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Konzervatorsko-restauratorski zahvati na ciboriju iz Sv. Marte u Bijaćima

Autor donosi prikaz konzervatorsko-restauratorskog zahvata na četverostranom ciboriju iz Sv. Marte u Bijaćima. Zahvat je izveden zbog dotrajalosti stare rekonstrukcije te radi dopunjavanja ciborija jednim recentno otkupljenim ulomkom i s nekoliko naknadno identificiranih originalnih ulomaka. Tekst opisuje konzervatorsko-restauratorski zahvat od uklanjanja stare rekonstrukcije, konsolidacije kamenog materijala i zamjene stare potkonstrukcije novom do ugradnje novootkrivenih ulomaka iz muzejskog lapidarija. Posebnost ovog zahvata jest konzervativni pristup restauraciji košare ciborija pri kojem je gotovo u potpunosti sačuvan izvorni izgled prve rekonstrukcije iz 1936. godine.

Ključne riječi: *konzervacija, restauracija, ciborij, Sv. Marta, Bijaći.*

Conservation and restoration interventions on the ciborium from St. Martha's Church at Bijaći

The present article describes the process of the conservation and restoration treatment of the four-sided ciborium from the Church of St. Martha in Bijaći. The intervention was undertaken in response to the deterioration of the earlier reconstruction and the need to incorporate a recently acquired as well as several subsequently identified original fragments into the ciborium. The text outlines the full course of the conservation-restoration process, i.e. from the removal of the former reconstruction and the consolidation of the stone material, through the replacement of the original substructure with a new one, to the incorporation of newly identified fragments from the Museum's lapidarium. A distinctive feature of this intervention is the conservative approach adopted for the restoration of the arched panels forming the canopy of the ciborium, whereby the appearance established in the first reconstruction of 1936 was preserved to the greatest possible extent.

Keywords: *conservation, restoration, ciborium, St. Martha, Bijaći.*

Konzervatorsko-restauratorski zahvati izvedeni na ciboriju iz Sv. Marte u Bijaćima, prikazani u ovom tekstu, potaknuti su prijedlogom tadašnjeg ravnatelja Muzeja hrvatskih arheoloških spomenika A. Miloševića i muzejske savjetnice V. Delonga. Postojala su dva osnovna razloga za taj zahvat. Prvi je svakako neprimjerenost i dotrajalost starije rekonstrukcije, a drugi je pronalazak originalnih ulomaka dekorativnih kuka s vijenca košare, koje je u muzejskom lapidariju prepoznao Ante Milošević.[1]

Prva rekonstrukcija ciborija izvedena je u Arheološkom muzeju u Splitu 1936. godine, a jedan njegov dio djelomično je upotpunjen 1994./1995. godine u Muzeju hrvatskih arheoloških spomenika.[2]

Delonga donosi podatak da su ulomci ciborija pronađeni u razdoblju od 1902. do 1905. godine te da je najveći broj ulomaka otkriven na mjestu barokne crkvice iz 17. stoljeća. Upravo je to prostor nekadašnje ranokršćanske i predromaničke krstionice.

Bijaći su lokalitet koji je ime dobio po Velom i Malom Bijaću, a smješteni su na zapadnoj strani Kaštelanskog polja, na području nekadašnjeg naselja Sikuli.

Nakon pada Salone početkom 7. stoljeća ovo područje naseljavaju Hrvati, a od 9. do kraja 11. stoljeća bilo je jedno od glavnih središta ranosrednjovjekovne hrvatske države.

Crkva sv. Marte spominje se u dvjema najstarijim hrvatskim ispravama iz 9. stoljeća. U prvoj knez Trpimir 852. godine potvrđuje Splitskoj nadbiskupiji posjede i crkvu sv. Jurja u Putalju, koju je na padinama Kozjaka iznad Kaštel Sućurca sagradio knez Mislav. U drugoj ispravi Muncimir, Trpimirov sin, 28. rujna 892. presuđuje spor oko tih posjeda, a taj dokument sastavljen je u Bijaćima pred vratima crkve sv. Marte.

Osim navedenog prvog istraživanja, između 1967. i 1970. godine provedeno je i drugo istraživanje.[3] Ta su istraživanja pokazala da se na lokalitetu može pratiti kontinuitet života od rimskog vremena do baroka.

P. Vežić postavlja pitanje o kojem je razmišljala i V. Delonga, a odnosi se na namjenu ciborija. Delonga drži da je izvorno zamišljen kao krstionički ciborij, dok Vežić smatra da je ipak riječ o oltarnom ciboriju, ali iz svetišta starije građevine.[4]

1 Delonga 1999, str. 291, bilj. 9.
2 Delonga 1999, str. 291.
3 Jelovina, Vrsalović 1968, str. 173.
4 Vežić 1999, str. 320.

The conservation and restoration works carried out on the ciborium of St. Martha's Church at Bijaći, presented in this article, were undertaken at the initiative of the then director of the Museum of Croatian Archaeological Monuments, A. Milošević, and the museum advisor V. Delonga. Two primary factors necessitated the intervention: the first was certainly the inadequacy and deterioration of the earlier reconstruction; the second was the discovery of original fragments featuring decorative hooks from the cornice of the canopy, which were identified in the Museum's lapidarium by Ante Milošević.[1]

The initial reconstruction of the ciborium was carried out at the Archaeological Museum in Split in 1936, while a segment was partially supplemented in 1994–1995 at the Museum of Croatian Archaeological Monuments.[2]

Delonga records that the ciborium fragments were discovered between 1902 and 1905, with the majority found at the site of a Baroque chapel from the 17th century, the location of which precisely corresponds to the area of a former early Christian and pre-Romanesque baptistery.

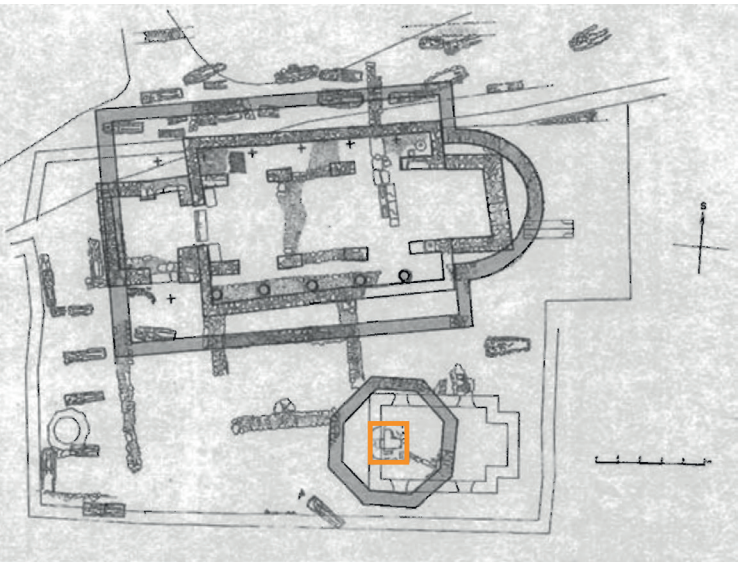
The site of Bijaći, named after the nearby localities of Veli Bijaći and Mali Bijaći, is situated on the western edge of the plain of Kaštela, in the territory of the former settlement of Sikuli.

Following the fall of Salona at the beginning of the 7th century, the area was settled by Croats, and from the 9th through to the end of the 11th century it developed into one of the principal centres of the early medieval Croatian state.

