

AMFORE RAVNOG DNA IZ SLOJEVA ANTIČKE LUKE U ZATONU KOD ZADRA

Antička luka u Zatonu otkrivena je sredinom šezdesetih godina 20. st., a sustavno se istražuje od 2002. god. što nam je omogućilo detaljniji uvid u kronološku problematiku. Vrlo bogati arheološki slojevi ne govore samo o privremenoj postaji, nego ukazuju na to da su se brodovi duže zadržavali i da je luka bila značajnije tranzitno pristanište. U luci je pronađena velika količina različitog materijala, uglavnom keramičkih proizvoda, među kojim amfore zauzimaju tek manji dio. U radu se donosi pregled 49 amfora klasificiranih kao tip Forlimpopoli, a za koje se danas najčešće koristi naziv amfore ravnog dna. Autori donose opći pregled istraživanja amfora tipa Forlimpopoli i statističku obradu amfora pronađenih u luci. Amfore su s obzirom na oblik oboda, ručki i dna podijeljene na nekoliko tipova.

Ključne riječi: Zaton, antička luka, amfore ravnog dna, Forlimpopoli

FLAT-BOTTOMED AMPHORAE FROM LAYERS OF THE ANCIENT PORT IN ZATON NEAR ZADAR

The ancient port in Zaton was discovered in the mid-1960s, and systematically researched since 2002, has provided us with more detailed insight into chronological issues. The very rich archaeological layers do not testify only of the existence of a temporary station, but suggest that the boats stayed for longer periods and that the port was an important transit station. A large amount of various materials has been discovered in the port, mainly ceramic products, of which the amphorae are only a small part. This paper provides an overview of 49 amphorae classified as the Forlimpopoli type, and for which the most commonly used name is the flat-bottomed amphora. The authors present a general overview of research into the Forlimpopoli type of amphorae and a statistical analysis of the amphorae found in the port. Based on the shape of the rim, the handles and bottom, the amphorae have been classified into several types.

Keywords: Zaton, ancient port, flat-bottomed amphora, Forlimpopoli



Slika 1. Položaj Zatona i Nina

Figure 1. Location of Zaton and Nin

prema / according to: ARKOD

O luci municipija *Aenone* na rtu Kremenjača u Zatonu kod Zadra (Sl. 1) u više je navrata pisano od kraja šezdesetih godina 20. stoljeća.¹ Istraživanja su vođena u nekoliko kampanja počevši od 1979.,² 1982. i 1983.,³ 1986.⁴ i zaključno s 1987. godinom⁵ kada je izvađen i drugi liburnski brod rađen tehnikom šivanja, a koji su kod antičkih pisaca poznati pod nazivom *serilia*.⁶

Nakon stanke duge više od desetljeća i pol, istraživanja su nastavljena 2002. god. i s prekidima traju sve do danas.⁷ Te 2002. god. pronađen je i treći šivani brod.⁸ Riječ je inače o prvoj antičkoj luci na istočnoj obali Jadrana u kojoj se započelo sa sustavnim arheološkim istraživanjima. Naime od 2002. god. istraživanja su obilježena novim pristupom i svi radovi na sustavnom iskopavanju obavljaju se unutar kvadratne mreže koja je georeferencirana totalnom stanicom i prema svim metodološkim pravilima struke (Sl. 2).⁹

Since the end of the 1960s, there have been multiple written articles about the municipal port *Aenona* on Cape Kremenjača in Zaton near Zadar (Fig. 1).¹ Research was conducted on several occasions starting in 1979,² in 1982 and 1983,³ in 1986⁴ and finally in 1987⁵ with the extraction of the second Liburnian ship constructed using sewing techniques, and which ancient writers referred to as *Serilia*.⁶

After a pause of more than a decade and a half, research continued intermittently from 2002 to this day.⁷ In that year of 2002, a third sewn boat was discovered.⁸ This was actually the first ancient port on the eastern Adriatic coast in which systematic archaeological excavations began. In fact, since 2002, excavations have been marked by a new approach and all work on systematic excavations has been carried out within a square grid that is georeferenced using a total station and in compliance with the methodological rules of the profession (Fig. 2).⁹

The material found in the cultural layers indicates that the origin of the port is the mid-first century. The port was intensively used until the end of the third century, and the ceasing of its intensive use can probably be dated to the beginning or the first half of the 4th century, thanks to the discovery of two shallow plates typical of North African ceramic production. One belongs to Hayes 59B type,¹⁰ dating from 320-420, and the second is the Hayes 61A type,¹¹ dating to the period 325-400/420.¹²

A large amount of various materials (ceramics, metal, glass, bone, etc.)¹³ has been found in the port, with the most diverse types of ceramic products prevailing. Amphorae include only a small proportion, and a significant group consists of the Forlimpopoli type of amphorae. Today, the most common term for this type is the **flat-bottomed amphora**. In addition, they are also the most numerous of the amphora types found at this site. Material from the old

1 Luku je sredinom šezdesetih godina 20. st. otkrio Z. Brusić. O tome vidi: Z. Brusić, 1968, 203-210.

2 Z. Brusić, 1980, 112-113.

3 S. Gluščević, 1984, 17-18.

4 S. Gluščević, 1986, 46-47.

5 S. Gluščević, 1987, 43-44.

6 Više o brodovima i njihovoj tehnici brodogradnje vidi: Z. Brusić, 1968, 206-209; Z. Brusić – M. Domijan, 1985, 67-85; Z. Brusić, 1995, 39-59.

7 Istraživanja su provedena 2002., 2003., 2006., 2007., 2011., 2012. i 2013. godine. Ostalih godina istraživanja nisu provedena jer Ministarstvo kulture RH nije osiguralo materijalna sredstva. Istovremeno valja naglasiti kako su svake godine značajnim sredstvima istraživanja pomagali TN Zaton i TZ Zaton na čemu osobito zahvalnost moramo izraziti gospodinu Frani Skoblaru i gospođi Daliji Pavlović Peroš. Materijal izvađen istraživanjem 2012. i 2013. god. nije uvršten u ovaj popis, jer je u trenutku pisanja ovog rada na materijalu iz 2012. god. tek bila obavljena preliminarna obrada, a materijal iz 2013. god. još uvijek se nalazio u bazenu za desalinizaciju.

8 S. Gluščević, 2002, 76-86; 2005, 41-52.

9 Više o samoj metodologiji istraživanja vidi: S. Gluščević, 2002, 76-86.

1 The port was discovered in the mid-1960s by Z. Brusić. For more, see: Z. Brusić, 1968, 203-210.

2 Z. Brusić, 1980, 112-113.

3 S. Gluščević, 1984, 17-18.

4 S. Gluščević, 1986, 46-47.

5 S. Gluščević, 1987, 43-44.

6 For more about the ships and their shipbuilding techniques see: Z. Brusić, 1968, 206-209; Z. Brusić – M. Domijan, 1985, 67-85; Z. Brusić, 1995, 39-59.

7 Excavations were conducted in 2002, 2003, 2006, 2007, 2011, 2012 and 2013. During those other years, excavations were not conducted because the Ministry of Culture did not provide the material resources. At the same time, it should be noted that every year, significant resources for excavations were provided by the Zaton Holiday Resort and the Zaton Tourist Board, for which we would like to express special gratitude to Mr Frane Skoblar and Mrs Dalija Pavlović Peroš. The material extracted in 2012 and 2013 has not been included in this list, because at the time of writing this paper, the material from 2012 had just been preliminary processed, whereas the material from 2013 was still located in the desalination pool.

8 S. Gluščević, 2002, 76-86; 2005, 41-52.

9 For more about the excavation methodology, see: S. Gluščević, 2002, 76-86.

10 J. W. Hayes, 1972, 96-100.

11 J. W. Hayes, 1972, 100-107.

12 S. Gluščević, 2005, 46-47; 2011, 14; A. Pydyn – S. Gluščević, 2011, 25-48.

13 The finds of plant and animal origin found in the layers of the port were also analysed. For more on this, see: S. Gluščević – M. Jurišić – R. Soštarić – S. Vujčić Karlo, 2006, 147-161.

Materijal pronađen u kulturnim slojevima govori o vremenu nastanka luke sredinom 1. stoljeća. Luka se intenzivno koristila do kraja 3. st., a prestanak intenzivnog korištenja najvjerojatnije se može datirati u početak ili polovicu 4. st. zahvaljujući pronalasku dva plitka tanjura sjevernoafričke proizvodnje. Jedan pripada tipu Hayes 59B¹⁰ koji se datira u vrijeme 320. - 420. god., a drugi tipu Hayes 61A¹¹ koji se datira u vrijeme 325. - 400./420. god.¹²

U luci je pronađena velika količina različitog materijala (keramika, metal, staklo, kost i dr.)¹³ među kojim u najvećem postotku prevladavaju najrazličitiji tipovi keramičkih proizvoda. Amfore zauzimaju tek manji dio, a posebnu skupinu čine amfore klasificirane kao tip Forlimpopoli. Danas se za isti tip najčešće koristi naziv **amfore ravnog dna**. One su ujedno i najbrojniji tip amfora pronađen na ovom lokalitetu. Pregledan je materijal starog fundusa Odjela za podvodnu arheologiju Arheološkog muzeja Zadar,¹⁴ te materijal pronađen sustavnim hidroarheološkim istraživanjima u razdoblju od 2002. do 2013. godine.¹⁵ Izdvojene amfore su kataloški obrađene.

S obzirom da se prilikom ranijih istraživanja nije koristio stratigrafski pristup, pri kasnijoj obradi materijala mogla se koristiti isključivo komparativno-tipološka metoda. Iz ove faze istraživanja od 1960-ih do 1980-ih godina potječe veći broj izdvojenih amfora, njih ukupno 27 – stari fundus (55,1%), dok iz novog ciklusa istraživanja od 2002. do 2011. god. potječe manji dio amfora, njih ukupno 22 – novi fundus (44,9%).¹⁶

Amfore ravnog dna¹⁷ počele su se proizvoditi u Italiji tijekom 1. stoljeća.¹⁸ Po obliku su najsljličnije amforama



Slika 2. Zračni snimak lukobrana s položajima istraživanja
Figure 2. Aerial photo of the breakwater and the excavation positions

foto / photo: D. Grosman

holdings of the Department of Underwater Archaeology at the Zadar Museum of Archaeology was inspected,¹⁴ and the material found in systematic underwater archaeological excavations in the period from 2002 to 2013.¹⁵ The featured amphorae have been catalogued.

