EUROLITHOS European Ornamental Stone Resources

Eurolithos case study

The Pučišća Stonemason School

Building entrance of the Pučišća Stone-mason's school, island of Brač, Croatia

Thematic focus: Stone and intangible heritage (crafts)

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LIST OF FIGURES:

Cover photo: Building entrance of the Pučišća Stone-mason's school, island of Brač, Croatia

Figure 1 Rosette and decorative elements made in the Pučišća Stone-mason's school, island of Brač, Croatia 7

Figure 2 Rosette and fountains made in the Pučišća Stone-mason's school, island of Brač, Croatia 8

Figure 3 In the Stonemason school students learn antique,"Roman" way of stone carving 10

Figure 4 Awards exhibited in the atrium Stone-mason's school in Pučišća 11

Figure 5 Outdoor spaces, also built in stone, form unity with the houses 12

Executive summary

The Stone-mason's school in town Pučišća, on the northern part of Island of Brač, successfully continues tradition of precious procession of stone, somewhat backward as regards to advanced technology. It recently celebrated the 100th anniversary of work whilst in the school workshop, apprentices' young hand is making real masterpieces in stone. The school is known for using ancient Roman hand tools in stone dressing, is receiving an increasing number of queries from foreign countries for student enrolment. Stone has played a major part of this small town's economy and has been a major part of its self-image. The quarries are situated to the east of the town and some of them date back to the Roman times and the school is the only place in Croatia and EU where one can obtain a professional qualification in stonemasonry.

The tools used are made of wrought iron and are designed for the rough and fine dressing of medium-hard limestone available in the island of Brač, quarries, which was used in building such landmarks in Croatia and around the world.

In this study case we will present the Stone-mason's school in Pučišća as example of the interaction between stone resources and humans has produced a rich and diversified in material heritage, namely crafts and skills.

Keywords: stone, Stone-mason's school, Brač

Table of Contents

Description of case study 6
Stonemason's school in Pučišća 6
Stonemason's school on Brač; a surviving guardian of a millennial tradition 6
Chronology of the development of the stonemason school in Pučišća 8
Beginnings - 1906. 8
School of students in economics - 1947. 9
Industrial stonemasonry school - 1956. 9
Construction of a school building - 1958. 9
Stonemason's school today 10
Exhibitions - 1994. 11
Awards - 2003. 11
Presentation of the stone tradition to the public - views and possibilities 12
Case study discussion 13
Case study conclusions 14
References 15
Web sites: 15

Description of case study

The starting point of this paper is to present the development of stone masonry on the islands Brač. Emphasis is placed on historical continuity from antiquity to the present, presented through social, economic and sociological aspects. This paper describes the situation of the stone-carving tradition today and its survival through the education of new stone-carvers, the modernization of processing technology and its impact on the quality of the final product. Finally, an overview of the distribution of stone from islands Brač is presented today and the possibility of presenting this noble craft in order to preserve its thousands years-old continuity.

Stonemason's school in Pučišća

On Brač, the education of stonemasons developed in a similar way as elsewhere, where the stonemasonry craft was initially transferred from the master to his students, journeymen. The first courses for stonemasons on the island of Brač were organized in 1906 in Pučišća and Selce, in cooperation with the School of Crafts in Split. The course could not meet the expectations of the profession and the market, so in 1909 in Pučišća was founded "School of training for apprentices in Pučišća".

After the Second World War, as already mentioned, due to the revival of stonemasonry, there is a need for the highest quality staff, so there is a transformation of the educational system for stonemasons. The school changed its name to "School for Business Workers", and was organized as a three-year evening school. Simultaneously, the company "Brač" was founded, which on two occasions changed its name to "Adriatic Stone and Marble Industry" and finally, the name that will be permanently retained, "Jadrankamen".

The Brač stone industry soon developed into the strongest stone industry in Yugoslavia, which resulted in the founding of the "Industrial Stonemasonry School" in 1956, which three years after its founding received its own building, built next to the renovated Kraljević House, which housed an art house. In 1963, he united with the school. Until 1991, the school operated within the Construction School Center Ćiro Gamulin, when it finally became independent and changed its name to " Stonemason's school", which has not changed to this day. This is also the only stonemason's school that has managed to survive to this day. Along with it and the one from Korčula, there was a stonemason's school in Selce and Pazin.

