clean glaze, decorated with Rumi, Hatai and stylized motifs in perspective view.

Nicaea became famous on tile making during the reign of Murat II, by the contribution of technological advances. The new technology was the substitution of kaolin-dense dough with quartz-dense dough to make hard and white dough. The change in material triggered a subsequent change in high temperature kiln drying. Soft porcelain ceramics with white-blue decorations replaced Chinese porcelain (Altun and Arli, 2004). The tiles of this period are classified as "early Ottoman period;" tiles made in mosaic or glazed dye technique were painted in navy blue, blue, turquoise, black and yellow. Rumi, kufic writing and plant motifs stylized in geometrical and spiral shapes were used in the tiles of the era. Rumi motifs, Chinese cloud, plant motifs, pistachio green, yellow, blue-turquoise, navy blue and brick red colours were used in the glazed dye technique during the transition period after the early Ottoman era (Kucukyilmazlar, 2006). The influence of the Far East, particularly Chinese Ming Dynasty, in late 15th century and early 16th century is reflected in the cloud, stylized dragon, peony, vine branch and chintemani motifs (Gundes et al. 2008).

In the first half of the 16th century, a darker navy blue and turquoise was added to the tiles decorated with blue and white on white background. Naturalist elements were adopted in decorations. In mid-16th century, spring branches in cobalt blue, manganese purple, cumin green, turquoise, contoured in black, were used on white undercoat. Shehzade Mehmet Mausoleum, the latest example of coloured glaze technique, was completed in 1548, followed by Suleymaniyeh Mosque, on which colour red was used. Richer patterns and colours

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were developed for Hurrem Sultan Mausoleum (Altun and Arli, 2004). A new era was ushered in for Ottoman tile making with puffy red. Mimar Sinan ("the Architect") was the most important figure in the new "Classic Era." The colour "puffy red" was the most prominent symbol of 16th century Ottoman tile making (Kucukyilmazlar, 2006). In the second half of the 16th century, tile makers adopted a brand new technique called "under glazing." Patterns drawn by miniaturists in the Palace in Istanbul were applied by Nicaea tile makers. Cobalt blue, turquoise, green and white in general with some brown, pink and grey were used for these motifs (Gundes et al. 2008).



Figure 1 –Visual characteristics of the tiles according to the historical periods (Atasoy & Raby, 1989).

The reason most tiles were manufactured in Nicaea is that famous architects like Architect Sinan preferred the quality of the Nicaea tiles, which were conveniently transported from Nicaea to Istanbul by sea. Tile making grew into a guild in Nicaea and until the end of the 17th century, bulk orders were received and overseen by "cinicibasi (chief tile (chini) maker)." When bulk orders came, tile making overweighed ceramics activity. There were over 300 workshops, which collaborated under the chief tile maker for tile orders. In Europe, which was yet to attain porcelain making, Nicaea ceramics made in these workshops were used for wall decorations and exclusive orders were placed to have family crests on the ceramics (Altun and Arli, 2004).

Travellers that visited the city in the 16th century point out in their travel books to a very busy ceramics industry (Lowry, 2004). Temelkuran et al. (1976) explain the writings of Evliya Celebi, a traveller who visited the city in the 17th and 18th centuries and mentioned a decline in production, by concluding that the 300 workshops during the reign of Sultan Ahmet (1603-1618) closed down due to financial difficulties and there were marble workshops of ceramics masters in nine locations. Temelkuran et al. (1976) further interpret the notes of Evliya Celebi and propose that marble bowls, plates and pitchers were valuable, all the painted marble in Ottoman lands came from Nicaea, which came to be known as "Cini Macin Rum," and magnificent works were accomplished with marble in Nicaea.

After 1736, travellers' notes do not include information concerning the tile making industry in Nicaea (Lowry, 2004). There was stagnation in the Nicaea art of tile making in early 17th century with deterioration in colour and pattern (Kucukyilmazlar, 2006). According to the findings from Nicaea excavations

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presided over by Professor Oktay Aslanapa, the reason for the disappearing of the puffy red, which is the most important element of Nicaea tile making and ceramics, is the depletion of mineral oxide resources (Altun and Arli, 2004).