Given that in previous studies the stratigraphic approach was not used, later treatment of the materials could only utilise the comparative-typological method. An increasing number of specified amphora originated from this phase of research covering the period from the 1960s to the 1980s, a total of 27 – the old holdings (55.1%), whereas a small proportion of the amphorae, totalling 22 – the new holdings (44.9%), originated from the new phase of research from 2002 to 2011.¹⁶

The flat-bottomed amphorae¹⁷ began to be produced in Italy during the first century.¹⁸ In terms of their

10 J. W. Hayes, 1972, 96-100.

11 J. W. Hayes, 1972, 100-107.

12 S. Gluščević, 2005, 46-47; 2011, 14; A. Pydyn – S. Gluščević, 2011, 25-48.

13 Analizirani su i nalazi biljnog i životinjskog podrijetla nađeni u slojevima luke. O tome vidi: S. Gluščević – M. Jurišić – R. Šoštarić – S. Vujčić Karlo, 2006, 147-161.

14 Pod starim fundusom misli se na materijal pronađen hidroarheološkim istraživanjima 1960-ih, 1970-ih i 1980-ih godina, a pod novim fundusom materijal pronađen od 2002. god. nadalje.

15 Vidi bilj. 7.

16 Vidi bilj. 7.

17 O tipovima dna amfora općenito vidi: V. Grace, 1961. Najpoznatiji oblik amfore je onaj sa šiljastim dnom, a autorica navodi kako je taj šiljak služio kao treća ručka, ispod težišta, koja se koristila pri okretanju težih posuda kako bi se iz njih izlivala tekućina. Također kaže kako bi ravno dno predstavljalo nepotrebno opterećenje, koje ne bi pružalo dovoljno čvrsto uporište za izlivanje tekućina, a i dodatno bi otežavalo slaganje robe u brodsko potpalublje. O prednosti zašiljenog ili zaobljenog dna u odnosu na ravno dno vidi: I. Radić Rossi – I. Senjanović – S. Rudan – J. Indof, 2004, 91-107. Naime autori navode kako je prednost zašiljenog ili zaobljenog dna u odnosu na ravno dno razlika u čvrstoći. Dokazano je da amfore s koničnim dnom puno bolje podnose vertikalno opterećenje, a šiljak još dodatno štiti amforu od vertikalnog opterećenja, dok su amfore s ravnim dnom gotovo dvostruko osjetljivije na vertikalno opterećenje. Međutim većina tzv. amfora ravnog dna ima rješenje kojim pokušava smanjiti vertikalno opterećenje. Naime u mnogim slučajevima se ni ne radi o pravom „ravnom dnu“, već je na suženo i zaobljeno ili zašiljeno dno nadodan prsten koji amforama omogućuje samostalno stajanje (amfore na prstenastoj nozi), ili je dno uvučeno (konkavno) kako bi se izbjegla ravna površina koja se pri udarcu lako lomi (amfore s prstenastim konkavnim dnom). Na isti način je riješen problem vertikalnog opterećenja kod izdvojenih primjeraka amfora koje možemo pripisati amforama tipa Forlimpopoli, gdje se uglavnom radi o prstenastom konkavno udubljenom dnu.

18 M. Jurišić, 2000, 20.

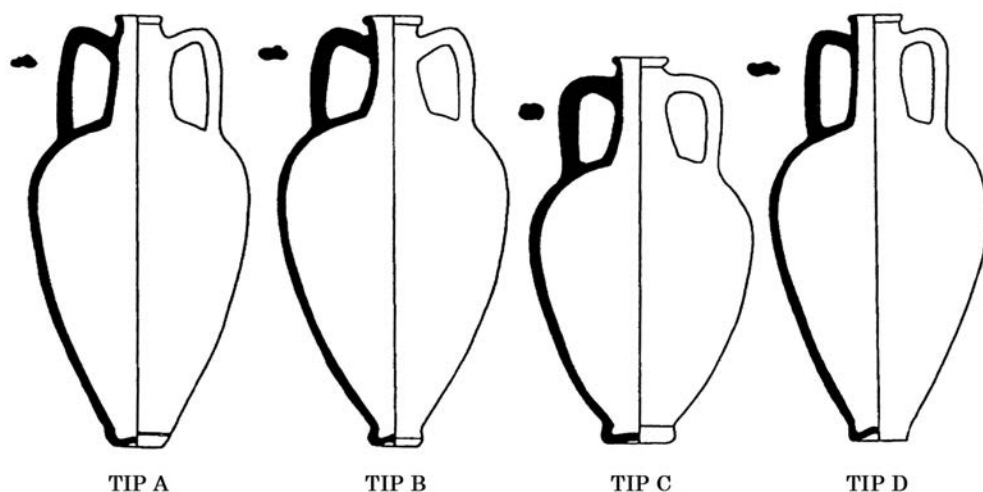
14 The old holdings refer to material discovered during underwater archaeological excavations in the 1960s, 1970s and 1980s, whereas the new holdings are material discovered from 2002 onwards.

15 See Note 7.

16 See Note 7.

17 For the types of amphorae bottoms in general, see: V. Grace, 1961. The best-known shape is the amphora with a tapered base, and the author notes that the taper served as a third handle, below the centre of gravity, which was used when rotating heavier vessels to pour liquid from them. She also says that a flat bottom posed an unnecessary load, which would not have provided a sufficient firm restraint when pouring liquids, and would further aggravate stacking goods under a ship deck. Concerning the advantages of a tapered or rounded bottom with respect to the flat bottom, see: I. Radić Rossi – I. Senjanović – S. Rudan – J. Indof, 2004, 91-107. The authors state that the advantage of a tapered or rounded bottom in relation to the flat bottom is the difference in strength. It has been proved that conical-bottomed amphorae bear vertical loads much better, whereas the tapered bottom additionally protects the amphora against vertical loads, while the flat-bottomed amphorae are almost twice as sensitive to vertical loads. However, most of the so-called flat-bottomed amphorae are designed as to reduce the vertical load. In fact, in many cases, this is not actually a true „flat bottom“, but instead a ring added onto the narrowed and rounded or tapered bottom which allows the amphora to stand on its own (amphorae on an annular leg), or the recessed bottom (concave) to avoid flat surfaces that easily break upon impact (amphorae with an annular concave bottom). In the same way, a solution is found to the problem of the vertical load in isolated specimens of amphorae that can be attributed to the Forlimpopoli type amphorae, where it mainly concerns the annular concave depressed bottom.

18 M. Jurišić, 2000, 20.



Slika 3. Podtipovi amfora ravnog dna A-D

Figure 3. Subtypes of the A-D flat-bottomed amphorae

prema / according to: T. Aldini

tipa Dressel 29, a pretpostavlja se da su u trgovini vinom zamijenile amfore tipa Dressel 6A.¹⁹ Sjevernoitalske amfore ravnog dna u literaturi su još poznate kao amfore tipa Forlimpopoli, nazvane prema lokalitetu *Forum Popili* (današnji Forlimpopoli) u sjeveroistočnoj talijanskoj pokrajini Emilia Romagna. U prvim stoljećima carstva grad smješten uz *Via Emilia* doživljava veliki gospodarski razvoj zahvaljujući poljoprivrednoj aktivnosti i prisutnosti peći za proizvodnju amfora za vino. Osim primarne proizvodnje započete u radioničkim centrima Emilie Romagne, ovakve amfore su se proizvodile i drugdje (Etruria, Umbria, Picenum, Veneto).²⁰ Isti tip amfore s atenske Agore donosi H. Robinson i datira ga u sredinu 3. st. (grupa K114).²¹ U nekim drugim klasifikacijama poznate su kao Mid Roman Amphora 13,²² Peacock & Williams Cl. 42,²³ Panella 41.²⁴

Prvi koji se bavio ovim tipom amfora bio je talijanski arheolog T. Aldini koji je, na temelju arheoloških nalaza s područja Forlimpopolija, napravio i prvu tipologiju.²⁵ Podijelio ih je u četiri podtipa A, B, C i D, koja su s nekim manjim razlikama dosta slična. Sva četiri podtipa imaju više ili manje udubljeno (konkavno) dno, najčešće s prstenastim ojačanjem. Tijelo podtipa A, B i D je jajolikog oblika koje se u donjem dijelu sužava, dok je tijelo podtipa C više zaobljeno. Vrat je koničan, na granici s cilindričnim kod podtipova A i D, s jednostavnim prstenasto zaobljenim obodom koji je kod podtipa B malo izvijen. Trakasto narebrene ručke se uzdižu okomito od zaobljenog ramena, izvirući malo iznad spoja s vratom kod podtipova A i B, dok je kod podtipova C i D pregib više pravokutan (Sl. 3).²⁶

shape, they are most similar to the Dressel 29 type amphorae, and the assumption is that in the wine trade they were replaced with Dressel 6A type amphora.¹⁹ The North-Italic flat-bottom amphorae is mentioned in literature also as the Forlimpopoli type amphorae, named after the site *Forum Popili* (today Forlimpopoli) in the north-eastern Italian region of Emilia Romagna. In the first centuries of the empire, the town situated along the *Via Emilia* experienced major economic development thanks to agricultural activities and the presence of furnaces for the production of wine amphorae. In addition to primary production started in the workshop centres of Emilia Romagna, these amphorae were produced elsewhere (Etruria, Umbria, Picenum, Veneto).²⁰ The same type of amphorae from the Athenian Agora was presented by H. Robinson and dates back to the mid-3rd century (group K114).²¹ In other classifications they are known as the Mid Roman Amphora 13,²² Peacock & Williams Cl. 42,²³ Panella 41.²⁴

The first who dealt with this type of amphora was the Italian archaeologist T. Aldini who, based on archaeological finds from the area of Forlimpopoli, devised the first typology.²⁵ He divided it into four subtypes A, B, C and D, although quite similar except for some minor differences. All four subtypes have a somewhat concave bottom, usually with an annular reinforcement. The bodies of subtypes A, B and D are an ovoid shape, tapered in the lower part, whereas the body of subtype C is more rounded. The neck is conical, bordering a cylindrical shape for subtypes A and D, with a simple annular rounded rim which for subtype B