Stonemason's school on Brač; a surviving guardian of a millennial tradition

In 1991, the stonemason school in Pučišća became an independent school institution with three professional specializations: stonemason technician, stonemason and surface miner. On average, about 100 students enroll in the school, who mostly opt for a stonemason technician and stonemason. For a long time, the school has been cooperating well with the company "Jadrankamen", from which it provides stone blocks for teaching. In addition to the much-needed materials for conducting practical classes, this company offered the students of the school a summer internship in their facilities, so that the students could get acquainted with the stone machining. This collaboration has continued through the organization of a symposium on stone picking, processing, installation and restoration, and has been held for 28 years. In parallel with the symposium, the publication of the journal "Stonemasonry and Construction" as a platform

for interdisciplinary study of construction and the use of architectural stone began. Despite great efforts to attract as many students as possible to the school, the trend is such that from year to year fewer students decide to enroll in the stonemasonry trade. The cause is the general situation in the country and the crisis of vocational education. An increasing number of students enroll in high schools, after which they go to college and to a large extent enroll in occupations that do not require much physical effort, and ultimately bring big profits. This entails the problem of working conditions in vocational occupations and the amount of compensation for their work. This trend results in the fact that today's generations do not enroll in occupations for which they have affinities and talents, but those that are profitable and with which they achieve greater material security.

The stonemason school in Pučišća is a good example of a well-organized vocational school that encourages its students in the direction of entrepreneurship, and through subjects, in addition to technical knowledge, they are taught how to manage a small business. The school enjoys a great reputation among domestic and European vocational schools, so in addition to a large number of students from all over Croatia, foreign students are also enrolled in the school.

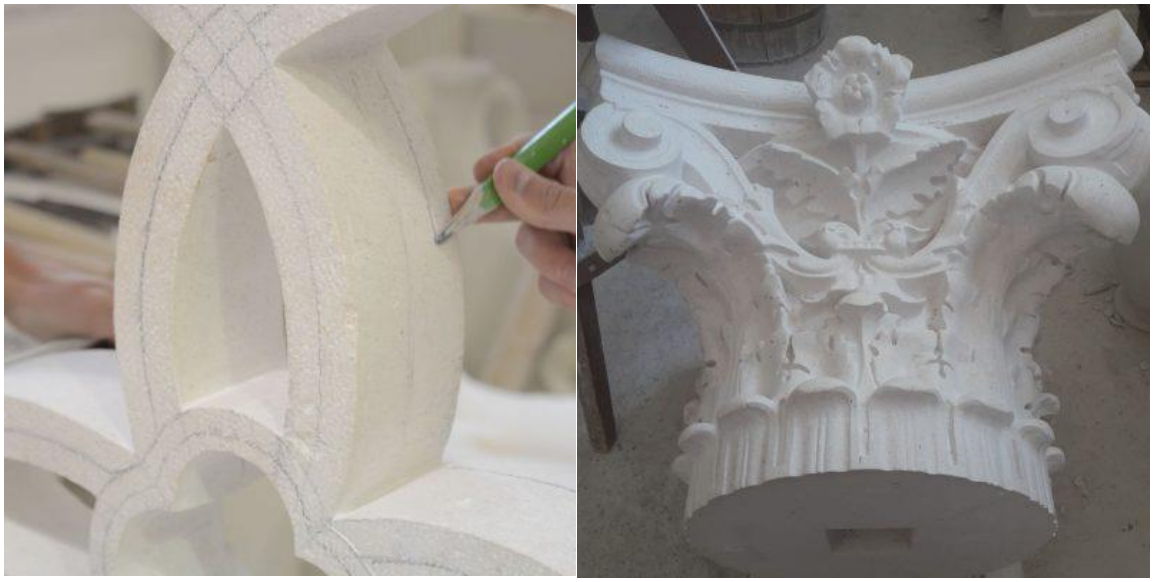

Figure 1 Rosette and decorative elements made in the Pučišća Stone-mason's school, island of Brač, Croatia