The underlying reason for the stagnation and regression of Nicaea tile making is the period of stagnation in the Ottoman Empire. The state, worn down by wars, was struggling to cope with unrest abroad and at home and neglecting arts, and due to financial difficulties, cutting down on architecture and subsequent halt in Nicaea tile making industry, of which architecture was the broadest area of use, suffered paralleling problems (Kucukyilmazlar, 2006). As the Nicaea tile making drew to a close in the 17th century, the city of Kutahya assumed tile making, based on the "Nicaea" in form and pattern, and adopted different dough and glazing techniques (Altun and Arli, 2004). In 1716, tile making ended in Nicaea (Kucukyilmazlar, 2006).

Sultan Ahmet III and his grand vizier, Ibrahim Pasa, brought artists from Izmit to the workshop in Tekfur Sarayi (the Palace of the Porphyrogenitus) to make tiles similar to Nicaea; however, the venture lasted only 25 years (Gundes et al. 2008).

2.2 ENDEAVORS TO REVITALIZE NICAEAN TILE MAKING

Nicaea and Nicaea tiles constitute a special case for researchers of Ottoman and Western ceramics. Several attempts have been made to revitalize Nicaean art of tile making.

Excavations performed in Nicaea, now called Iznik, by a team presided over by Professor Oktay Aslanapa have made the greatest contribution to Nicaea tiles gaining currency. Nicaea has been brought forward by the First Tile Kilns Excavation in 1963 and 1964, later, the Second Nicaea Tile Kilns Excavations between 1981 and 1989, monitored by Professor Aslanapa, and a book of the findings have helped Nicaea to gain importance in Turkey and abroad (Altun ve Arli, 2004).

In 1980, Faik Kirimli went to Nicaea to set up a tile kiln, failed to obtain necessary permissions and moved on to Kutahya, the other tile maker city. In 1985, Esref Eroglu persuaded Faik Kirimli to return to Nicaea and they installed the first tile kiln; Rasih Kocamanoglu joined them the same year and tile making restarted in Nicaea (Alpman, 2009).

In September 1989, the Nicaea Tiles Exhibition at the Museum of Turkish Islamic Arts, organized with the help of Professor Isil Akbaygil, Manager of Istanbul University's Institute of Social Sciences, regenerated interest in Nicaea tiles. Following the exhibition, a book on Nicaea, prepared by Julian Raby and Nurhan Atasoy, became the most important work on the subject. In "Introduction," Professor Isil Akbaygil expresses that the aim of the exhibition is to assist lecturers and students in other disciplines than Archaeology and Art History and display their works. The inspiration to the exhibition was the tile kiln excavations in Nicaea. Directors of several museums around the world, especially the British Museum, sent items to the exhibition and encouraged private collectors to do the same, enriching the book to be prepared for the exhibition (Ozkan, 2001). The book was edited after the exhibition with contributions of Turkish Economy Bank (TEB) and attracted considerable interest as the book of Nicaea (Dalli, 2010). The Ministry of Culture declared the year 1989 as "the year of Nicaea" and brought Nicaea tile making to the forefront (Kucukyilmazlar, 2006).

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In 1993, Professor Isil Akbaygil founded Iznik Training and Education Foundation on the shore of Lake Nicaea; the Department of Tile Making and Ceramics was initiated within the Vocational School of Higher Education at Uludag University in 1995-1996, accelerating the tile making industry in Nicaea.

In order to provide for the increasing demand, Suleymanpasa Medresesi (Madrasah), built in 1360, was restored and transformed into a Tile Makers Market by the Municipality. Later, Nilufer Hatun Tiles and Ceramics Market was commissioned to support the industry (Alpman, 2009). Nicaea, a small town with no trace of the former glory of tile making and ceramics industry in early 20th century, had 30 workshops in 2005 (Arlı, 2005). There are currently some 100 active tile making workshops in Nicaea (M. Aydin, interview on May 28, 2010).

3 NEW TECHNIQUES AND DIFFERENT APPLICATION AREAS

3.1 IZNIK FOUNDATION

Prof. Dr. Isil Akbaygil and Akin Akbaygil, who pioneered the Nicaea Exhibition that held in 1989, carried out many important studies. They founded "Iznik Training and Education Foundation" in 1993 with the aim of reviving Nicaea art. Having spent years of research and countless experiments the Foundation successfully discovered the secret of "quartz tiles" and started producing with the ancient traditional methods.