The Church of St. Martha is mentioned in the two oldest surviving Croatian charters, both dating to the 9th century. In the first, Duke Trpimir, in 852, confirmed the estates and the Church of St. George at Putalj, built by Duke Mislav on the slopes of Kozjak hill above Kaštel Sućurac, to the Archdiocese of Split. In the second, Muncimir, son of Trpimir, adjudicated a dispute over those same estates on 28th September 892, this document was drawn up at Bijaći in front of the entrance of St. Martha's Church.

In addition to the first investigation, a second campaign of research was conducted between 1967 and 1970.[3] These excavations revealed that the site

1 Delonga 1999, p. 291, fn. 9.
2 Ibid., p. 291.
3 Jelovina, Vrsalović 1968, p. 173.



Sl. 1 – Tlocrt starokršćanske bazilike i krstionice; položaj ciborija istaknut je žutom bojom (preuzeto iz: V. Delonga, Bazilika sv. Marte u Bijaćima i problem njezina ciborija, Starohrvatska prosvjeta III/26, 1999, str. 324)

Fig. 1 – Plan of the Early Christian basilica and baptistery; the position of the ciborium is highlighted in yellow (taken from: P. Vežić, Bazilika sv. Marte u Bijaćima i problem njezina ciborija, Starohrvatska prosvjeta III/26, 1999., p. 324)

U prilog pretpostavci da se izvorno radilo o krstioničkom ciboriju govore mjere krsnog zdenca koje su identične dimenzijama košare ciborija (170 × 170 cm), ali i činjenica da su svi ulomci ciborija pronađeni u krstionici (sl. 1). Osim toga, Delonga primjećuje da je natpis na arkadama ciborija karakterom blizak duhu i obredu krštenja.[5] Tu interpretaciju prihvaća i T. Marasović, koji smatra da se ciborij može povezati sa znatnim brojem ulomaka trabeacije oltarne ograde iz druge polovine 9. stoljeća.[6] On pretpostavlja da su ciborij i oltarna ograda mogli nastati u istoj kiparsko-klesarskoj radionici.

N. Jakšić i I. Josipović također otvaraju pitanje radionice koja je izradila ovaj ciborij.[7] Ukrasne elemente ciborija uspoređuju s motivima karakterističnim za *Majstora koljanskog pluteja*. Likovnomorfološkom analizom uočili su sličnosti u izradi pojedinih dekorativnih elemenata i motiva, poput vijenca kimatija, tordiranog užeta i ljiljana na arkadi s paunovima, sa spomenicima iz Biskupije i Koljana, arheoloških lokaliteta na kojima je ta radionica bila osobito aktivna.

5 Delonga 1996, str. 43.
6 Marasović 2011, str. 168–170.
7 Jakšić, Josipović 2015, str. 158–159.

preserves evidence of continuous occupation from the Roman period through to the Baroque era.

P. Vežić raised the question, which was also considered by Delonga, of the original purpose of the ciborium. Whereas Delonga interpreted it as a baptismal ciborium, Vežić proposed that it should instead be understood as an altar ciborium, albeit originating from the sanctuary of an earlier structure.[4]

Support for the hypothesis of a baptismal ciborium is provided by the dimensions of the baptismal font, which are identical to those of the canopy (170 × 170 cm), as well as by the fact that all fragments of the ciborium were found within the baptistery (Fig. 1). Moreover, Delonga noted that the inscriptions on the ciborium arcades are, in both spirit and character, closely connected with the rite of baptism.[5] This interpretation was also accepted by T. Marasović, who argued that the ciborium could be linked to a substantial number of fragments of an entablature of the altar screen from the second half of the 9th century,[6] and who proposed that the ciborium and the altar screen may have been produced in the same stonemason workshop.

N. Jakšić and I. Josipović likewise addressed the question of the workshop responsible for the creation of the ciborium,[7] and compared its decorative elements with motifs characteristic of the *Master of the Koljane pluteus*. Through a stylistic and morphological analysis, they identified similarities in the execution of certain motifs, such as the cymatium moulding, the twisted rope ornament and the lily on the arcade with peacocks, with monuments from Biskupija and Koljane, two archaeological sites at which this workshop had been particularly active.

The four-sided ciborium (Fig. 2) comprises four decorated panels with arcades, surmounted by a pyramidal roof with an acroterion, while the entire structure is supported by four columns with capitals.

The panels are decorated with a three-strand interlace that intertwines and forms motifs of braids, circles and pretzel-like shapes, as well as with animal representations of lions and symmetrically facing peacocks holding a bunch of grapes in their

4 P. Vežić 1999, p. 320.
5 Delonga 1996, p. 43.
6 Marasović 2011, pp. 168–170.
7 Jakšić, Josipović 2015, pp. 158–159.



Sl. 2 – Ciborij sv. Marte, zapadna strana (foto: A. Alajbeg)
Fig. 2 – Ciborium of St. Martha, west side (photo: A. Alajbeg)

Četverostrani ciborij (sl. 2) sastoji se od četiriju ukrasnih ploča s arkadama, natkrivenih piramidalnim krovom s akroterijem. Cijelu konstrukciju nose četiri stupa s kapitelima.

Ploče su ukrašene troprutim pleterom koji se isprepliće oblikujući motive pletenica, kružnica i pereca te životinjskim prikazima lavova i nasuprotno postavljenih paunova koji u kljunovima drže po jedan grozd. U prostoru između životinja nalaze se rozete i ljiljani. Pri vrhu ploča izvedena su dva ukrasna pojasa međusobno odijeljena uzdužnim rebrom. Gornji je pojas ispunjen nadesno položenim kukama, a donji arkadama. Natpisno polje nalazi se na donjem rubu ploča, kako s vanjske tako i s unutrašnje strane ciborija. Detaljan opis svih ploča ciborija donosi V. Delonga u katalogu izložbe *Hrvati i Karolinzi*.[8]

Ploče košare ciborija međusobno su povezane bakrenim klanfama (sl. 3) koje su smještene na uglovima kruna svake ploče i zalijepljene dvokom-

[8] Delonga 2000, str. 186–190.



Sl. 3 – Bakrene klamfe (foto: M. Matijaca)
Fig. 3 – Copper clamps (photo: M. Matijaca)

beaks. The space between the animals is filled with rosettes and lilies. Near the top of the panels are two decorative zones separated by a longitudinal rib: the upper zone is filled with right-facing hooks, while the lower is articulated by arcades. The inscription field is located along the lower edge of the panels, both on the exterior and interior sides of the ciborium. A detailed description of all ciborium panels is provided by V. Delonga in the catalogue of the exhibition *Croats and Carolingians*.[8]

The panels of the ciborium canopy are joined to one another by copper clamps (Fig. 3), positioned at the corners of the upper edge of each panel and secured with a two-component polyester adhesive. The base of each panel is connected by copper rods to the capitals, which together with the columns form a unified structural assembly (Fig. 4). All columns and capitals were reconstructed in limestone, as was the one panel of the canopy, which is oriented northward within the Museum. Two original fragments forming the "foot," or base, of the panel were incorporated into this reconstructed element.

The reconstructed panels were made so that all their elements were placed on a flat surface, brought

[8] Delonga 2000, pp. 186–190.

ponentnim poliesterskim ljepilom. Stope svake ploče bakrenim su šipkama povezane s kapitelima koji sa stupovima čine cjelinu (sl. 4). Svi stupovi i kapiteli rekonstruirani su u vapnenačkom kamenu, kao i jedna ploča košare koja je u Muzeju orijentirana prema sjeveru. U tu ploču ugrađena su dva originalna ulomka koja čine „petu", odnosno stopu ploče.