The school participates in numerous EU projects, such as the STONE / STONE project, which in cooperation with BiH seeks to encourage and promote entrepreneurship in the sector of stone exploitation and processing. There are also SAFEQU projects, which encourage safety in work in quarries, then the STONEPLACING project, which encourages the education of stone fitters. Numerous associations from European countries participate in these projects. The cooperation that the school has with other European schools should also be pointed out. Through the BRABOURG project, cooperation between Croatian and French schools in the study of medieval heritage is achieved, and through the EARN project, cooperation is established with Slovenian and Italian schools to improve practical teaching in vocational schools. Traditional stone processing is the foundation of the school's education program, however, due to market demand for jobs looking for workers trained to work on modern machines, the school has not deprived students of that part either. For the needs of educating students to work on modern machines, work is underway to expand the space capacity of the school. The stonemason's school in Pučišća has become an integral part of the tourist promotion of the island of Brač. It serves as an example to all other vocational

schools in the country, pointing out the importance of preserving vocational knowledge, especially that knowledge that is slowly falling into oblivion due to the growing primacy of modern technologies.

The activities in which the school participates or is their originator greatly help to develop awareness of the protection of cultural heritage, especially the architectural one, which has been preserved to this day precisely because of the durability and strength of the stone. The heritage that ennobles our environment needs to be nurtured, but it also needs to be re-created, because man was created to create. Creation encourages the progress of civilization, so it is vital that a school like this be preserved and that awareness be developed in future generations about the beauty of vocational occupations and the achievements they bring with them.

Figure 2 Rosette and fountains made in the Pučišća Stone-mason's school, island of Brač, Croatia

The stonemason school in Pučišća is an example of how the millennial tradition, love and devotion to the craft from which and for which Brač has lived for centuries, can, despite all the negative trends in demography, vocational education and awareness of cultural heritage, be preserved as a cultural treasure to this day. The continuity of stonemasonry that has been preserved on Brač indicates the power of the human will and is an example and encouragement to other stonemason communities that have neglected the heritage of their region and neglected this valuable craft.

Chronology of the development of the stonemason school in Pučišća

Beginnings - 1906.

On the islands of Brač, Hvar and Korčula there are rich layers of white-yellowish limestone, so nature itself has favored the development of stonemasonry, especially on the island of Brač. With the development of stonemasonry, there is a need for organized education of stonemasons, so since 1906, in cooperation with the Crafts School in Split, in Pučišća and Selce, courses in stonemasonry are organized and exams for stonemasons are taken. At the beginning of 1909, the "School for training in stonemasonry" was founded

under the direction of Emil Ruml, a stonemason from the Czech lands. Ruml took over the directorate of the newly opened school, which in its work adhered to the curriculum prescribed by the Ministry of Public Works for all craft schools of the Monarchy.

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School of students in economics - 1947.

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After the Second World War, stonemasonry on Brač revived and became the strongest economic branch on the island. The existing island plants and quarries formed the company "Brač" in 1947, which later changed its name to "Adriatic Stone and Marble Industry", or "Jadrankamen", based in Split. The first generation in Pučišća learned the stonemason's craft in 1946. The school is named "School of Economics" and operates as a three-year evening school. Namely, the students worked for 6 hours in "Jadrankamen", and in the evening they went to school. Theoretical classes were held in the building of the Elementary School.

Industrial stonemasonry school - 1956.

In the mid-fifties, the idea of organizing a unique central three-year stonemason's school based in Pučišća was launched. Pučišća was chosen due to the tradition of stonemasonry and the fact that in the immediate vicinity of the school was the largest and most developed stonemasonry industry in the country. In 1956, the "Industrial Stonemasonry School" was founded in Pučišća, along with which a student dormitory was founded, at that time with the name "Ivan Rendić". In 1957, the academic sculptor Ante Kostović was elected director of the new school, and in 1965 he was succeeded by professor Jasna Kuzmanić Orlandini, who had worked at the school since 1953 as a teacher of the Croatian language. She worked at the Masonry School until her retirement on June 30, 1989.

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Construction of a school building - 1958.

The Kraljević house in Pučišća was purchased for the purpose of solving the spatial conditions.