19 M. A. Cipriano – M. B. Carrè, 1989, 88.

20 M. A. Cipriano – M. B. Carrè, 1989, 88-90.

21 H. Robinson, 1959, 69.

22 J. A. Riley, 1979, 197, Fig. 85 (D256).

23 D. P. S. Peacock – D. F. Williams, 1986, 180-181.

24 Prema M. Jurišić, 2000, 20.

25 T. Aldini, 1978, 236-245.

26 T. Aldini, 1978, 241-243.

19 M. A. Cipriano – M. B. Carrè, 1989, 88.

20 M. A. Cipriano – M. B. Carrè, 1989, 88-90.

21 H. Robinson, 1959, 69.

22 J. A. Riley, 1979, 197, Fig. 85 (D256).

23 D. P. S. Peacock – D. F. Williams, 1986, 180-181.

24 According to M. Jurišić, 2000, 20.

25 T. Aldini, 1978, 236-245.

Visina amfore varira, a prosječno iznosi 50 - 65 cm, dok je prosječna širina 30 - 35 centimetara.²⁷

Pronalazak novih značajnih arheoloških nalaza navedenog tipa amfore potaknuo je naknadnu nadopunu tipologije. Tako je Aldini podtip A podijelio na dvije grupe, podtipove A1 i A2, a dodao je i jedan novi podtip – E (Sl. 4).²⁸ Također je detaljnije razradio i vremensko trajanje pojedinog podtipa. Tako podtipove A1, A2 i B datira u sredinu 1. st. - početak 2. st., podtipove C i E u 2. st. i podtip D u kraj 2. st. - sredina 3. stoljeća.²⁹ Kod nekih autora nalazimo i malo raniju dataciju početka njihove proizvodnje već od kraja 1. st. pr. Kr.³⁰

Premda su spomenute amfore ravnog dna tipa Forlimpopoli osobito važne za naše prostore, ipak valja kazati kako je sistematizaciju dijela amfora ovog tipa napravila i E. Lapadula, ali na primjercima pronađenim u dolini Tibera na prostoru kojeg su zauzimale Augustove regije VI i VII.³¹ Tip karakterističan za unutrašnje centralno područje Apeninskog poluotoka je bila amfora tipa Spello, inače poznata i kao *Ostia III*, 369-370/*Ostia II*, 521.³² Isti se tip proizvodio na središnjem sjevernom tirenskom području, gdje su poznate kao amfore tipa Falerno.³³ Sve se stavlja u kontekst italske proizvodnje vina tijekom 1. i 2. stoljeća, a rad bazira kako na tipološkoj tako i na mineraloškoj analizi primjeraka.

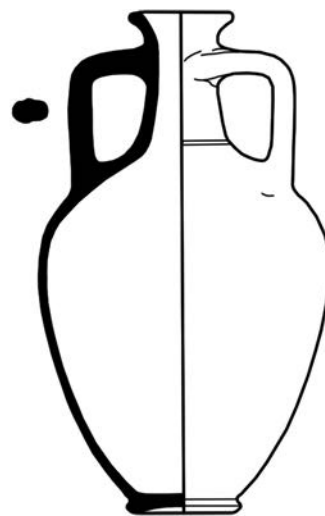
Distinkciju je radila prema morfološkom obliku podijelivši ih na pet grupa (A-D) od kojih sve osim posljednje (D) imaju podpodjelu.³⁴ Lapadula međutim radi i tipologiju oboda,³⁵ vrata,³⁶ ručki³⁷ i dna.³⁸ Važno je napomenuti kako su veličine amfora, unatoč istim tipološkim karakteristikama, vrlo različite. Tako se njihov kapacitet kreće od samo 9 pa sve do 20,65 litara.³⁹

Glavna obilježja amfora ravnog dna iz Zatona su tijelo jajolikog oblika koje se u donjem dijelu sužava prema ravnom, najčešće prstenasto ojačanom, i konkavnom dnu. Na naglašeni obod, koji je izveden u nekoliko varijanti, nastavlja se manje ili više konični do cilindrični vrat, s jačim ili slabijim ojačanjem u visini gornje baze

Slika 4. Podtip amfore ravnog dna E

Figure 4. Subtype of the E flat-bottomed amphora

prema / according to: T. Aldini



TIP E

is slightly everted. The ribbed strap handles rise vertically from the rounded shoulder, protruding slightly above the joint of the neck for subtypes A and B, while for subtypes C and D the bend is more right-angled (Fig. 3).²⁶ The heights of the amphorae vary, and averages 50-65 cm, while the average width is 30-35 centimetres.²⁷

The discovery of new important archaeological finds of the specified type of amphorae prompted a subsequent updating of the typology. Therefore, the Aldini subtype A is divided into two groups, subtypes A1 and A2, and a new subtype – E was added (Fig. 4).²⁸ He also elaborated in more detail the duration of the period of each subtype. Therefore, subtypes A1, A2 and B were dated from the mid-1st century to the beginning of the 2nd century, subtypes C and E belonged to the 2nd century, and subtype D from the end of the 2nd century to the mid-3rd century.²⁹ We have noticed that some authors have dated the beginning of their production a little earlier, i.e. as early as the 1st century B.C.³⁰

Although the mentioned Forlimpopoli type flat-bottom amphorae are especially important for our region, nonetheless, it is worth mentioning that the systematisation of some of the amphorae of this type was carried out by E. Lapadula, specifically for the specimens found in the valley of the Tiber in the area occupied by the Augustan regions VI and VII.³¹ The type that is characteristic of the inner central area of the Apennine Peninsula was the Spello type amphora, otherwise known as *Ostia III*, 369-370/*Ostia II*, 521.³² This type was produced in the central-northern Tyrrhenian area, which is

27 A. Starac, 2008, 97.

28 T. Aldini, 1999, 24.

29 T. Aldini, 1999, 45.

30 A. Caravale – I. Toffoletti, 1997, 109.

31 E. Lapadula, 1997, 127-156.

32 E. Lapadula, 1997, 127, gdje citira C. Panellu, 1989, 144.

33 P. Arthur, 1987, 402; P. Arthur – D. Williams, 1992, 250.

34 E. Lapadula, 1997, 137, Fig. 8. Valja naglasiti kako je morfološkoj analizi E. Lapadula pristupila vrlo minuciozno bazirajući se na klasifikaciji amfora iz Narbonske Galije koju je napravio P. Laubenheimer, 1985, 233-243, navodeći ukupno dvanaest mjera koje su joj, uz ostalo, bile osnova za izračun kapaciteta amfora.

35 E. Lapadula, 1997, 132, Fig. 3.

36 E. Lapadula, 1997, 133, Fig. 4.

37 E. Lapadula, 1997, 134-135, Fig. 5-6.

38 E. Lapadula, 1997, 136, Fig. 7.

39 E. Lapadula, 1997, 145, Fig. 22. Sve je veličine preračunala u rimske *sextariae* čija je zapremina iznosila 0,545 litara. S obzirom na zapreminu, podijelila ih je u tri skupine: velike čija zapremina iznosi 29 - 37 *sextaria*, srednje sa zapreminom 23 - 26 *sextaria* i male čija zapremina iznosi oko 16 *sextaria*.

26 T. Aldini, 1978, 241-243.

27 A. Starac, 2008, 97.

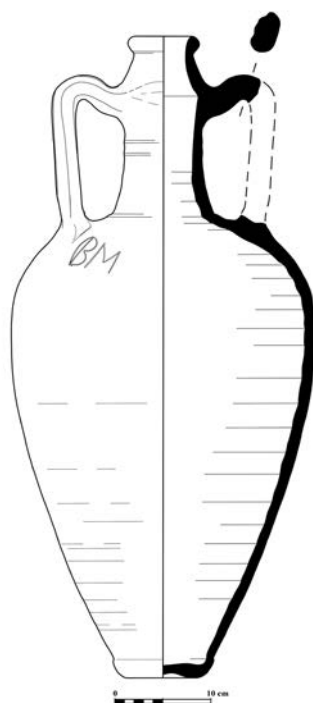
28 T. Aldini, 1999, 24.

29 T. Aldini, 1999, 45.

30 A. Caravale – I. Toffoletti, 1997, 109.

31 E. Lapadula, 1997, 127-156.

32 E. Lapadula, 1997, 127, where C. Panella, 1989, 144 is cited.



Slika 5. Amfora inv. br. 1887H

Figure 5. Amphora inv. no. 1887H

crtež / drawing: J. Belevski

146 ručka. Prijelaz vrata u rame različito je riješen. Ponekad je to blagi prijelaz, ali ima i onih kojima je taj prijelaz oštiji i naglašen najčešće plitkom kanelirom. Na rame se gotovo pod pravim kutom naslanjaju dvije trakasto narebrene ručke, koje u gornjem dijelu imaju koljenasti pregib (Sl. 5). U najvećem broju slučajeva tijelo amfora je glatko dok kod nekoliko primjeraka nalazimo manje ili više narebreno tijelo, gotovo u pravilu samo donji dio. Samo u jednom slučaju rame je riješeno višestrukim oštrim lomovima (inv. br. 3361H).

Nakon što je pregledan materijal starog i novog fundusa u depoima Arheološkog muzeja Zadar, izdvojeno je ukupno **49**, uglavnom necjelovitih primjeraka, amfora koje najvjerojatnije možemo svrstati u tip amfora s ravnim dnom i klasificirati ih kao tip Forlímpopoli.⁴⁰ Iz starog fundusa pretežno su sačuvani vratovi s obodom amfora što je posljedica pristupa starijim istraživanjima pri čemu ručke, a osobito ulomci trbuha, gotovo i nisu vađeni jer im se nije pridavala velika važnost. Potpuno novi i vrlo sistematičan pristup istraživanjima od 2002. god. nadalje rezultirao je, među ostalim, i nalazima tri cjelovite amfore ravnog dna od čega je jedna dijelom rekonstruirana (inv. br. 1887H).⁴¹

40 U radu nisu obrađene, ni u katalog uvrštene, amfore ravnog dna tipa Crikvenica jer će one biti posebno predstavljene i objavljene na III. Međunarodnom arheološkom kolokviju „Rimske keramičarske i staklarske radionice. Proizvodnja i trgovina na jadranskom prostoru“ u Crikvenici. Ovom tipu amfora ravnog dna pripada 11 primjeraka iz slojeva antičke luke u Zatonu kod Zadra, od čega 10 primjeraka starom, a samo 1 primjerak novom fundusu.