Rekonstrukcije ploča izrađene su tako da su svi njihovi elementi postavljeni na ravnu plohu, dovedeni u međusobno pravilan odnos te povezani negdje bakrenom, a negdje željeznom potkonstrukcijom. Prilikom prve rekonstrukcije ciborija iz 1936. godine ploče košare izrađene su tako da je prostor oko svake ploče bio omeđen drvenim daskama koje su poslužile kao okvir za lijevanje smjese umjetnog kamena.[9] Taj se proces lijevanja odvijao u dvjema fazama. U prvoj fazi izrađena je smjesa sivog portland-cementa i krupnijeg kamenog agregata, dok je drugi, završni sloj izveden od smjese sivog portland-cementa i fino mljevenog kamenog agregata.[10] U tom finom završnom sloju mogla se izraditi ornamentika primjenom klesarskih alata.

Osmerokutni krov izrađen je od poliestera,[11] a na njegov vrh ugrađen je originalni akroterij. Krov se naslanja na posebno perforirane kamene dosjede ploča košare kao i na četiri kamene ploče u obliku trokuta.

Od vremena prve rekonstrukcije ciborij je više puta bio demontiran i ponovno sastavljen, zbog čega je popustila njegova konstruktivna stabilnost. Upravo su narušena konstruktivna stabilnost, pronalazak dekorativnog završnog vijenca s kukama i otkupljeni ulomak sjeverne ploče potaknuli opsežne konzervatorsko-restauratorske radove na košari ciborija.

Radovi na ciboriju započeli su u prvoj polovini 2015., a dovršeni su sredinom 2016. godine. Na

9 Delonga 1999, str. 291.

10 Primjena portland-cementa u kombinaciji s različitim frakcijama pijeska desetljećima je bila osnova za sve rekonstrukcije kamenih spomenika u MHAS-u.

11 Poliester je drugi najraširenij materijal koji se primjenjivao prilikom restauracije muzejskih spomenika. Restauratori ga u muzejskoj praksi koriste od 1960-ih i 1970-ih zbog njegove čvrstoće, brzine stvrdnjavanja, niske cijene i otpornosti na vlagu. Uglavnom se koristio za zapunjavanje pukotina ili izradu nadomjestaka, no u MHAS-u postoje primjeri u kojima je čitav spomenik izrađen od kombinacije poliestera i kamenog brašna kao punila (među njima su replika pluteja s hrvatskim dostojanstvenikom i tranzena s prikazom Bogorodice iz Biskupije).

into proper alignment with one another, and interconnected using a substructure made in some places of copper and in others of iron. In the first reconstruction of the ciborium from 1936, the panels of the canopy were made in such a way that the area around each panel was enclosed by wooden boards, which served as a frame for casting an artificial stone mixture.[9] This casting process was carried out in two phases. In the first phase, a mixture of grey Portland cement and coarse stone aggregate was prepared, while the second, finishing layer was made from a mixture of grey Portland cement and finely ground stone aggregate.[10] The decorative ornament could then be carved into the smooth surface of this finishing layer using stonemason's tools.

The octagonal roof was made from polyester resin,[11] with the original acroterion installed at its apex. The roof rests on specially perforated stone bearing surfaces of the canopy panels and on four triangular stone slabs.

Since the time of the first reconstruction, the ciborium had been dismantled and reassembled on multiple occasions, with the result that its structural stability had been compromised. These circumstances (the impaired structural stability, the discovery of the decorative terminal cornice with hooks, and the acquisition of a fragment of the northern panel) prompted the extensive conservation-restoration works on the canopy of the ciborium.

The works commenced in the first half of 2015 and were completed in mid-2016. The restoration of the ciborium was primarily carried out by two conservator-restorers specializing in stone sculpture, namely Ozren Radovanović and Mladen Matijaca.

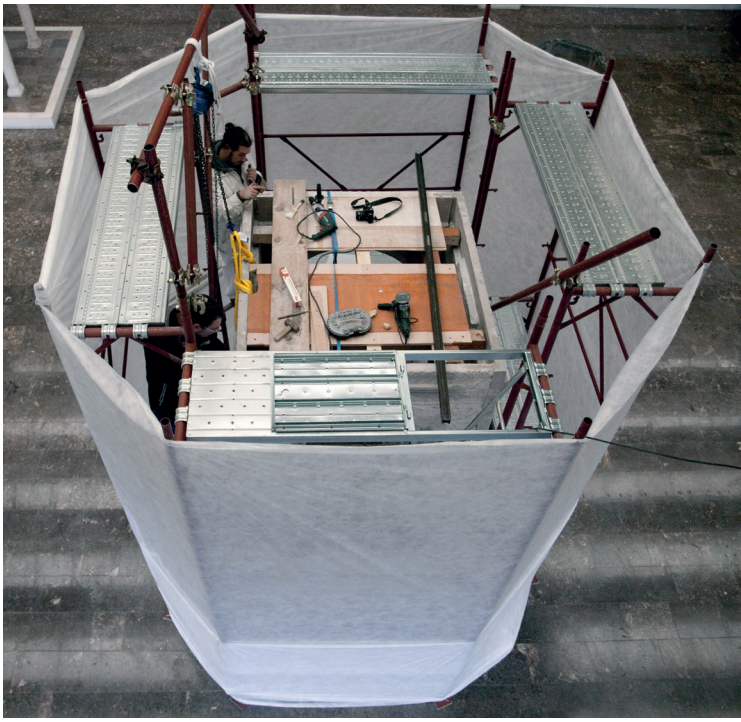
9 Delonga 1999, p. 291.

10 The use of Portland cement combined with sand of varying grain sizes had, for decades, constituted the standard procedure for the reconstruction of stone monuments at the Museum of Croatian Archaeological Monuments (MHAS).

11 Polyester resin represents the second most widely employed material in the restoration of museum monuments. Since the 1960s and 1970s, conservators have favoured it for its structural strength, rapid curing time, low cost, and moisture resistance. It was typically applied for filling fissures or fabricating replacement elements; however, the MHAS collections include specimens in which entire monuments were produced from a composite of polyester resin and stone powder as a filler. One such example is the replica of the pluteus with a Croatian dignitary and the transenna depicting the Virgin from Biskupija.



Sl. 4 – Spoj kapitela i ploče košare bakrenim klamfama (foto: M. Matijaca)
Fig. 4 – Connection between the capital and the basket slab with copper clamps (photo: M. Matijaca)



Sl. 5 – Radna skela postavljena oko ciborija (foto: M. Matijaca)
Fig. 5 – Working scaffold erected around the ciborium (photo: M. Matijaca)

restauraciji ciborija uglavnom su radila dvojica restauratora kamene plastike, Ozren Radovanović i Mladen Matijaca.

Projekt je obuhvatio demontažu svih ploča ciborija kako bi se uklonile sve stare betonske rekonstrukcije i stara željezna te dotrajala bakrena armaturna mreža, konsolidirao sav originalni kameni materijal te ugradili prethodno spomenuti otkupljeni ulomak i ulomci s kukama.

Konzervatorsko-restauratorski zahvat započeo je podizanjem dvoetažne skele s dizalicom kako bi se omogućila priprema ploča za demontažu i obavila sama demontaža (sl. 5).

Prije početka radova unutar ciborija izgrađena je drvena potkonstrukcija koja je imala ulogu stabilizacije cijelog spomenika tijekom trajanja radova. Oko cijele skele omotano je bijelo platno koje je imalo dvostruku ulogu: zaštitu posjetitelja od mogućeg pada predmeta s visine te da ovo privremeno restauratorsko radilište ne nagrđuje izložbeni prostor velike dvorane Muzeja.