Iznik Foundation has managed to attain this major achievement through the unsparing efforts of the 45-member team of the "Ceramic Research Centre" and the "Tiles and Ceramic Corporation" along with the efforts enlisted by Istanbul University, Mimar Sinan University and TÜBİTAK (Technological Research Council of Turkey), Princeton University, USA. In 1993 Iznik Foundation was established together with its production company; Iznik Tiles and Ceramics Corporation (Kucukyilmazlar, 2006). Though its main office and showroom are in Istanbul, the workshops, production and research are still going on in Nicaea. Also the design department is located in Istanbul and the R&D department in Nicaea.

The foundation consists of three units: Iznik Training and Education Foundation, Istanbul; Iznik Ceramic Research Centre, Nicaea; and Iznik Tiles and Ceramic Corporation, Istanbul and Nicaea.

Foundation produces coating material that is used for inner and outer surfaces of buildings and plates, vases, lamps and etc. that are called as "evani" and applies traditional and contemporary designs to tiles as well. Wall covering could be in three different types; straight coloured, painted (traditional or modern) and miniatures.

3.2 NEW APPLICATIONS OF THE TRADITIONAL CRAFT OF TILE MAKING

Tiles were elements frequently used in Ottoman architecture, particularly in mosques. Nicaea tiles can absorb sound, distribute sound waves homogeneously thanks to the reflective quality of the glaze, help with heat insulation and contribute to the carrier systems in buildings with their weight (Journal of Turkish Ceramic Federation, 2008); so, the tiles are currently used in hotels, business centres, mosques and schools. The tiles manufactured at Iznik Foundation are put to use by Turkish and foreign architects throughout the world. Iznik Foundation carried out architectural projects such as bathhouses,

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mosques, hotels, monuments in the Middle East, Russia, Japan and Canada; Ann Sacks is the only distributor of the company to the US and Canada.

The Foundation accepts private online orders and the design team creates unique private collections, murals or architectural projects according to customer demands (Iznik Foundation, 2013).



Figure 2 –Panel board design for Hermes (Hocaoglu archive, 2010).

Some of the spaces the Foundation worked on are: a courtyard and audience area at Dubai BurJuman Shopping Centre (EKA Design Consultants/England), Dubai Techno Park at Zabeel Park, and Dubai-Istanbul Sister Cities Monument. The Foundation also manufactured the tiles used in Peace Park in Montreal, Canada (Architect Ahmet Gulgonen), Monument of Friendship and Meditation Centre in Tokyo (Architect Han Tumertekin) (Figure 3), Sheikh Zayed Mosque in Abu Dhabi, Hariri Mosque in Lebanon (Architect Azmi Fakhouri) and subway stations in Istanbul. The reason tiles were used in the Meditation Centre in public space in Tokyo is that silica in the tiles is compatible with human bone structure and has tranquillizing qualities (Guner, 2008).



Figure 3 –Tokyo Monument of Friendship, (Iznik Foundation, 2014).

Each tile piece is examined in the labs of the Iznik Foundation along with colour analyses. The Foundation is supported by the Turkish Scientific and Technical Researches Institution (TUBITAK) and works towards standardizing the Nicaea tiles. Local residents have come to take interest in the Foundation's operations and the studies to uncover the mysteries of Nicaea tiles and started opening tile making workshops. However, very few tile makers put handiwork into tile making and the general trend in these workshops is painting Nicaea patterns on raw material of Kutahya. Here, quartz, the basic element of Nicaea tiles, gains importance; the Iznik Foundation tiles contain 85 per cent quartz (Dalli, 2010).

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The most important examples of Iznik Foundation's work are in Istanbul subway stations. After producing the tiles of subway entrances' of Istanbul, Ankara and Bursa, the Foundation prepared the tiles of Marmaray (underwater tunnel). The Foundation generally works with foreign designers for these projects and the concept is selected by the Municipality. According to the concept, designers prepare alternatives and the selected design is applied to the tiles (Gunes, 2010). Since the foundation produces tiles for the large-scale architectural projects or for the works built by the foreign royal families, the price scale addresses to the A+ customers. Pricing varies according to the uniqueness of the pattern and to the meter square size of facades.

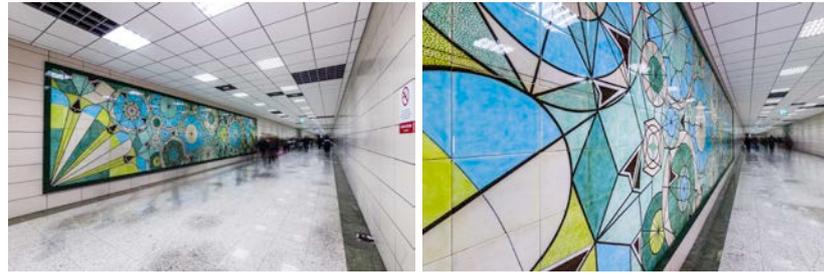


Figure 4 - Tiles of Marmaray (Iznik Foundation Archive, 2014).