41 Upravo zbog različitog pristupa u starom ciklusu istraživanja nije nađen ni jedan cijeli primjerak dok u novom ciklusu imamo čak devet primjeraka razne tipologije, od kojih su neke i rekonstruirane.

known for the Falerno type amphora.³³ Everything is put into the context of Italian wine production during the first and second centuries, a work based on both the typological and the mineralogical analysis of specimens.

The distinction is based on the morphological form and was divided into five groups (A-D) of which all but the last (D) have a subdivision.³⁴ However, Lapadula also devises a typology of the rim,³⁵ the neck,³⁶ handles³⁷ and bottom.³⁸ It is worth noting that the sizes of amphorae, despite the same typological characteristics, are very different. Meaning that their capacities range from just 9 up to 20.65 liters.³⁹

The main features of the flat-bottomed amphora from Zaton are their ovoid shaped body that in the lower part becomes narrower towards the flat, most often, annular reinforcement, and a concave bottom. From the pronounced rim, with several shape variants, the shape continues somewhat conical up to the cylindrical neck, with a somewhat stronger or weaker reinforcement situated at the same level as the handle base. The transition from the neck to the shoulder varies. Sometimes it is a smooth transition, but there are some amphorae where the transition is sharper and more pronounced, usually accompanied by a shallow fluting. Leaning on the shoulder at almost right angles are two ribbed strap handles, which in the upper part have an elbow bend (Fig. 5). In most cases, the body of the amphora is smooth while in a few instances we find more or less ribbed bodies, and almost as a rule, only the lower part. Only in one case does the shoulder have multiple sharp inflections (inv. no. 3361H).

Having viewed the material from old and new holdings in the depots of the Zadar Museum of Archaeology, a total of **49** were selected, mainly the specimens with missing parts, the amphorae that can probably be categorized as the flat-bottomed type amphora and classified as the Forlímpopoli type.⁴⁰ The old holdings contain

33 P. Arthur, 1987, 402; P. Arthur – D. Williams, 1992, 250.

34 E. Lapadula, 1997, 137, Fig. 8. It should be noted that the morphological analysis was conducted by E. Lapadula very meticulously based on the classification of amphorae from Narbonne Gaul made by P. Laubenheimer, 1985, 233-243, citing a total of twelve measures that were for her, among other things, the basis for calculating the capacity of amphorae.

35 E. Lapadula, 1997, 132, Fig. 3.

36 E. Lapadula, 1997, 133, Fig. 4.

37 E. Lapadula, 1997, 134-135, Fig. 5-6.

38 E. Lapadula, 1997, 136, Fig. 7.

39 E. Lapadula, 1997, 145, Fig. 22. She converted all the sizes into the Roman *sextaria* where the volume amounted to 0.545 litres. With respect to the capacity, she divided them into three categories: high, with a volume amounting to 29-37 *sextaria*, medium with a volume of 23-26 *sextaria* and small with a volume of about 16 *sextaria*.

40 The paper does not treat, nor does the catalogue list Crikvenica type flat-bottomed amphorae, as they will be presented and published separately at the 3rd International Archaeological Colloquium „Roman Ceramic and Glass Manufacturers. Production and Trade in the Adriatic Region“, in Crikvenica. Eleven specimens from the layers of the ancient port in Zaton near Zadar belong to this type of flat-bottomed amphora, of which 10 specimens belong to the old holdings and only 1 specimen belongs to the new holdings.

Od 49 amfora, čak za njih pet iz starog fundusa (od ukupno 27) nemamo ni podatke o godini,⁴² pa stoga možemo pretpostaviti da najvjerojatnije pripadaju najranijim nalazima iz kraja šezdesetih godina 20. stoljeća. Za dvije amfore iz novog fundusa (od ukupno 22) nemamo podatke o kvadrantu i sloju.⁴³

Relevantni stratigrafski podatci (kvadrant i sloj) zabilježeni su samo za amfore iz novog fundusa.⁴⁴ Od 22 amfore iz novog fundusa najveći broj, ukupno jedanaest, pripada sloju 4, šest sloju 3 i tri sloju 6 (Grafikon 1).⁴⁵ U svim slojevima luke, pa tako i u slojevima 3 i 4, pronađen je kronološki dobro datiran materijal koji u potpunosti korespondira s vremenom datiranja amfora ravnog dna. Tako npr. u sloju 4, među ostalim, nalazimo zdjelu istočne sigilate B tipa Hayes 80 koja se datira u vrijeme 80. - 150. god.,⁴⁶ zdjelu istočne sigilate B tipa Hayes 60 koja se datira u vrijeme 50./60. - 150. god.,⁴⁷ zdjelu sjevernoafričke proizvodnje tipa Hayes 8A koja se datira u vrijeme 80./90. - 160. god.,⁴⁸ zdjelu sjevernoafričke proizvodnje tipa Hayes 9A koja se datira u vrijeme 100. - 160. godine.⁴⁹ Isto tako u sloju 3 nalazimo zdjelu sjevernoafričke proizvodnje tipa Hayes 23B koja se datira u vrijeme od sredine 2. st. - početka 3. stoljeća.⁵⁰

Najveći broj amfora pronađen u luci pripada amforama ravnog dna tipa Forlimpopoli, ali osim njih pronađeno je još nekoliko poznatih tipova⁵¹ koji su zastupljeni s jednim ili s više primjeraka.⁵² Sudeći po broju nalaza po slojevima, može se zaključiti da je najintenzivnije vrijeme korištenja luke bilo tijekom slojeva 6, 5 i 4 koji su nastali u vremenskom razdoblju druge polovice 1. st. i u 2. stoljeću. Izdvojeno je ukupno 11 tipova amfora koje su datirane u

mostly preserved necks with the rim of an amphora which is the result of approach in the older excavations where the handles, and in particular body fragments, most often were not extracted because they were not attributed great importance. Since 2002, a completely new and very systematic approach to excavations resulted, among other things, in findings that provided three whole flat-bottomed amphorae of which one was reconstructed (inv. no. 1887H).⁴¹

Of the 49 amphorae, as many as five (out of 27) from the old holdings provide no information as to their age,⁴² hence we can assume most likely that they belong to the earliest finds from the 1960s. There is no information on the square or layer for two (out of 22) amphorae from the new holdings.⁴³

Relevant stratigraphic data (square and layer) were recorded only for the amphorae from the new holdings.⁴⁴ Of the 22 amphorae from the new holdings, the greater number, a total of eleven, belongs to layer 4, six to layer 3 and three to layer 6 (Graph 1).⁴⁵ Chronologically well-dated material that fully corresponds to the dating of the flat-bottomed amphorae was found in all layers of the port, so too in layers 3 and 4. Thus, for example, we find in layer 4, among other things, a bowl of Eastern Sigillata B type Hayes 80 dating from 80-150,⁴⁶ a bowl of Eastern Sigillata B type Hayes 60, dating from 50/60-150,⁴⁷ a bowl typical of North African ceramic production of type Hayes 8A, dating from 80/90-160,⁴⁸ a bowl typical of North African ceramic production of type Hayes 9A, dating from 100-160.⁴⁹ Moreover, we find in layer 3 a bowl typical of North African

42 Inventarni brojevi 3691H, 4324H, 4325H, 4326H i 4327H.

43 Radi se o amforama s inventarnim brojevima 2955H koja je pronađena pregledom okolnog terena i 4458H koja je pronađena u površinskom sloju. Ni jedna ni druga nemaju značajniju kronološku vrijednost s obzirom da se radi o vrlo plitkom moru (2 - 3 m) gdje je djelovanje juga izrazito jako, zbog čega se stvaraju veliki valovi i dolazi do pomjeranja pijeska u površinskom sloju.

44 Pri istraživanju se koristila klasična stratigrafska metoda kod koje su arbitrarni otkopni slojevi bili debeli 10 cm (0 - 10 cm = sloj 1, 11 - 20 cm = sloj 2, 21 - 30 cm = sloj 3 itd.). Razlikujemo dva procesa iskopavanja: stratigrafski i arbitrarni. Proces stratigrafskog iskopavanja je kretanje uvijek unutar jedne, iste stratigrafske jedinice pri kojem odstranjujemo arheološke slojeve u skladu s mikoreljefom lokaliteta. Kada ne opažamo takve stratigrafske jedinice ili kad je stratigrafsko iskopavanje nemoguće, upotrebljavamo arbitrarni proces pri kojem se odstranjuju arheološki slojevi unaprijed određene debljine 5 - 10 centimetara.

45 Pet amfora koje imaju oznaku da su iz sloja 7 (dvije amfore) i sloja 8 (tri amfore) pronađene su u KV. C koji je većim dijelom bio postavljen na lukobran i povišen za 40 cm u odnosu na KV. A i KV. B. Zbog toga se podatci o materijalu iz KV. C moraju koristiti uz „kalibriranu“ stratigrafiju (oduzima se 40 cm, odnosno 4 sloja), pa se onda može kazati kako i navedeni primjerci s oznakom sloj 7 i sloj 8 zapravo pripadaju sloju 3 i sloju 4 (sloj 7 = sloj 3; sloj 8 = sloj 4). Za dvije amfore nemamo zabilježen stratigrafski podatak (kvadrant i sloj), jedna je nađena pregledom okolnog terena, a druga je iz površinskog sloja (vidi bilj. 43).

46 J. W. Hayes, 1986, 69-70.

47 J. W. Hayes, 1986, 64.

48 J. W. Hayes, 1972, 33-35.

49 J. W. Hayes, 1972, 35-37.

50 J. W. Hayes, 1972, 45-48.

51 U luci je nađen i jedan manji broj amfora za koje do sada nisu pronađene analogije.

52 Više o drugim tipovima amfora koje potječu iz antičke luke u Zatonu vidi: D. Taras (u tisku).

41 It is precisely because of the different approaches in the old cycle of research that not a single whole specimen was found, whereas the new cycle has nine specimens of various typologies, some of which have been reconstructed.

42 Inventory numbers 3691H, 4324H, 4325H, 4326H and 4327H.

43 It relates to amphorae designated by the inventory numbers 2955H, which was found surveying the surrounding terrain, and 4458H, which was found in a surface layer. Neither have significant chronological value given that they were found in very shallow waters (2-3 m) where the action of the southerly wind called "jugo" is exceptionally strong, creating large waves and resulting in the movement of sand in the surface layer.