Dinamika radova diktirala je brzinu demontiranja i montiranja kamenih ploča. Nakon što bi pojedina ploča bila dovršena, podizala bi se na stupove ciborija, a sljedeća bi se odmah potom spuštala i prevozila u restauratorsku radionicu.

Svaka ploča ciborija, osim posljednje, koja je gotovo u potpunosti rekonstrukcija, prošla je kroz proces uklanjanja betonskih ispuna nastalih tije-

The project included the dismantling of all the ciborium panels in order to remove all previous concrete reconstructions, as well as the old iron and deteriorated copper reinforcement mesh. All original stone material was consolidated, and the previously mentioned acquired fragment, along with fragments with hook motifs, was incorporated.

The conservation-restoration intervention began with the erection of a two-tier scaffold equipped with a hoist, facilitating both the preparation of the panels for dismantling and the execution of the dismantling itself (Fig. 5).

Prior to any works within the ciborium, a timber substructure was constructed to serve as a stabilising framework for the monument throughout the duration of the intervention. The entire scaffold was wrapped in white canvas, which served a dual purpose: to protect visitors from the risk of falling objects and to prevent the temporary restoration site from detracting from the exhibition space of the Museum's main hall.

The pace of work dictated the speed of dismantling and reassembling of the stone panels. Once a panel had been completed, it was lifted back onto the ciborium columns, while the next panel was immediately lowered and transported to the restoration workshop.

kom originalne restauracije iz 1936. godine, kao i uklanjanja željeznih trnova i klanfi. Naš je zadatak bio potpuno odvojiti sve armiranobetonske rekonstrukcije (sl. 6) i bilo kakve druge ispune kako bi se oslobodili originalni kameni ulomci ciborija. Osim betona, postojale su i rekonstrukcije izrađene od smjese kamenog brašna i poliestera, koji je korišten i kao ljepilo za povezivanje ploča s bazama stupova ali i međusobno. Sve neadekvatne rekonstrukcije uklonjene su i zamijenjene novima, dok su sva nestabilna mjesta na pločama konsolidirana podljepljivanjem i injektiranjem epoksidnim ljepilima (sl. 7).

Najveći izazov ovog konzervatorsko-restauratorskog zahvata bio je pronaći najbolji način kako odvojiti sve dijelove ploča košare i ukloniti betonsku ispunu, a da se svaki ulomak vrati na mjesto na koje je bio postavljen tijekom prve rekonstrukcije. Rješenje tog problema u osnovi je bilo jednostavno: za svaku ploču košare trebalo je izraditi vlastiti negativ. Međutim, prije izrade negativa izvedene su potrebne rekonstrukcije, odnosno modeliranje nedostajućih elemenata kako bi kalup bio što potpuniji. To je uključivalo popunjavanje manjih i većih procjepa, opšivanje plastelinom, zatvaranje „kontrakonusa“[12] i modeliranje tzv. tordiranog užeta, ukrasa koji uokviruje ploče.

Konzervatorsko-restauratorski zahvat započeo je demontažom ploče koja je u Muzeju orijentirana prema zapadu. Delonga u svojem radu pri opisu ciborija iz Bijaća svakoj ploči dodjeljuje posebnu oznaku razlikujući vanjsku od unutrašnje strane.[13]

Takvo je razlikovanje bilo važno radi snalaženja među različitim epigrafičkim poljima koja teku kako vanjskom tako i unutrašnjom stranom ciborija. Delonga označivanje ploča započinje upravo pločom od koje smo i mi krenuli, pločom s paunovima, kojoj dodjeljuje oznaku I.A (sl. 8).

Sljedeća je ploča karakteristična po geometrijskim troprutim učvorenim vrpcama u kutovima središnjeg polja, a nosi oznaku I.B (sl. 9). Treća ploča u kutovima ima prikaze lavova i nosi oznaku I.C (sl. 10).

Posljednja stranica gotovo je u cijelosti rekonstrukcija, osim dviju originalnih stopa. Uzor za tu

[12] Kontrakonus je oblikovanje dijela elementa koji se sužava prema vrhu (suprotno od konusa). Kod izrade kalupa kontrakonus (podrez) sprječava da se kalup „zalijepi“ za original ili da se njegovi dijelovi teško odvajaju.

[13] Delonga 1999, str. 290.



Sl. 6 – Uklanjanje cementnih ispuna na južnoj ploči košare ciborija (foto: M. Matijaca)
Fig. 6 – Removal of cement fills on the southern slab of the ciborium basket (photo: M. Matijaca)

With the exception of the last panel, which is almost entirely a reconstruction, each panel of the ciborium underwent a process of removal of the concrete fills deriving from the original restoration in 1936, as well as the removal of iron rods and clamps. The objective was to detach completely all reinforced concrete reconstructions (Fig. 6) and any other fills in order to expose the original stone fragments of the ciborium. In addition to the concrete, some reconstructions consisted of a mixture of stone powder and polyester resin, which had also been used as an adhesive to bond the panels to the column bases and to one another. All inadequate reconstructions were removed and replaced by new ones, while all structurally unstable areas on the panels were consolidated through the injection and application of epoxy adhesives (Fig. 7).

The main challenge of the entire conservation-restoration intervention was to identify the most appropriate method for separating all components of the canopy panels, removing the concrete fill, and ensuring that each fragment could be returned to its original position as established during the first reconstruction. The solution to this problem was, in principle, straightforward: a separate negative impression had to be produced for each panel. However, prior to the fabrication of the negative, the necessary reconstructions were carried out, i.e. the missing elements were modelled so as to render the mould as complete as possible. This involved filling minor and major gaps, sealing edges with



Sl. 7 – Konsolidacija nestabilnih mjesta injektiranjem tekućom epoksidnom smolom (foto: M. Matijaca)
Fig. 7 – Consolidation of unstable areas by injection with liquid epoxy resin (photo: M. Matijaca)

rekonstrukciju bila je nasuprotna ploča s oznakom I.B (sl. 11). Delonga donosi oznake i za unutrašnje strane koje naziva II.A, II.B, II.C i II.D.

Sve ploče košare bile su na šest mjesta pričvršćene za okolne konstruktivne elemente; stope su brončanim trnovima sidrene za kapitele, a vrhovi ploča na uglovima su povezani bakrenim klanfama.[14] Sva ta spojna mjesta bila su ispunjena poliesterskim ljepilima.[15] Kao dodatno osiguranje, ploče su međusobno učvršćene istim ljepilom u području arkada. Prva stranica ciborija, kao i druga i treća,

[14] Restauratori Muzeja HAS-a već desetljećima primjenjuju tradicionalnu metodu sidrenja i učvršćivanja kamenih elemenata bakrenim klanfama jer pritom ne dolazi do izraženog volumnog širenja kao kod željeza, čime se smanjuje i opasnost od pucanja kamena djelovanjem korozijskih produkata. Osim toga, bakar je dovoljno elastičan da može preuzeti manja pomicanja kamenih elemenata u koje je ugrađen ili koje povezuje.

[15] Poliesterska se ljepila u restauraciji kamena počinju intenzivnije koristiti od sredine 20. stoljeća. Riječ je o dvokomponentnim sustavima (smola + učvršćivač) koji se odlikuju brzim vezivanjem i velikom mehaničkom čvrstoćom.

plasticine, closing the "contra-cone"[12] sections, and reconstructing the ornament known as the "twisted rope" that frames the panels.