Due to the increased interest in enrollment, it was decided to convert the entire Kraljević house into a dormitory, and the project of the school building changed and the present school building was built, which was completed in the school year 1958/59. In the same year, the school changed its name to "Stonemasonry school with practical training, Pučišća". The curriculum was adjusted and summer practice was introduced. In 1980, in the system of vocational education, the reform of vocational education was reflected in the "Industrial School of Stonemasonry". At that time, large school centers were created, so this school, together with the gymnasium "Ćiro Gamulin" and the "Male Student Dormitory" from Split, in 1980 merged into the "Construction School Center Ćiro Gamulin". It became a mixed school with the first two classes of general orientation in which the students had stonemasonry classes only in the form of elective classes. One floor of the dormitory was intended for male students and the other for female students. After the first two grades, students decided to change schools or continue their education at the Stone-mason's school, where they were offered two programs: a one-year in the mining direction of education for a worker

in stone exploitation, and a two-year in the direction of a stonemason. After the first two grades, the students decided to change schools or to continue their education at the Stone-mason's school, where they were offered two programs ...

Stonemason's school today

With the entry in the court register on 18 February 1991, the school in Pučišća again became an independent school institution with the name "Klesarska škola".

Changes in the school system in secondary schools in 1991 re-emphasized the importance of professional content. In the new program, there has been an increase in the number of professional subjects, especially practical classes. The training of stonemasons was divided into three areas: stonemasonry technician, stonemason and surface miner. Stonemasonry technicians attend classes for four years, and after the final exam they can continue their education at colleges (construction, architecture, mining, art academy, etc.). The training of stonemasons lasts three years, and after three years of practice there is the possibility of taking a master's exam. Training for a surface miner also lasts three years. Today, up to 100 students a year are enrolled in the Stone-mason's school. Half of that number is enrolled in stonemasonry technicians, and the other half in stonemasonry. On average, about a quarter of students come from Pučišća, a quarter from other Brač places, while the rest of the students come from all over Croatia. In recent years, in the gender structure of enrolled students, female students have also begun to appear in this traditionally male occupation.

Figure 3 In the Stonemason school students learn antique,"Roman" way of stone carving

In the performance programs of practical classes, hand processing based on the old Roman school of carving with classical hand tools prevails. Classes are held in our own, well-equipped workshop. Teachers of stonemasonry are excellent masters, skilled in performing various stonemasonry works. One teacher follows a group of up to 10 students, and classes are completely individualized. The stonemason's school cooperates excellently with the company "Jadrankamen d.d.", from which it receives stone blocks for practical classes in its own workshop. Also, during the summer internship in modernly equipped plants of this company, students have the opportunity to get acquainted with the most modern technology for stone machining. Symposia on picking, processing and installation of stone were realized continuously with the

company Jadrankamen as the main sponsor and co-organizer of the meetings. The company has always provided great assistance to the school either in organizing its solo exhibitions.

The school also cooperates with several well-equipped craft workshops in Pučišća, in which students enrolled in a craft specialization successfully complete their professional practice.

Exhibitions - 1994.

In 1994, the first solo exhibition of student works outside Brač was organized in the exhibition hall "Izidor Kršnjavi" of the School of Applied Arts and Design in Zagreb. In the same year, the Stone-mason's school made a notable appearance at the Zagreb Fair, where it represented the craft schools of the Republic of Croatia. Since that year, he has been performing regularly at the Fair in cooperation with the company "Jadrankamen".

Awards - 2003.

In 2003, the Stone-mason's school was proposed by the Office for Education, Culture, Sports, Information and Technical Culture of the Split-Dalmatia County as the "best school" in the Republic of Croatia.

Figure 4 Awards exhibited in the atrium Stone-mason's school in Pučišća

At a special ceremony at the Croatian National Theater in Zagreb, the school received the "Minister's Award". The Stone-mason's school also contributes to the promotion of Croatia with its tourist offer. Throughout the tourist season, the school, and especially its workshop, are open for sightseeing by student excursions and to all interested guests from the country and abroad. This activity of the school was recognized and welcomed by tourist organizations, and the Croatian National Tourist Board at a solemn session on June 30, 2005 awarded the School of Stonemasonry a poster of the Croatian Tourist Board "Anton Štifanić" for 2004 for "exceptional contribution to tourism in Croatia." During 2008, the workshop of the Stone-mason's school was visited by more than 9000 visitors. Due to the great interest, the school prospectus was printed in Croatian, English, German, French, Italian and Czech, which is distributed to school visitors.