44 During the excavation, a classical stratigraphic method was used where the arbitrary excavated layers were 10 cm thick (0-10 cm = layer 1, 11-20 cm = layer 2, 21-30 cm layer = 3, etc.). We differentiate two excavation processes: stratigraphic and arbitrary. The stratigraphic excavation process involves movement always within the one and same stratigraphic unit, where we remove archaeological strata in accordance with the microrelief of the particular site. When such stratigraphic units are not observed or when stratigraphic excavation is impossible, we use the arbitrary process whereby the archaeological layers are removed in accordance with predetermined thicknesses of 5-10 centimetres.

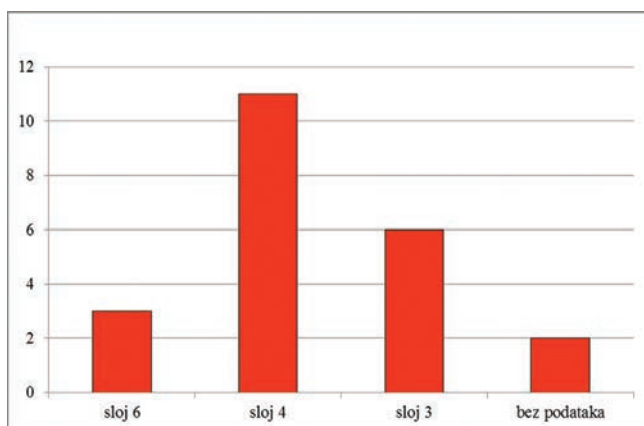
45 Five amphorae that are marked as being from layer 7 (two amphorae) and layer 8 (three amphorae) were found in SQ. C, which was largely placed on the breakwater and elevated by 40 cm compared to SQ. A and SQ. B. Therefore, the data on material from SQ. C must be used with the „calibrated“ stratigraphy (subtracted by 40 cm or 4 layers), hence it can be said that so too the above specimens designated as layer 7 and layer 8, in fact, belong to layer 3 and layer 4 (layer 7 = layer 3; layer 8 = layer 4). For two amphorae we have no recorded stratigraphic data (square and layer), one was found surveying the surrounding terrain, and the other was from the surface layer (see Note 43).

46 J. W. Hayes, 1986, 69-70.

47 J. W. Hayes, 1986, 64.

48 J. W. Hayes, 1972, 33-35.

49 J. W. Hayes, 1972, 35-37.



vrijeme od 1. st. pr. Kr. do kraja 3. st. (Grafikon 2). Od tih jedanaest tipova za njih 7 imamo relevantne stratografske podatke (kvadrant i sloj), dok je njih 4 bez konteksta.⁵³ Najveći broj amfora pripada slojevima od 3 do 6 u vrijeme 1. i 2. st., koje u potpunosti korespondira s vremenom datiranja amfora ravnog dna.

Navedenim primjercima (ukupno 49) koje smo pripisali amforama ravnog dna, u kulturnim slojevima luke nađeno je i 11 primjeraka koji se mogu klasificirati kao amfore ravnog dna tipa Crikvenica,⁵⁴ koje će biti posebno obrađene i naknadno objavljene (Sl. 6).⁵⁵

Među 49 amfora, tri su cjelovite, odnosno dvije imaju sve nužne elemente za rekonstrukciju,⁵⁶ dok jednoj nedostaje samo dno.⁵⁷ Od ostalih kod 20 primjeraka sačuvan je samo vrat, eventualno s početkom ramena,⁵⁸ kod 11 primjeraka imamo sačuvan vrat s ramenom,⁵⁹ kod četiri primjerka nalazimo vrat s ramenom, ali bez oboda,⁶⁰ samo dva primjerka imaju dio vrata⁶¹ i dva primjerka imaju samo obod ili dio oboda.⁶² Kod tri primjerka sačuvano je dno s tijelom,⁶³ a kod četiri primjerka je sačuvano samo

Grafikon 1. Broj amfora po slojevima

Graph 1. Number of amphorae in the layers

prirredila / prepared by: D. Romanović

ceramic production of type Hayes 23B, dating from the time of the mid-2nd century to the beginning of the 3rd century.⁵⁰

The majority of amphorae found in the port are the Forlimpopoli type flat-bottomed amphorae, but apart from these, several other known types were found,⁵¹ which are represented by one or more specimens.⁵² Judging by the number of findings per layer, the conclusion is that the most intensive use of the port was during layers 6, 5 and 4, which were formed in the period of the second half of the 1st century and in the 2nd century. A total of 11 types of amphorae were selected dating to the period from the 1st century B.C. to the end of the 3rd century (Graph 2). Of these eleven types, we have relevant stratigraphic data (square and layer) for 7 of them, whereas no context can be found for 4 of them.⁵³ The greatest number of amphorae belongs to layers 3-6 during the period of the 1st and 2nd century, which fully corresponds to the period of dating for the flat-bottomed amphorae.

Apart from the mentioned specimens (total of 49) with the characteristics of flat-bottomed amphorae, in the cultural layers of the port 11 specimens were found that can be classified as Crikvenica type flat-bottomed amphorae,⁵⁴ which will be treated separately and subsequently published (Fig. 6).⁵⁵

Among the 49 amphorae, 3 are whole, meaning that 2 have all the necessary elements for reconstruction,⁵⁶ whereas 1 is missing the bottom.⁵⁷ Of the remaining, 20 specimens only the neck has been preserved, eventually

53 To su: Dressel 2-4 Egyptian (sloj 6), Portorecanati (sloj 6), Dressel 43 (sloj 5), Rhodian (sloj 4), Gauloise 4 (sloj 4), Dressel 2-4 Cos (sloj 2, 3, 4 i 6), Forlimpopoli (sloj 3, 4 i 6), Agora M125 (bez konteksta), Corinth 243 (bez konteksta), Cretoise 1 (bez konteksta) i Leptiminus 2 (bez konteksta).

54 Najviše zasluga za istraživanje ovog tipa amfora na našem području pripada G. Lipovac Vrkljan koja od 2006. god. provodi sustavna arheološka istraživanja rimske keramičarske radionice u Crikvenici (*Ad turres*), gdje se proizvodio navedeni tip amfora. Vlasnik radionice bio je Sekst Metilije Maksim, a njegovo ime je ostalo sačuvano na građevinskom materijalu, uglavnom krovnom crijevu (*tegulae*). Pečat je isti na svim proizvodima i glasi: *De salt(u) Sex(ti) M(e) tili Max(im)i*. Više o samim istraživanjima i ulomcima tegula s pečatom vidi: G. Lipovac Vrkljan, 2007; 2007a, 83-87; G. Lipovac Vrkljan – B. Šiljeg, 2008, 88-92; 2009, 108-113; 2010, 70-76; G. Lipovac Vrkljan, 2011, 3-18. Isti pečat pronađen je na sedam ulomaka krovnog crijeva pri zaštitnim arheološkim istraživanjima 2006. god. u Ulici don Vida Dunatova u mjestu Preku na otoku Ugljanu. O tome vidi: M. Jurjević, 2010, 57-80.

55 Vidi bilj. 40.

56 Inventarni brojevi 1877H i 2046H.

57 Inventarni broj 3366H.

58 Inventarni brojevi 2064H, 2096H, 2397H, 2473H, 2913H, 3348H, 3497H, 4179H, 4180H, 4316H, 4317H, 4319H, 4320H, 4321H, 4326H, 4334H, 4364H, 4422H, 4458H i 5136H.

59 Inventarni brojevi 1577H, 2047H, 3345H, 3349H, 3361H, 3691H, 4182H, 4318H, 4323H, 4324H i 4325H.

60 Inventarni brojevi 2955H, 3364H, 4177H i 5138H.

61 Inventarni brojevi 4327H i 4752H.

62 Inventarni brojevi 465H i 1237H.

63 Inventarni brojevi 2950H, 2954H i 3694H.

50 J. W. Hayes, 1972, 45-48.

51 Also found in the port was a small number of amphorae, the analogies of which have not been found so far.

52 For more on other types of amphorae dating from the ancient port in Zaton, see: D. Taras (currently being printed).

53 They are Dressel 2-4 Egyptian (layer 6), Portorecanati (layer 6), Dressel 43 (layer 5), Rhodian (layer 4), Gauloise 4 (layer 4), Dressel 2-4 Cos (layers 2, 3, 4 and 6), Forlimpopoli (layers 3, 4 and 6), Agora M125 (no context), Corinth 243 (no context), Cretoise 1 (no context) and Leptiminus 2 (no context).

54 Most of merit for researching this type of amphora in our region belongs to G. Lipovac Vrkljan who since 2006 has been carrying out systematic archaeological excavations of the Roman ceramic workshop in Crikvenica (*Ad turres*), where a specified type of amphora were produced. The owner of the workshop was Sextus Metillius Maximus, and his name is preserved on the construction material, mainly on the roofing tile (*tegulae*). The seal is the same on all products and reads as follows: *De salt(u) Sex(ti) M(e) tili Max(im)i*. For more about the research and fragments of the tegulae carrying the seal, see: G. Lipovac Vrkljan, 2007; 2007a, 83-87; G. Lipovac Vrkljan – B. Šiljeg, 2008, 88-92; 2009, 108-113; 2010, 70-76; G. Lipovac Vrkljan, 2011, 3-18. The same seal was found on seven fragments of roof tiles during rescue archaeological excavations in 2006 in the street named Ulica don Vida Dunatova in Preko on the island of Ugljan. For more information, see: M. Jurjević, 2010, 57-80.