The conservation-restoration intervention began with the dismantling of the first panel, oriented westward within the Museum. In her study of the ciborium from Bijaći, Delonga provides a detailed description of the monument and assigns specific designations to each panel, distinguishing between their exterior and interior sides.[13]

This system of differentiation proved essential for orientation within the complex arrangement of various epigraphic fields extending across the exterior and interior surfaces of the ciborium. Delonga began her labelling with the same panel we used as a starting point, namely the panel with the peacocks, designating it I.A (Fig. 8).

The next panel, characterised by geometric three-strand knotted ribbons in the corners of its central field, bears the designation I.B (Fig. 9).

The third panel features lions in its corners and is designated I.C (Fig. 10).

The fourth panel is almost entirely a reconstruction, apart from two original base fragments; its reconstruction is modelled after the opposite panel, labelled I.B (Fig. 11). Delonga also provides designations for the interior faces, identified as II.A, II.B, II.C, and II.D.

All canopy panels were secured at six points to the surrounding structural elements: the base fragments were anchored to the capitals by bronze rods, while the upper edges of the panels were joined at the corners by copper clamps.[14] All these connection points were filled with polyester adhesive.[15] As

[12] A "contra-cone" is the shaping of a part of an element that narrows towards the top (the opposite of a cone). In mould-making, a counter-cone (undercut) prevents the mould from 'sticking' to the original or that parts are difficult to separate.

[13] Delonga 1999, p. 290.

[14] For decades, conservators at the Museum of Croatian Archaeological Monuments (MHAS) have been applying the traditional method of anchoring and securing stone elements using copper clamps, since copper does not undergo significant volumetric expansion as iron does, thereby substantially reducing the risk of stone fracture caused by the action of corrosion products. In addition, copper is sufficiently ductile to accommodate minor movements of the stone elements in which it is embedded or which it connects.

[15] Polyester adhesives have been employed increasingly in stone conservation since the mid-20th century. These



Sl. 8 – Zapadna ploča s prikazom paunova (foto: Z. Alajbeg)
Fig. 8 – Western slab with a depiction of peacocks (photo: Z. Alajbeg)



Sl. 9 – Južna ploča s geometrijskim troprutim učvorenim vrpcama (foto: Z. Alajbeg)
Fig. 9 – Southern slab with geometric triple-strand knotted bands (photo: Z. Alajbeg)

pretrpjela je oštećenja na ornamentiranoj površini zbog ugradnje neadekvatnih željeznih šipki koje su s vremenom korodirale, volumno se povećale i razorile dijelove ornamentike (sl. 12).[16]

Zahvat na ploči I.A započeo je popunjavanjem procjepa, učvršćivanjem nestabilnih mjesta i manjim rekonstrukcijama nedostajućih dijelova. Značajnija rekonstrukcija izvedena je na desnoj strani, gdje se pristupilo izradi pauna prema postojećem uzorku s lijeve strane. Tijekom prve rekonstrukcije lik pauna bio je samo ugraviran u stranicu.[17] Paun je preko paus-papira prekopiran i precrtan te je u stiroporu izvedena rekonstrukcija kontura te ptice. Konačan izgled ptice izmodeliran je u glini (sl. 13). Tako pripremljena ploča bila je spremna za uzimanje gipsanog otiska.

Taj se rekonstruktivni postupak provodi u dvjema fazama lijevanja. U prvoj fazi izrađuje se gipsani

an additional measure of reinforcement, the panels were mutually bonded with the same adhesive in the area of the arcades. Like the second and third panels, the first panel of the ciborium had sustained damage to its ornamented surfaces as a result of the installation of inadequate iron rods, which had over time corroded, expanded in volume, and fractured sections of the carved decoration (Fig. 12).[16]

The intervention on panel I.A began with the filling of gaps, the stabilisation of friable areas, and minor reconstructions of missing elements. A more substantial reconstruction was executed on the right side, where a peacock was reconstructed based on the existing model on the left side. During the first reconstruction, the figure of the peacock had been only incised into the panel surface.[17] The fig-

16 Donelli, Malinar 2015, str. 157.

17 Ovo je tipičan primjer jedne od ranijih konzervatorsko-restauratorskih metoda primjenjivanih na muzejskim spomenicima u kojoj se zbog bojazni od pogrešnog identificiranja izvornog materijala i rekonstruiranih dijelova odustajalo od plastične rekonstrukcije te se nedostajući motiv označivao isključivo linearnim iscrtavanjem na mjestu interpolacije. U kasnijoj praksi ta je metoda napuštena. Diferencijacija između izvornog i rekonstruiranog dijela danas se ostvaruje suptilnijim postupcima, ponajprije različitom završnom obradom površine, odnosno diskretnim teksturalnim razlikama i kontroliranom patinom. Time se osigurava vizualna koherentnost cjeline uz istodobno poštivanje načela prepoznatljivosti i etičke transparentnosti intervencije.

two-component systems, consisting of a resin and a hardener, are characterised by rapid curing times and high mechanical strength.

16 Donelli, Malinar 2015, p. 157.

17 This is a typical example of one of the earlier conservation-restoration methods applied to museum monuments, in which, due to the concern of incorrectly identifying original material and reconstructed parts, plastic reconstruction was abandoned, and missing motifs were indicated solely by linear drawing at the point of interpolation. In later practice, this method was abandoned. Today, differentiation between original and reconstructed parts is achieved through subtler approaches, primarily by applying different surface finishes, discreet textural variation, and controlled patination. This ensures the visual coherence of the whole while simultaneously respecting the principles of rec-



Sl. 10 – Istočna ploča s prikazima lavova
(foto: Z. Alajbeg)
Fig. 10 – Eastern slab with depictions of lions (photo: Z. Alajbeg)



Sl. 11 – Sjeverna ploča, najvećim dijelom rekonstrukcija
(foto: Z. Alajbeg)
Fig. 11 – Northern slab, largely a reconstruction (photo: Z. Alajbeg)

kalup koji služi kao precizna negativna matrica za pozicioniranje izvornih kamenih ulomaka. U drugoj fazi, nakon njihove stabilizacije unutar kalupa, pristupa se lijevanju smjese umjetnog kamena kojom se nadomještaju nedostajući dijelovi ploče ciborija, čime se uspostavlja njezina konstruktivna i vizualna cjelovitost. Prva faza postupka započela je nanošenjem smjese gline i deterdženta na ploču kako bi se kalup kasnije što lakše odvojio od nje. Oko ploče je podignuta oplata koja sprječava razlijevanje gipsane smjese izvan željenih okvira. U drugom i trećem nanosu u gipsanu smjesu dodana je kanava[18] radi postizanja veće čvrstoće kalupa. Konačno, cijeli gipsani kalup izvana je ojačan drvenim letvicama koje su za kalup vezane gipsom i kanavom (sl. 14).

Po završetku sušenja kalupa pristupilo se odvajanju negativa od ploče ciborija. Uslijedila je druga faza u kojoj smo originalne ulomke, prethodno izdvojene iz stare betonske rekonstrukcije, očišćene od produkata korozije[19] metalnih trnova i konso-

ure was traced onto tracing paper, transferred, and a reconstruction of its outline was produced in expanded polystyrene. The final form of the bird was then modelled in clay (Fig. 13). The panel prepared in this way was then ready for the production of a plaster cast.

This reconstructive procedure was executed in two casting phases. In the first phase, a plaster mould was produced to serve as a precise negative matrix for the accurate positioning of the original stone fragments. In the second phase, following the stabilisation of the fragments within the mould, an artificial stone mixture was cast to compensate for the missing sections of the panel, thereby re-establishing its structural and visual integrity. The preparation of the first phase involved the application of a clay-and-detergent mixture to the panel surface in order to facilitate the later separation of the mould from the panel. A retaining frame was erected around the panel to prevent the plaster mixture from spreading beyond the intended area. Hemp fibre[18] was incorporated into the second and third applica-

18 Kanava, poznata i kao kudjelja, dobiva se od prerađenih vlakana biljke konoplje te se tradicionalno koristi kao armirajući materijal pri izradi gipsanih kalupa i odljeva. Njezinom ugradnjom u gipsanu smjesu povećava se otpornost na savijanje i udarce, a smanjuje lomljivost.