In addition to large-scale projects of the Foundation, it is possible to see tile patterns in modern accessories. So, in 2011, designer Vidal Erkohen in collaboration with the Iznik Foundation, have prepared seven different models for RVS company. The company, which engaged in hand-made glasses, supplies its limited collection to only the most exclusive boutiques worldwide (Eyewear glasses, 2011).



Figure 5 -Eyeglasses, RVS by V Iznik collection (Eyewear glasses, 2011).

In 2005, the Foundation was awarded by the "YEM (Yapi Endustri Merkezi) 2005 Golden Plummet Prize," and in 2007, it sponsored for the 3rd time the Skal International Ecotourism Awards. The Foundation has organized 17 exhibitions since 1989. The most important of these exhibitions was the one opened at the Hagia Sophia Museum in 2005, following the workshop titled "From 16th Century Nicaea Tiles to the Designers, Artists of the 16th Century, FOR TILES: Infinite Repetition as a Surface Problem," which was organized as part of UIA World Congress of Architecture. 16 Turkish and foreign designers, including Zaha Hadid, and Ettore Sottsass, attended the exhibition and reinterpreted tile making (Figure 6).

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Figure 6 –Tiles designed by Zaha Hadid (left) and Ettore Sottsass (right) for "For Tiles (Cini İcin)" Exhibition (Hocaoglu archive, 2010).

The Iznik Foundation organizes various events -such as International Viola Camp- to promote Nicaea and Nicaea tile making. 40 per cent of participants of the International Viola Camp are foreign with BA or MA degrees and are going to be accommodated at the guesthouse of the Foundation. The camp program includes studies with teachers, meetings and a final concert. Participants work on tiles and get to know the Nicaea tile making (Ersan, 2010). The Foundation also allows foreign tile makers to use its facilities in Nicaea.

Considering that Iznik Training and Education Foundation was founded in 1993, started manufacturing in 1995 and Isil Akbaygil took the lead in organizing the Nicaea Exhibition in 1989, Iznik Foundation contributed to bringing tile making back on the agenda and opening workshops to keep the tile making heritage alive. The Foundation's endeavours to find the formula for the Nicaea tiles made in the Ottoman era and to standardize Nicaea tile making are going to help uphold the former quality of Nicaea tiles and distinguish them from other works, particularly the Kutahya tiles. The Foundation provides internships for the students of the vocational high school and the school of higher education, employment when students graduate and help the trained personnel sustain Nicaea tile making. Iznik Foundation organizes national and international events on tile making and other subjects and contributes greatly to the promotion of Nicaea and Nicaea tiles.

4 CONCLUSION

Nicaea Tile Kiln Excavations, managed by Professor Oktay Aslanapa, publications based on the findings, and the declaration of 1989 as the Year of Nicaea by the Ministry of Culture were very important for the reawakening of Nicaea tile making. After the initial steps, the inauguration of Iznik Foundation in 1993 and the following tile making workshops pioneered the recommencement of Nicaea tile making after 400 years. Iznik Foundation, by participating in fairs, opening exhibitions and conducting joint projects with research centres in Turkey and abroad, commissioning foreign and Turkish designers to design, contributed to the branding of Nicaea in tile making. The company's mission statement is "preserving one of the rarest forms of design heritage and creating new designs; Iznik Foundation revives the traditional designs while creating contemporary designs at the same time". The R&D and design are both vital elements for the company, as the founder of the company declared "first you have to figure out how to produce the materials, how to produce the colours, how to glaze them and how to bring the whole process together and you can think about design". If we date back to the establishment of the company, at the beginning the main purpose was finding the techniques of a lost craft, but now after solving that mystery their new challenge was using this technique in new products and

becoming a brand. Rise in the number of tile making workshops in Nicaea after 1995 and the expansion of tiles from the walls of mosque and mausoleum walls to monuments in public spaces, walls of subway stations, wall panels in commercial stores and accessories has been thanks to the revitalization of a traditional craft and reinterpretation of the craft through design.

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