55 See Note 40.

56 Inventory numbers 1877H and 2046H.

57 Inventory number 3366H.

Grafikon 2. Pregled tipologije amfora iz Zatona s njihovim vremenom trajanja

Graph 2. View of the typology of amphorae from Zaton with their time duration

priređila / prepared by: D. Romanović

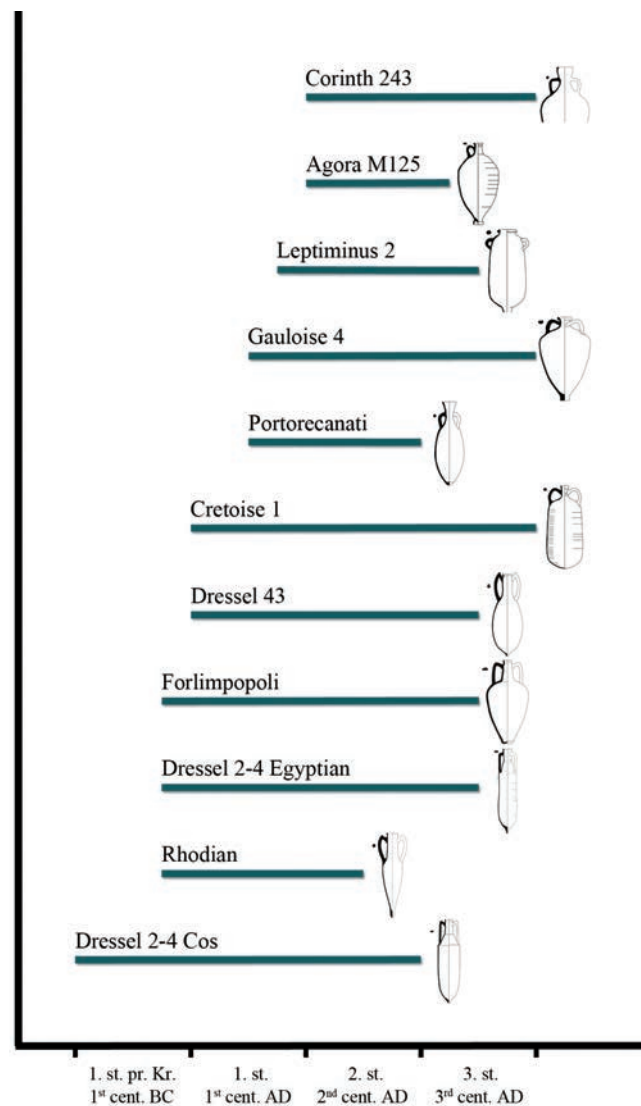
dno.⁶⁴ Bez obzira na sačuvanost sve njih je ipak bez sumnje tipološki moguće ubrojiti u amfore ravnog dna.

Amfore su u pravilu neukrašene, ali neki primjerci ipak imaju elemente koji ih na neki način odvajaju od drugih. Tako kod šest primjeraka nalazimo horizontalnu kaneluru na ramenu,⁶⁵ dok se kanelira na vratu javlja kod četiri primjerka, od čega su tri horizontalne⁶⁶ i u jednom slučaju valovita.⁶⁷

Na sačuvanim primjercima zamjetni su još neki elementi koji, kao i niz ostalih, mogu govoriti bilo o različitim proizvodnim centrima ili različitim majstorima. Tako su npr. ojačanja na vratu, u visini gornje baze ručka, različito riješena: najčešće poput blagog zadebljanja (17 primjeraka),⁶⁸ bikoničnog zadebljanja s izrazitim sljemenom (14 primjeraka),⁶⁹ rebra (4 primjerka)⁷⁰ ili je to vrlo oštar prijelaz bitno različit od svih ostalih (5 primjeraka).⁷¹

Značajan pokazatelj različitih radionica jesu i dna koja bez iznimke pripadaju amforama ravnog dna. Ukupno imamo 9 (18,4%) primjeraka dna, od čega su u četiri slučaja sačuvana samo dna, kod tri primjerka imamo i veći dio tijela, a imaju ga i dvije cjelovito sačuvane amfore. Kod amfora ovog tipa dna su u pravilu, pa tako i kod naših, konkavna. Pritom su udubljenja dublja ili plića, s umbom ili bez njega, a sastavni su im dio prstenasto ojačanje (Sl. 7). Možemo izdvojiti ukupno 4 tipa dna (Sl. 8): konkavno dno s jačim prstenastim ojačanjem i umbom u sredini (4 primjerka),⁷² konkavno dno s jačim prstenastim ojačanjem bez umba u sredini (1 primjerak),⁷³ konkavno dno s prstenastim ojačanjem i umbom u sredini (1 primjerak)⁷⁴ i stajaća ploha koja u sredini ima manje udubljenje (3 primjerka).⁷⁵ Osim tipološki dna se razlikuju i dimenzijama pa im se promjer kreće od 9,8 do 13,1 cm, dok se kod amfora sa stajaćom plohom kreće od 9,5 do 10,2 centimetra.

Unatoč svim izdvojenim elementima, teško je govoriti o ukupnim dimenzijama, a stoga i raditi komparacije veličina odnosno kapaciteta, s obzirom da samo dvije



with the beginning section of the shoulder,⁵⁸ 11 specimens come with a preserved neck and shoulder,⁵⁹ 4 specimens have only the neck and shoulder, but without the rim,⁶⁰ only 2 specimens have part of the neck⁶¹ and 2 specimens have only the rim or only part of the rim.⁶² Of these amphorae, 3 specimens have the bottom and body preserved,⁶³ and 4 specimens have only the bottom preserved.⁶⁴ Nonetheless, regardless of their degree of conservation, without doubt, all of them can be typologically listed as being the flat-bottomed amphora.

64 Inventarni brojevi 632H, 1466H, 2949H i 5137H.

65 Inventarni brojevi 2046H, 3361H, 4177H, 4179H, 4180H i 4324H.

66 Inventarni brojevi 3345H, 3691H i 4364H.

67 Inventarni broj 2473H.

68 Inventarni brojevi 1887H, 2046H, 2047H, 2064H, 2913H, 3348H, 3349H, 3361H, 3366H, 3497H, 4177H, 4179H, 4180H, 4318H, 4324H, 4326H i 4752H.

69 Inventarni brojevi 2096H, 2397H, 2955H, 3364H, 3691H, 4182H, 4316H, 4317H, 4323H, 4325H, 4364H, 4458H, 5136H i 5138H.

70 Inventarni brojevi 1577H, 4319H, 4320H i 4321H.

71 Inventarni brojevi 2473H, 3345H, 4327H, 4334H i 4422H.

72 Inventarni brojevi 632H, 1466H, 3694H i 5137H.

73 Inventarni broj 2950H.

74 Inventarni broj 2954H.

75 Inventarni brojevi 1887H, 2046H i 2949H.

58 Inventory numbers 2064H, 2096H, 2397H, 2473H, 2913H, 3348H, 3497H, 4179H, 4180H, 4316H, 4317H, 4319H, 4320H, 4321H, 4326H, 4334H, 4364H, 4422H, 4458H and 5136H.

59 Inventory numbers 1577H, 2047H, 3345H, 3349H, 3361H, 3691H, 4182H, 4318H, 4323H, 4324H and 4325H.

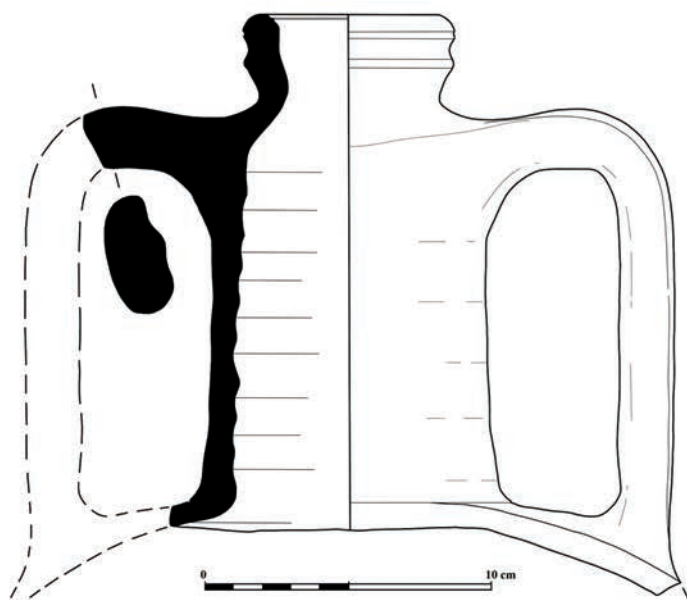
60 Inventory numbers 2955H, 3364H, 4177H and 5138H.

61 Inventory numbers 4327H and 4752H.

62 Inventory numbers 465H and 1237H.

63 Inventory numbers 2950H, 2954H and 3694H.

64 Inventory numbers 632H, 1466H, 2949H and 5137H.



Slika 6. Amfora tipa Crikvenica inv. br. 2908H

Figure 6. Type Crikvenica amphora inv. no. 2908H

crtež / drawing: J. Belevski, foto / photo: D. Romanović

amfore imaju sve sačuvane elemente. Zato se mogu pokušati analizirati vrijednosti samo još nekih elemenata kao npr. oblik ručki i oboda.

Oblik ručki možemo podijeliti na 3 tipa (Sl. 9): više ili manje povišene s koljenastim pregibom (32 primjerka),⁷⁶ vrlo blago povišene bez izraženog koljenastog pregiba (3 primjerka)⁷⁷ i vrlo blago povišene s pregibom pod pravim kutom (2 primjerka).⁷⁸ S obzirom na tip i položaj ručki, te oblik vrata, odnosno je li blago koničan ili cilindričan, većinu amfora tog tipa iz slojeva antičke luke u Zatonu možemo tipološki svrstati u Aldinijev podtip A.⁷⁹ Od ostalih podtipova mogu se još izdvojiti podtip B (inv. br. 2047H), podtip C (inv. br. 4177H) i podtip D (inv. br. 2046H i 4325H).

Promjer oboda je različit i kreće se od 6,3 do 9,7 cm, a visina oboda varira od 0,8 do 2,8 centimetra. S obzirom na tip oboda, ali i dna, dopušteno je pretpostaviti da su se proizvodile u različitim radioničkim centrima.⁸⁰ Od ukupno 37 sačuvanih primjeraka grla s obodom ili samo obod, izdvojili smo nekoliko varijanti koje možemo podijeliti na 8 tipova (Sl.