19 Kada metal, osobito željezo, dođe u dodir s vlagom i kisikom, dolazi do procesa korozije pri kojem nastaju različiti oksidi i hidroksidi željeza. Korozijski produkti mogu kemijski reagirati s mineralnim sastavom kamena, što može rezultirati promjenom boje kamena i kemijskom destabilizacijom minerala.

ognisability and ethical transparency of the intervention.

18 Hemp fibre (also known as tow) is obtained from processed fibres of the hemp plant and is traditionally used as a reinforcing material in the production of plaster moulds and casts. Its incorporation into the plaster mixture substantially improves resistance to bending and impact, while reducing overall brittleness.



Sl. 12 – Razarajuće djelovanje produkata korozije na strukturu kamena (foto: M. Matijaca)
Fig. 12 – Destructive effect of corrosion products on the stone structure (photo: M. Matijaca)



Sl. 13 – Modeliranje ptice u glini prije izrade kalupa (foto: O. Radovanović)
Fig. 13 – Modeling the bird in clay before making the mold (photo: O. Radovanović)

lidirane, mogli postaviti na njihovo mjesto unutar dobivenog kalupa. Postavljanjem svih originalnih ulomaka jedne ploče u negativ dobili smo njihove pozicije unutar ploče kakve su bile nakon prve rekonstrukcije iz 1936. godine (sl. 15).

Tako pozicionirani kameni ulomci međusobno su povezani navojnim šipkama od inoksa.[20] Svaki ulomak sadrži perforirani utor za prihvat šipke, a konačna veza između kamena i metala ostvarena je

[20] Donelli, Malinar 2015, str. 154–159.



Sl. 14 – Gipsani kalup ojačan drvenim letvicama prije odvajanja od originalne ploče (foto: M. Matijaca)
Fig. 14 – Plaster mold reinforced with wooden slats before separation from the original slab (photo: M. Matijaca)

tions of plaster to increase the rigidity of the mould. The completed plaster mould was further reinforced on its exterior by timber laths tied to it with plaster and hemp fibre (Fig. 14).

Once the mould had dried, the negative was separated from the panel of the ciborium. The second phase could then commence: the original fragments, previously extracted from the old concrete reconstruction, cleaned of corrosion products[19] from the metal rods and consolidated, were placed into their respective positions within the mould. By arranging all original fragments of a given panel into the negative, their positions within the panel as established after the first reconstruction of 1936 were recovered (Fig. 15).

The stone fragments, once positioned in this manner, were interconnected by stainless steel threaded rods.[20] Each fragment was provided with a perforated groove to accommodate the rod, while the permanent bond between stone and metal was achieved using the epoxy adhesive "Megapoxy".[21]

[19] When metal, in particular iron, comes into contact with moisture and oxygen, a process of corrosion ensues, producing various iron oxides and hydroxides. The corrosion products may react chemically with the mineral composition of the adjacent stone, which can result in discolouration of the stone and chemical destabilisation of the mineral.

[20] Donelli, Malinar 2015, pp. 154–159.

[21] Megapoxy is a trade name for two-component epoxy adhesives and injection compounds used in construction, industry and stone conservation. Due to its outstanding mechanical properties, such as strength and low shrinkage during curing, it was selected as the main adhesive for the conservation-restoration procedure on this monument.



Sl. 15 – Detalj postavljanja ulomaka u gipsani negativ i povezivanja inox šipkama (foto: O. Radovanović)
Fig. 15 – Detail of placing fragments in the plaster negative and connecting them with stainless-steel rods (photo: O. Radovanović)

epoksidnim ljepilom „Megapoxy".[21] Nedostajući dijelovi, odnosno mjesta na kojima originalni ulomci nisu prisutni, nadomješteni su metalnim šipkama koje će u daljnjoj fazi postupka služiti kao nosivi elementi buduće rekonstrukcije. Cjelokupna ploča, s integriranim kamenim ulomcima i metalnim šipkama, privremeno je bila uokvirena oplatom izrađenom od stakloplastike[22] kako bi se dobila karakteristična forma ploče ciborija (sl. 16).

Prije samog ulijevanja smjese umjetnog kamena u kalup svi rekonstruirani i originalni dijelovi izolirani su glinom kako bi se osiguralo njihovo dobro odvajanje.[23] Spojevi kalupa brtvljeni su plastelinom radi sprječavanja istjecanja smjese. Samo lijevanje smjese umjetnog kamena vrlo je pažljivo izvede-

In areas where original fragments were lacking, metal rods were inserted to function in the subsequent phase of the process as load-bearing supports for the reconstructed sections. The entire assembled panel, comprising integrated stone fragments and metal rods, was temporarily enclosed within a fibreglass formwork[22] in order to obtain the characteristic shape of the ciborium panel (Fig. 16).

Before the artificial stone mixture was poured into the mould, all reconstructed and original elements were isolated with clay to ensure proper separation.[23] The mould joints were sealed with plasticine to prevent leakage of the artificial stone mixture. The pouring of the mixture was carried out with great care to ensure that it penetrated all connection points, however small. To this end, professional electric vibrating tools were used, whose oscillating action assists in expelling excess air from the mixture. The outer edge of the panel was simultaneously adjusted to correspond precisely to the external outline impressed in the negative mould. The prepared mould was then filled with the artificial stone mixture, composed of white cement, double-ground stone aggregate of fraction "0", water and an acrylic emulsion serving as a plasticiser[24] (Fig. 17).

Once the hardening process was complete, the formwork was removed and work began on the edging at the points where the original stone material meets the reconstructed sections. This step was necessary for aesthetic reasons, as the transition between the two materials is thereby resolved in a visually more coherent manner, producing a cleaner and more refined appearance. Following several days of drying, the panel was ready for the carv-

[21] Megapoxy je trgovački naziv za dvokomponentna epoksidna ljepila i mase za injektiranje koje se koriste u građevini, industriji i restauraciji kamena. Budući da posjeduje visoka mehanička svojstva (poput čvrstoće) i niski indeks skupljanja prilikom stvrdnjavanja, izabran je kao glavno ljepilo za konzervatorsko-restauratorski postupak na ovom spomeniku.

[22] Stakloplastika koja se ovdje primijenila je polimetilmetakrilat (PMMA). Materijal je razvijen 1930-ih godina i danas ima široku primjenu u arhitekturi, industriji i muzeologiji.

[23] U postupcima izrade kalupa u kiparstvu te konzervaciji i restauraciji kamena glina se koristi kao izolacijski i razdjelni sloj između izvornog materijala i materijala kalupa. Zahvaljujući svojim prirodnim svojstvima sprječava izravan kontakt originala i materijala od kojeg je izrađen kalup, što je u našem slučaju gips.

[22] The fibreglass material used here was polymethyl methacrylate (PMMA), a synthetic polymer developed in the 1930s that has since found extensive application in architecture, industry and museology.

[23] In mould-making for sculpture and stone conservation-restoration, clay serves as an isolating and separating layer between the original material and the mould material. Thanks to its natural properties, it prevents direct contact between the original and the material the mould is made of, which in our case is plaster.