Presentation of the stone tradition to the public - views and possibilities

The continuity of the stonemasonry tradition on the island of Brač, which has been partially preserved on the island of Korčula, indicates the development of awareness of this island environment for its preservation. The strategy of presenting stonemasonry to the public is implemented through the activities of the Stone-mason's school, which, in addition to students from Brač and the surrounding islands and cities, also educates students who come for exchange from European Union countries. Apart from education, the presentation of stonemasonry through museum collections is also important, such as the stonemasonry collection in the Museum of the Island of Brač in Škrip. The stonemason's school itself served the people of Brač as a kind of gallery open to visitors. In addition, as already mentioned, the school is active in various projects whose purpose is to promote stonemasonry, but also to achieve cooperation with stonemasons, stoneworkers and distributors.

Figure 5 Outdoor spaces, also built in stone, form unity with the houses

The activity of the people of Brač in the promotion of this tradition is also evidenced by the proposal to protect the Brač stone with a geographical indication, which was accepted by the European Parliament at the end of 2015. Participation in international stone fairs also contributes to the promotion, and a good example of such a fair is the one held every year in Verona, Marmomacc. Also, stone "waste" could be used for nobler purposes, so that, in addition to popular souvenirs in stone, some other useful objects could be made from it, which would ultimately reduce the harmful impact of exploitation fields on the environment. One good example of revitalizing stone "waste" is the project "Port of Mosaic", the association of Fine Arts of Vela Luka, which is a kind of homage to the landscape and the centuries-old coexistence of the

inhabitants with stone. Through this project, more than 200 meters of mosaic promenade made of thousands of pebbles, used stone "waste", which was once used in this landscape for the construction of dry stone walls, and today for the improvement of public space.These positive examples of the promotion of stone and stonemasonry are an indicator of how the will, idea and feeling for craft occupations can open more ways of development of one environment. The initiators of everything are certainly people who know stone matter and share knowledge, and people who are willing to receive and preserve that knowledge. The education of new generations of stonemasons is vital for the development of this craft. In addition to education, there are certainly adjustments to the labor market and the improvement of working conditions that would attract people to engage in a particular occupation. The crisis of craft occupations is an indicator of the alienation of the population from tradition. Subordination to service activities, which is currently imposed on us by the most developed branch of the economy, tourism, puts in the background achievements, knowledge and, above all, awareness of their value. The awareness of the value of preserving stonemasonry, investing in its sustainability and encouraging creation in stone.

In recent years, European funds have been actively drawn for the development of the economy, the renovation of residential buildings and cultural institutions, and for a general increase in people's living standards. It has been recognized that funds can be drawn from this source to encourage the development of traditional crafts. Although any support, including this one, can play a major development role, perhaps a better future lies in adapting the market to crafts that would base their production on traditional knowledge and ways of working. The valorisation of people who work diligently and breathe the character of the stone with their hands is a perspective and an opportunity for such a refined environment, apart from handicrafts, to produce talented individuals from time to time who will breathe artistic value into objects.

Case study discussion

The tradition of stonemasonry on the islands of Brač originated from the need of the inhabitants of the sparse region to tame the landscape and from the most logical and most fruitful raw material to develop an economic branch that will feed the population of these two areas for centuries. The active exploitation of stone on Brač came with the arrival of the Romans, who needed quality stone for the construction of their palaces, country villas and aqueducts.

In the quarries in the vicinity of Škrip on the island of Brač, you can still recognize the activities of slaves and tool prints in the coffee shops that are dormant today. Numerous sarcophagi and stone sculptures testify to the persistence of stonemasonry workshops both on Brač and in Salona, where the stone was delivered by ship. With the strengthening of the new religion, Christianity, which denies all ancient monuments, the activity in these quarries subsides, and the divine Hercules and his protection of hard work in the quarries are forgotten. Now the ancient monuments are becoming a kind of quarry because their stone material was used to build new sacral buildings.

In the Middle Ages, stone exploitation and construction activity were reactivated. The tools used in stonemasonry and stonemasonry have not changed much and have been used in parallel with the advent of gunpowder. Some of the tools became lighter for easier work that was no longer done by slaves but by workers. The culmination of the stonemasonry tradition of Brač took place in the Renaissance and Baroque period, when many Brač stonemason families breathe in the stone measured and unpretentious spirit, elaborate ornaments in the spirit of styles, which, without excessive ornaments, adapted to the stone units

of our coastal towns. These families faithfully preserved and passed on knowledge to future generations of stonemasons who, even after standing, built monuments of our culture.