Amphorae are usually unornamented, but even so, some specimens do have elements that in some way separate them from others. Therefore, 6 specimens have horizontal fluting on the shoulder,⁶⁵ while the fluting on the neck is found on 4 specimens, of which 3 have horizontal fluting⁶⁶ and in one case, the flute is wavy.⁶⁷

Noticeably, preserved specimens have some other elements that, as with a number of others, provide evidence of various production centres or craftsmen. For example, the reinforcement of the neck, at the level of the upper handle base is differently crafted: most often like a slight thickening (17 specimens),⁶⁸ a biconical thickening with a pronounced ridge (14 specimens),⁶⁹ ribs (4 specimens)⁷⁰ or a very sharp transition essentially different from all other amphorae (5 specimens).⁷¹

An important indicator of the different workshops is also the bottom which without exception is attributed to flat-bottomed amphorae. In total, we have nine (18.4%) specimens of bottoms, of which in four cases only the bottom is preserved, three specimens have most of the body section, as do two complete preserved amphorae. Amphorae of this type, in general and as is the case for our specimen, have a concave bottom. Here too, the depressions are deeper or shallower, with or without an umbo, and the annular reinforcement is the integral part of them all (Fig. 7). Four types of bottoms can be specified (Fig. 8): concave

76 Inventarni brojevi 1577H, 1887H, 2047H, 2096H, 2397H, 2473H, 2913H, 2955H, 3345H, 3348H, 3361H, 3364H, 3366H, 3497H, 3691H, 4179H, 4180H, 4182H, 4316H, 4317H, 4318H, 4319H, 4320H, 4321H, 4323H, 4324H, 4326H, 4327H, 4334H, 4752H, 5136H i 5138H.

77 Inventarni brojevi 2064H, 3349H i 4177H.

78 Inventarni brojevi 2046H i 4325H.

79 Vrlo je vjerojatno da se amfore nađene u zatonskoj luci najvećim dijelom mogu pripisati tipu Forlimpopoli. Stoga smo i našu klasifikaciju pokušali uvrstiti pod različite tipove koje donosi T. Aldini. Moguće je naravno da se, ne samo u Zatonu nego i na drugim jadranskim nalazištima, pronađu i primjerci koji se mogu pripisati proizvođačkim centrima centralne Italije ili onima s tirenskog područja. To je, međutim, veliki posao koji bi svakako jednog dana trebalo obaviti kako bi se ustanovili najprije centri u kojima su se proizvodile, a samim time i prostori s kojih su trgovački brodovi dolazili u Jadran.

80 Vidi bilj. 79.

65 Inventory numbers 2046H, 3361H, 4177H, 4179H, 4180H and 4324H.

66 Inventory numbers 3345H, 3691H and 4364H.

67 Inventory number 2473H.

68 Inventory numbers 1887H, 2046H, 2047H, 2064H, 2913H, 3348H, 3349H, 3361H, 3366H, 3497H, 4177H, 4179H, 4180H, 4318H, 4324H, 4326H and 4752H.

69 Inventory numbers 2096H, 2397H, 2955H, 3364H, 3691H, 4182H, 4316H, 4317H, 4323H, 4325H, 4364H, 4458H, 5136H and 5138H.

70 Inventory numbers 1577H, 4319H, 4320H and 4321H.

71 Inventory numbers 2473H, 3345H, 4327H, 4334H and 4422H.



Slika 7. Tipovi dna

Figure 7. Types of bottoms

foto / photo: D. Romanović

10). **Tip 1** – ovaj tip oboda ima samo 1 amfora.⁸¹ Obod je visok i cilindričan te blago naglašen, promjera 6,3 cm i visine oboda 2,6 cm (Sl. 11A). **Tip 2** – ovaj tip oboda imaju 2 amfore.⁸² Obod je visok i blago koničan te naglašen, promjera 8,0 cm i visine oboda 2,4 do 2,6 cm (Sl. 11B). **Tip 3** – ovaj tip oboda imaju 4 amfore.⁸³ Obod je šireg promjera i prstenasto zadebljan te naglašen, promjera 8,2 do 9,7 cm i visine oboda 2,2 do 2,6 cm od čega dva oboda imaju nepravilan ovalan oblik (Sl. 11C). Možemo izdvojiti tri veličine oboda. **Tip 4** – ovaj tip oboda ima 5 amfora.⁸⁴ Obod je visok i blago zaobljen te naglašen, promjera 7,0 do 8,7 cm i visine oboda 2,2 do 2,8 cm (Sl. 11D). Možemo izdvojiti dvije veličine oboda. **Tip 5** – ovaj tip oboda ima 12 amfora.⁸⁵ Obod je visok i prstenasto zadebljan te naglašen, promjera 6,3 do 8,0 cm i visine oboda 2,2 do 2,8 cm, od čega dva oboda imaju nepravilan ovalan oblik (Sl. 11E). Možemo izdvojiti tri veličine oboda. **Tip 6** – ovaj tip oboda ima 5 amfora.⁸⁶ Obod je nizak i prstenasto zadebljan te naglašen, promjera 6,7 do 7,8 cm i visine oboda 1,2 do 2,2 cm, od čega jedan obod ima nepravilan ovalan oblik (Sl. 11F). Možemo izdvojiti dvije veličine oboda. **Tip 7** – ovaj tip oboda ima samo 1 amfora.⁸⁷ Obod je izvijen prema vani, kratak i prstenasto zaobljen promjera 7,8 cm i visine oboda 1,2 cm (Sl. 11G). Dio vrata se izvija od baze ručka. **Tip 8** – ovaj tip oboda ima ukupno 7 amfora.⁸⁸ Obod je kratak i prstenasto zaobljen promjera 7,0 do 7,7 cm i visine oboda 0,8 do 1,9 cm, od čega

81 Inventarni broj 1577H.

82 Inventarni brojevi 2913H i 3497H.

83 Inventarni brojevi 3691H, 4318H, 4321H i 4323H.

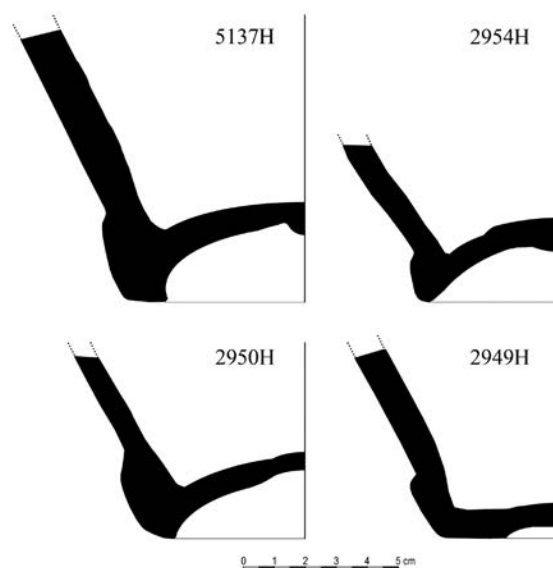
84 Inventarni brojevi 3345H, 4182H, 4317H, 4319H i 4422H.

85 Inventarni brojevi 465H, 1237H, 2096H, 2397H, 2473H, 4179H, 4316H, 4320H, 4327H, 4334H, 4364H i 5136H.

86 Inventarni brojevi 3348H, 3349H, 3366H, 4325H i 4326H.

87 Inventarni broj 2047H.

88 Inventarni brojevi 1887H, 2046H, 2064H, 3361H, 4180H, 4324H i 4752H.



Slika 8. Tipovi dna

Figure 8. Types of bottoms

crtež / drawing: I. Condić

bottom with a stronger annular reinforcement and an umbo in the middle (4 specimens),⁷² concave bottom with a stronger annular reinforcement without an umbo in the middle (1 specimen),⁷³ concave bottom with an annular reinforcement and an umbo in the middle (1 specimen),⁷⁴ and the standing surface which has a small depression in the middle (3 specimens).⁷⁵ In addition to the typological base, the different dimensions also stand out with diameters ranging from 9.8 to 13.1 cm, while in amphorae with a standing surface, the diameters range from 9.5 to 10.2 centimetres.

Despite all the featured elements, treating the overall sizes and therefore making comparisons with regard to size or capacity is difficult, given that only two amphorae have all their preserved elements. That is why, an attempt can be made to analyse only some other elements such as the shape of the handle and rim.

The shape of the handle can be divided into three types (Fig. 9): more or less elevated with an elbow bend (32 specimens),⁷⁶ slightly elevated without a pronounced elbow bend (3 specimens),⁷⁷ and slightly elevated with a bend at right angle (2 specimens).⁷⁸ In view of the type and position of the handle, and the shape of the neck, whether it is slightly conical or cylindrical, most of the amphorae of this type from the layers of the ancient port

72 Inventory numbers 632H, 1466H, 3694H and 5137H.

73 Inventory number 2950H.

74 Inventory number 2954H.

75 Inventory numbers 1887H, 2046H and 2949H.

76 Inventory numbers 1577H, 1887H, 2047H, 2096H, 2397H, 2473H, 2913H, 2955H, 3345H, 3348H, 3361H, 3364H, 3366H, 3497H, 3691H, 4179H, 4180H, 4182H, 4316H, 4317H, 4318H, 4319H, 4320H, 4321H, 4323H, 4324H, 4326H, 4327H, 4334H, 4752H, 5136H and 5138H.

77 Inventory numbers 2064H, 3349H and 4177H.

78 Inventory numbers 2046H and 4325H.



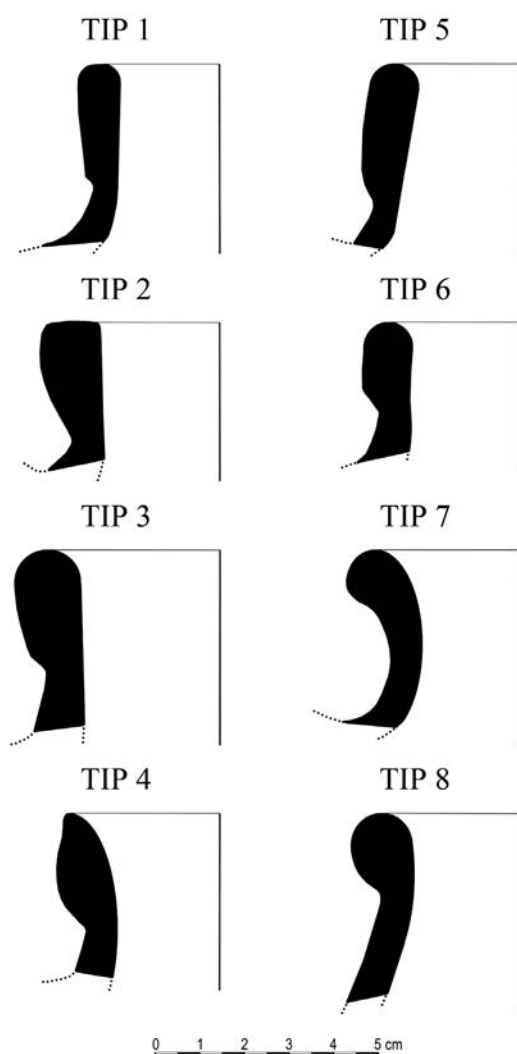
Slika 9. Tipovi ručka

Figure 9. Types of handles

foto / photo: D. Romanović

in Zaton can be typologically classified as the Aldini sub-type A.⁷⁹ Another subtype that can be pointed out is sub-type B (inv. no. 2047H), subtype C (inv. no. 4177H) and subtype D (inv. no. 2046H and 4325H).