[24] Plasticisers are chemical additives that are added to concrete or mortar to enhance the workability of the mixture without increasing the amount of water. In our case, the application of plasticizers increased the flowability and elasticity of the artificial stone mixture in the mould.



Sl. 16 – Proces izrade gipsanog kalupa za ploču 1. B (foto: M. Matijaca)
Fig. 16 – Process of making the plaster mold for slab 1B (photo: M. Matijaca)

no kako bi smjesa dospjela do svih, pa i najmanjih spojnih mjesta. Kako bismo to postigli, koristili smo profesionalne električne vibracijske alate koji svojom trešnjom pridonose izbacivanju suvišnog zraka iz smjese. Rubna linija ploče također je slijedila vanjsku liniju otisnutu na negativu. U tako pripremljen kalup unesena je smjesa umjetnog kamena sastavljena od bijelog cementa, dvostruko mljevenog kamenog agregata frakcije „0", vode i akrilne emulzije koja je imala ulogu plastifikatora[24] (sl. 17).

Po dovršetku procesa otvrdnjavanja oplata je uklonjena te se pristupilo izradi opšava na mjestima gdje se spajaju originalni kameni materijal i rekonstrukcije. To je bilo potrebno iz estetskih razloga jer se prijelaz s jednog materijala na drugi na taj način vizualno puno bolje rješava te ostavlja čišći i jasniji dojam. Ploča je nakon nekoliko dana sušenja bila spremna za klesanje dekoracije. Klesarski su obrađene samo jasne situacije, primjerice povezivanje linije lukova, izrada tordiranog motiva i površinska obrada rekonstrukcija[25] (sl. 18).

ing of the decorative ornaments. Stone carving was limited strictly to clearly defined elements, such as the continuation of arch lines, the execution of the twisted-rope motif, and the surface treatment of the reconstructed areas[25] (Fig. 18).

All three panels were treated in this manner, on both their exterior and interior faces.

The ciborium was originally designed to bear a cornice decorated with a hook motif along the upper edge of the canopy. However, during the first reconstruction only a part of this cornice was incorporated, while the remainder was, for reasons unknown, left out.

In his stylistic-morphological analysis of the ciborium from St. Martha's Church, N. Jakšić devoted particular attention to the hook motif, noting that all hooks are oriented in the same direction. He argued that this departs from the generally accepted convention whereby the hooks on the central axis of a panel diverge, one portion facing in one direction and the other in the opposite.[26] In the present

[24] Plastifikatori su kemijski dodatci (aditivi) koji se dodaju betonu ili mortu radi povećanja obradivosti smjese bez povećanja količine vode. U našem slučaju primjena plastifikatora povećala je protočnost i elastičnost smjese umjetnog kamena u kalupu.

[25] Prilikom izvođenja zahvata vodili smo se načelom koje je formulirao Cesare Brandi, prema kojem restauracija staje ondje gdje počinje pretpostavka. To načelo, ugrađeno u Venecijansku povelju iz 1964. godine, predstavlja temelj suvremene konzervatorske teorije.

[25] During the intervention, we were guided by the principle formulated by Cesare Brandi, according to which restoration ceases where conjecture begins. This principle, incorporated into the Venice Charter of 1964, represents a fundamental basis of modern conservation theory.

[26] This practice is attested on two hexagonal ciboria: one from Biskupija and one from Galovac. All three ciboria have been attributed to the workshop of the *Master of the Koljane Pluteus*.



Sl. 17 – Proces lijevanja smjese umjetnog kamena u kalup (foto: O. Radovanović)
Fig. 17 – Process of casting the artificial stone mixture into the mold (photo: O. Radovanović)



Sl. 18 – Klesarska obrada rekonstruirane površine (foto: M. Matijaca)
Fig. 18 – Stone-carving treatment of the reconstructed surface (photo: M. Matijaca)

Na ovaj su način obrađene sve tri ploče i s vanjske i s unutrašnje strane.

Ciborij je izvorno bio zamišljen tako da se na vrhu košare nalazi vijenac ukrašen motivom kuka. Međutim, tijekom prve rekonstrukcije u ciborij je ugrađen samo jedan njegov dio, dok drugi iz nekog razloga nije bio postavljen.

N. Jakšić u svojoj se likovno-morfološkoj analizi ciborija iz Sv. Marte posebno osvrnuo na motiv kuka, primijetivši da su sve okrenute u istom smjeru. Smatra da to odstupa od općeprihvaćenog pravila prema kojem se kuke na sredini ploče dijele tako da je jedan dio usmjeren na jednu, a drugi na drugu stranu.[26] U ovom su slučaju sve 53 kuke usmjerene u istom pravcu, i to na svim četirima pločama košare ciborija.[27]

Tijekom prve rekonstrukcije nedostajući kameni elementi zamijenjeni su betonskim nadomjescima.

[26] Primjer ovakve prakse nalazimo na dvama šesterostranim ciborijima: jedan potječe iz Biskupije, a drugi iz Galovca. Sva tri ciborija pripisuju se radionici *Majstora koljanskog pluteja*.

[27] Jakšić, Josipović 2015, str. 155.

case, all 53 hooks on all four panels of the canopy of the ciborium are uniformly oriented in the same direction.[27]

During the first reconstruction, the missing stone elements were replaced by concrete substitutes. Some of these formed integral parts of the panels, while others were attached to original stone fragments by means of metal rods, as previously described. In the course of the present intervention, all concrete hooks were removed and replaced with the original elements. Upon completion of the works, all panels of the canopy were interconnected using new stainless-steel clamps and secured with epoxy adhesive (Fig. 19).

The fourth panel, which had been incorrectly interpreted during the first reconstruction due to the lack of information, was now properly reconstructed on the basis of the newly acquired original fragment. (Fig. 20)[28] A fortunate circumstance was

[27] Jakšić, Josipović 2015, p. 155.

[28] Thanks to the specialist expertise of V. Delonga, a fragment of the ciborium panel was identified in private ownership. Recognising it as a component of the ciborium from Bijaći, the Museum of Croatian Archaeological Monuments carried out its acquisition, thereby making the object a permanent part of the Museum's holdings.



Sl. 19 – Obnovljene ploče košare ciborija povezane inox klamfama
Fig. 19 – Restored slabs of the ciborium basket connected with stainless-steel clamps



Sl. 20 – Rekonstruirana ploča košare s ugrađenim otkupljenim ulomkom (foto: M. Matijaca)
Fig. 20 – Reconstructed basket slab with the purchased fragment incorporated (photo: M. Matijaca)



Sl. 21 – Postavljanje piramidalnog poliesterskog krova na košaru ciborija (foto: M. Matijaca)
Fig. 21 – Placement of the pyramidal polyester roof on the ciborium basket (photo: M. Matijaca)

Neki od njih činili su dio ploče, dok su drugi bili povezani s izvornim kamenom metalnim šipkama, kao što je već spomenuto. Ovim zahvatom uklonjene su sve te betonske kuke, a na njihovo mjesto vraćeni su originalni elementi. Po završetku radova sve ploče košare ciborija međusobno su povezane novim klanfama od inoksa te učvršćene epoksidnim ljepilom (sl. 19).

Četvrta ploča, koja je zbog nedostatka podataka tijekom prve rekonstrukcije bila pogrešno interpretirana, sada je na osnovi otkupljenog originalnog ulomka nanovo pravilno izrađena. (sl. 20)[28] Sretna okolnost bila je mogućnost neposrednog spajanja lijeve pete ciborija s novim ulomkom, koji je sadržavao dovoljno ostataka pleterne ornamentike da se mogla rekonstruirati nedostajuća dekoracija oko arkade ploče. Lijepljenje tih dvaju ulomaka izvedeno je ugradnjom nehrđajućih metalnih šipki i učvršćivanjem epoksidnim ljepilom. Postupak izrade nove ploče tekao je slično kao i kod prethodnih rekonstrukcija.