The continuity of the development of stonemasonry has left its mark on the rich stonemason's vocabulary. In addition to the surviving traditional stone processing techniques, numerous names of Roman origin have been preserved for a large number of tools that were used both in the quarry and in the stonemason's workshops. In addition to the names of Roman origin, many names have been modified from Italian and later from Venetian stonemasonry terminology, which is the result of geopolitical changes in this area.

With the development of Enlightenment thought, the stonemasonry craft began to be studied in craft schools, of which the only surviving one today is in Pučišća. Today, this school studies stonemasons from all over the country, whose stonemasonry tradition has been dormant since the second half of the 20th century.

Intense demand for stone construction in Dalmatian cities limited the development of artistic expression. The clients of the work at that time did not support art for the sake of art. Freed from craft narrowness, several sculptors from Brač marked the development and sculpture of the 19th and 20th centuries. Ivan Rendić and Branislav Dešković, and many others, approached the great European artistic currents. The craftsmanlike respect for stone and the skill that has been studied for centuries in these environments has encouraged artistic creation that strives not for monumentality but for purity of expression.

The exploitation of stone on Brač has intensified, the Brač stonemasonry tradition, adapted to the modern market, today intensively exploits non-renewable stocks of stone, thus leaving wounds in the landscape. However, in order to survive and respond to the demands of the accelerating market, it is forced to adapt.

Valorization and investment in stonemasonry is vital for its preservation. Education has a great role in the promotion of stonemasonry, through which new generations should be encouraged to practice this craft, but also which has a great responsibility in recognizing and developing innate talents that have never been lacking in this area.

Finally, responsible behavior towards the environment, which has supplied bread to the people of our region for centuries, should be encouraged, and therefore the negative impact of exploitation fields on the environment, which should not be sacrificed for the needs of a greedy market, should be reduced. Valorization and investment in stonemasonry is vital for its preservation. Education has a great role in the promotion of stonemasonry, through which new generations should be encouraged to practice this craft, but also which has a great responsibility in recognizing and developing innate talents that have never been lacking in this area.

Finally, responsible behavior towards the environment, which has supplied bread to the people of our region for centuries, should be encouraged, and therefore the negative impact of exploitation fields on the environment, which should not be sacrificed for the needs of a greedy market, should be reduced.

Case study conclusions

The Stone-mason's school in Pučišća is the only one in the Republic of Croatia that educates stonemasons and stonemasonry technicians and is known in Europe and the world. The art of stone processing that is taught and nurtured in our country has been declared a protected intangible asset of the Republic of Croatia. The school currently participates in 4 EU Erasmus + projects and has 1 project with the United Kingdom. The school is also attended by students from other EU countries and countries from Europe that

are not yet members of the EU. The school is a tourist attraction visited annually by 12,000 to 15,000 tourists, mostly foreigners. The school has a dormitory next to the school building. The school publishes the magazine **Klesarstvo i graditeljstvo**, which was also published on Hrčak (https://hrcak.srce.hr/), the only one of its kind in the Republic of Croatia. Since the first exhibition, organized in the restaurant of the school's student dormitory on the occasion of its opening in 1958, numerous notable exhibitions of student works have been organized in Croatia and throughout Europe. Some of the most notable are the exhibition at the Croatian Pastoral Center in Paris in 1995, the fair in Verona in 1998, the fair in Numberg in 1999, the largest trade fair in Europe "MunchenHandwerke" in 2001, the fair SASSO in Split 2012 2019 and many others. The school organizes an international symposium on quarrying, processing and installation of stone, which is held as a biennial, with the participation of relevant economic entities, faculties and institutions related to the stone sector from Croatia, the EU and the world. The school established the "Tripun Bokanić" award, which is given to architects, restorers, builders, and designers in stone for exceptional contributions to stone achievements. Our eminent and most famous architects and master stonemasons are on the commission. The school organizes summer workshops for stonemasons and sculptors from the Republic of Croatia and the EU. In the summer, students who want to do this work as guides and demonstrators in the workshop of the Stone-mason's school. The diploma of the Stone-mason's school is recognized all over the world.

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