Na radionički stol postavljeni su svi sastavni elementi: kimation s arkadama, ukrasno uže, ulomci peta i novi ulomak. Izrađen je gipsani negativ u koji su potom postavljeni originalni kameni dijelovi, međusobno zalijepljeni i povezani metalnim šipkama, dok je prostor između njih ispunjen smje-

the possibility of directly joining the left base of the ciborium with the new fragment, which preserved sufficient remains of the interlace ornament to enable the reconstruction of the missing decoration surrounding the arcade of the panel. The bonding of the two fragments was achieved through the insertion of stainless steel rods and the application of epoxy adhesive. The fabrication of the new panel followed the same general methodology as that employed in the preceding reconstructions.

All component elements were laid out on the workshop table: the cymatium with arcades, the decorative rope, the fragments of the bases and the new fragment. A plaster negative was produced, into which the original stone elements, mutually bonded and interconnected by metal rods, were placed,

[28] Zahvaljujući stručnoj ekspertizi V. Delonga, ulomak ploče ciborija identificiran je u privatnom posjedu. Prepoznavši da se radi o ulomku ciborija iz Bijaća, Muzej hrvatskih arheoloških spomenika proveo je postupak otkupa, čime je predmet postao dio muzejskog fundusa.

som umjetnog kamena. Nakon sušenja na ploči od umjetnog kamena izvedena je rekonstrukcija pleterne ornamentike i tordiranog užeta te završna klesarska obrada teksture ploče.

Na taj je način dobivena kontinuirana pleterna ornamentika koja se proteže od lijeve do desne pete ploče. Međutim, za zonu koja se nalazi između arkada ukrasnog vijenca i nove rekonstrukcije ne postoje nikakvi podatci, pa je ostavljena bez ukrasa. Na vijenac su potom postavljene i učvršćene ukrasne kuke.

Piramidalni osmerostrani krov ciborija postavljen je na postolje koje se sastoji od četiriju trokutastih kamenih ploča[29] i dosjeda ploča koje tvore košaru ciborija. Osim originalnog akroterija, krov je u cijelosti rekonstrukcija; izrađen je od poliestera i kamenog brašna kao agregata (sl. 21). Postavljanjem krova završeni su opsežni konzervatorsko-restauratorski radovi koji su uključivali demontažu svih ploča, uklanjanje svih betonskih rekonstrukcija i uklanjanje kompletne željezne potkonstrukcije koja je povezivala kamene elemente.

Svako razdoblje donosi svoje materijale i tehnike. Pristup koji se koristio tridesetih godina 20. stoljeća danas je nezamisliv iz dvaju razloga. Prvi razlog je upotreba sivog portland-cementa, koji je tada bio relativno nov i nedovoljno ispitan materijal, a drugi je primjena željezne armature. Problem kod upotrebe sivog cementa jest prisutnost štetnih topljivih soli koje prelaze na kameni materijal i kontaminiraju ga, dok je pri primjeni željezne armature zanemarena činjenica da ona s vremenom korodira. Upravo je to zanemarivanje dovelo do najvećih oštećenja na kamenim ulomcima. Međutim, bez obzira na te previde, promatrajući tehničku i umjetničku izvedbu prve rekonstrukcije ciborija iz Sv. Marte, treba priznati da je majstorski rad tadašnjih muzejskih restauratora-klesara zanatski bio na visokoj razini. Njihov pristup i rad nadahnuli su nas da ovom zahvatu pristupimo konzervativno, nastojeći očuvati što više originalne rekonstrukcije uz primjenu isključivo sigurnih i pouzdanih materijala (sl. 22).

[29] Trokutaste ploče koje podržavaju krov nisu posebnost samo ovog ciborija, nego su redovit konstruktivni element svih ciborija iz fundusa Muzeja HAS-a. O važnosti i ključnoj ulozi tog elementa prilikom rekonstrukcije šesterostranog ciborija iz Biskupije piše S. Gunjača u godišnjaku JAZU-a objavljenom 1953. godine.

while the interstices were filled with the artificial stone mixture. After drying, the reconstruction of the interlace ornament, the twisted-rope motif, and the final surface treatment of the panel were executed on the artificial stone panel.

In this manner, a continuous interlace pattern was achieved, extending from the left to the right base of the panel. The zone between the arcades of the decorative cornice and the newly reconstructed section, however, lacked sufficient documentary evidence and was therefore intentionally left undecorated. The decorative hooks were then installed along the cornice and fixed in position.

The pyramidal octagonal roof of the ciborium was placed on a base consisting of four triangular stone slabs[29] and the bearing surfaces of the panels, which form the canopy. With the exception of the original acroterion, this roof constitutes an entirely reconstructed element, made of polyester resin with stone powder as a filler (Fig. 21). The installation of the roof concluded the extensive conservation-restoration works, which had encompassed the dismantling of all panels, the removal of all concrete reconstructions, and the elimination of the entire iron substructure that had previously connected the stone elements.

Each period is characterized by its own materials and techniques. The procedures employed in the 1930s would today be considered unacceptable for two principal reasons: The first is the use of grey Portland cement, which at that time was a relatively new and insufficiently tested material; the second is the use of iron reinforcement. The problem of grey cement lies in the presence of harmful soluble salts that migrate into the stone material and contaminate it, while in the case of iron armature the neglected reality is that iron corrodes over time. It was precisely this oversight that caused the most severe damage to the stone fragments. Nevertheless, despite these shortcomings, an examination of the technical and artistic execution of the first reconstruction of the ciborium from St. Martha's Church

[29] The triangular slabs that support the roof are not unique to this ciborium, but are a common structural element of all ciboria in the collection of the Museum of Croatian Archaeological Monuments. The importance and key role of this element in the reconstruction of the hexagonal ciborium from Biskupija is discussed by S. Gunjača in the yearbook of the Yugoslav Academy of Sciences and Arts (JAZU), published in 1953.



Sl. 22 – Fotografija ciborija nakon zahvata (foto: M. Matijaca)
Fig. 22 – Photograph of the ciborium after the intervention (photo: M. Matijaca)

V. Delonga napisala je za ciborij iz Sv. Marte u Bijaćima da je to „najmarkantnije kiparsko-epigrafičko ostvarenje, ali i danas sačuvani objekt-spomenik iz ranog srednjeg vijeka s tog lokaliteta. Zbog likovnosti, gdje se ogledaju komponente predromaničkog kiparstva prve polovine 9. stoljeća, kao i uklesana natpisa, ciborij stoji na vrhu ljestvice spomeničkih vrednota starohrvatskog predromaničkog opusa.“[30]

[30] Delonga 1999, str. 289.

compels one to acknowledge that the craftsmanship of the Museum's restorer-stonemasons of that period attained a high level of artisanal quality. Their approach and work inspired the present team to adopt a conservative stance toward this intervention, aiming to preserve as much of the original reconstruction as possible while employing only safe and proven materials (Fig. 22).

V. Delonga has described the ciborium from St. Martha's Church at Bijaći as "the most outstanding sculptural and epigraphic achievement, as well as the best-preserved monument-object from the early medieval period at this site. Because of its artistic qualities, in which the components of early Romanesque sculpture from the first half of the 9th century are reflected, and the inscriptions it bears, the ciborium occupies a preeminent position within the early Croatian pre-Romanesque corpus in terms of its heritage value.[30]

[30] Delonga 1999, p. 289.

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