The rim diameter differs ranging from 6.3 to 9.7 cm, with the rim height varying from 0.8 to 2.8 centimetres. Given the specific type of rim, and the base, the reasonable presumption is that they were produced in different workshops.⁸⁰ Of the total of 37 preserved specimens of necks with rim or rim only, we have selected several varieties that can be divided into eight types (Fig. 10). **Type 1** – only 1 amphora has this type of rim.⁸¹ The rim is high, cylindrical and slightly pronounced, with a diameter of 6.3 cm and a rim height of 2.6 cm (Fig. 11A). **Type 2** – 2 amphorae have this type of rim.⁸² The rim is high, slightly conical and pronounced, with a diameter of 8.0 cm and a rim height of 2.4 to 2.6 cm (Fig. 11B). **Type 3** – 4 amphorae have this type of rim.⁸³ The rim is wider in diameter, has a thickened and pronounced annular shape, with a diameter of 8.2 to 9.7 cm and a rim height of 2.2 to 2.6 cm of which 2 rims have an irregular oval shape (Fig. 11C). There are 3 different rim sizes. **Type 4** – 5 amphorae have this type of rim.⁸⁴ The rim is high, slightly rounded and pronounced, with a diameter of 7.0 to 8.7 cm and a rim



Slika 10. Tipovi oboda 1-8

Figure 10. Types of rims 1-8

crtež / drawing: I. Čondić

79 Most likely, the amphorae found in Zaton port are the Forlimpopoli type. Therefore, we have tried to place our classification under the different types established by T. Aldini. Of course, it is possible that not only in Zaton but also in other Adriatic sites, specimens relating to the production centres of central Italy or those from the Tyrrhenian area will be found. However, this is a big job, which, in any case, should be done one day in order to establish, first of all, the centres in which they were produced, and thus the locations from where merchant ships arrived into the Adriatic.

80 See Note 79.

81 Inventory number 1577H.

82 Inventory numbers 2913H and 3497H.

83 Inventory numbers 3691H, 4318H, 4321H and 4323H.

84 Inventory numbers 3345H, 4182H, 4317H, 4319H and 4422H.



Slika 11. Tipovi oboda 1-8

Figure 11. Types of rims 1-8

foto / photo: D. Romanović

height of 2.2 to 2.8 cm (Fig. 11D). There are 2 different rim sizes. **Type 5** – 12 amphorae have this type of rim.⁸⁵ The rim is high, has a thickened and pronounced annular shape, with a diameter of 6.3 to 8.0 cm and a rim height of 2.2 to 2.8 cm, of which two rims have an irregular oval shape (Fig. 11E). There are 3 different rim sizes. **Type 6** – 5 amphorae have this type of rim.⁸⁶ The rim is low, has a thickened and pronounced annular shape, with a diameter of 6.7 to 7.8 cm and a rim height of 1.2 to 2.2 cm, of which one has a rim with an irregular oval shape (Fig. 11F). There are 2 different rim sizes. **Type 7** – only 1 amphora has this type of rim.⁸⁷ The rim is bent outwards, short and has a rounded annular shape, with a diameter of 7.8 cm and a rim height of 1.2 cm (Fig. 11G). Part of the neck is twisted from the handle base. **Type 8** – 7 amphorae have this type of rim.⁸⁸ The rim is short and has a rounded annular shape, with a diameter of 7.0 to 7.7 cm and a rim height of 0.8 to 1.9 cm, of which two rims have an irregular oval shape (Fig. 11H). Part of the neck below the rim recedes conically to the handle base.

Of the total of 49 amphorae that are preserved to a lesser or greater extent, 4 amphorae (8.2%) are amphorae without preserved rims.⁸⁹ Nevertheless, they can be attributed to the flat-bottomed amphorae, most likely the Forlimpopoli type.

Amphorae are mostly of a hard fabric without additives, a beige to grey-beige colour which in the Munsell tables generally matches the colour 2.5Y 7/3 pale yellow and 10YR 7/4 very pale brown. The other colours are beige and grey which in the Munsell tables generally match the colours 2.5Y 7/4 pale yellow, 10YR 7/3 very pale brown, 2.5Y 6/2 light brownish grey and 2.5Y 7/2 light grey. Six specimens have a soft, some a partially 'floury' fabric that can be rubbed off.⁹⁰ Only three specimens of amphorae have small additives of mica.⁹¹

This type of amphorae, as has been previously established, was used for transporting wine⁹² as is evident by the remains of a resinous coating on the interior of all the recipients.⁹³ In fact, the view is that the inside of the wine amphora was coated with a resin to reduce porosity,

dva oboda imaju nepravilan ovalan oblik (Sl. 11H). Dio vrata ispod oboda se spušta konično do baze ručki.

Od ukupno 49 manje ili više sačuvanih amfora, njih 4 (8,2%) pripadaju amforama kojima nije sačuvan obod.⁸⁹ Usprkos tome moguće ih je pripisati amforama ravnog dna, najvjerojatnije tipa Forlimpopoli.

Amfore su ponajviše tvrde fature i bez primjese, bež do sivo bež boje koja u Munsell tablicama uglavnom odgovara boji 2.5Y 7/3 pale yellow i 10YR 7/4 very pale brown. Od ostalih boja koje se javljaju možemo još izdvojiti tonove bež i sive boje koji u Munsell tablicama uglavnom odgovaraju boji 2.5Y 7/4 pale yellow, 10YR 7/3 very pale brown, 2.5Y 6/2 light brownish gray i 2.5Y 7/2 light gray. Šest primjeraka ima mekanu, neke i djelomično „brašnastu“, fakturu koja se otire.⁹⁰ Samo tri primjerka amfore imaju sitne primjese mlice.⁹¹

Ovaj tip amfora, kako je to već ranije utvrđeno, bio je namijenjen transportu vina⁹² što potvrđuju i ostaci smolastog premaza s unutrašnje strane svih recipijenata.⁹³ Smatra se naime da se unutrašnjost amfora za vino premazivala smolom kako bi se smanjila poroznost, dok za ulje to nije bilo potrebno, jer je ono samo stvaralo zaštitni sloj.

89 Inventarni brojevi 2955H, 3364H, 4177H i 5138H.

90 Inventarni brojevi 2954H, 2955H, 4177H, 3349H, 4324H i 4325H.

91 Mica, tinjac ili liskun je silikatni mineral slojevite strukture i lako se kala u tanke listiće. Otporan je na visoke temperature. Na keramici se uočava u obliku sitnih svjetlucavih čestica. Inventarni brojevi 2949H, 2473H i 4326H.

92 E. Lapadula, 1997, 151 gdje je i ostala literatura.

93 M. Jurišić, 2000, 20.

85 Inventory numbers 465H, 1237H, 2096H, 2397H, 2473H, 4179H, 4316H, 4320H, 4327H, 4334H, 4364H i 5136H.

86 Inventory numbers 3348H, 3349H, 3366H, 4325H and 4326H.

87 Inventory number 2047H.

88 Inventory numbers 1887H, 2046H, 2064H, 3361H, 4180H, 4324H and 4752H.

89 Inventory numbers 2955H, 3364H, 4177H and 5138H.

90 Inventory numbers 2954H, 2955H, 4177H, 3349H, 4324H and 4325H.

91 Mica is a silicate mineral with a layered structure and easily splits into thin sheets. It is resistant to high temperatures. On the pottery it can be noticed in the form of small glittering particles. Inventory numbers 2949H, 2473H and 4326H.

92 E. Lapadula, 1997, 151 where the literature remains.

93 M. Jurišić, 2000, 20.



Amfore na sebi nemaju žigove, ali je na dva primjerka zabilježen grafit (Sl. 12).⁹⁴ U prvom je slučaju teško kazati o kojim se slovima točno radi. I dok je u drugom slovu lako prepoznatljivo slovo M, kod prvoga je to mnogo teže. Čini se kako bi se moglo raditi o slovu O, odnosno nepravilnom (s jednom zaobljenom hastom) slovu B. Njegovom sredinom međutim prolazi okomita hasta koja na taj način asocira na grčko slovo Φ.⁹⁵ U drugom slučaju još je teže kazati radi li se samo o grafičkom znaku majstora ili o uglato riješenom obrnutom slovu S koji opet može predstavljati službenu oznaku?⁹⁶ Na samo jednom primjerku su uočeni tragovi otiska prstiju (inv. br. 4317H) koji se ipak ne može identificirati s bilo kakvom oznakom nego je nastao slučajno.

Nalazi amfora ravnog dna u jadranskom podmorju

U podmorju istočne obale Jadrana amfore ravnog dna najčešće su prisutne kao pojedinačni nalazi, kao ostaci brodoloma ili, kao što je slučaj u Zatonu, o nalazima u slojevima luke. Može se kazati, unatoč nedostatku

Slika 12. Grafiti na amforama

Figure 12. Graffiti on amphorae

foto / photo: D. Romanović

whereas for oil it was not necessary, because it only created a protective layer.

Amphorae do not bear any markings, but two specimens do have graffiti (Fig. 12).⁹⁴ It is difficult to identify immediately the letters. Though the second letter is easily recognisable as the letter M, the first letter is harder to identify. It seems as though it could be the letter O, or an irregular (with one rounded hasta) letter B. However, a perpendicular hasta passes through its middle, which thus resembles the Greek letter Φ.⁹⁵ In the second case, it is even more difficult to say whether this is just a graphic sign by a master or an angularly reversed letter S, which again can represent an official mark?⁹⁶ There are fingerprints only on one example (inv. no. 4317H) which nonetheless cannot be identified with any sign, meaning that it occurred accidentally.

Finds of flat-bottomed amphorae in the Adriatic Sea

Flat-bottom amphorae in the sea of the eastern Adriatic coast are mostly present as individual finds, as the remains of a shipwreck or, as is the case in Zaton, the finds in the layers of a port. Despite the lack of detailed analysis of all known specimens, amphora finds of the Forlimpopoli type are more numerous than Crikvenica type amphorae. The largest number of finds is especially concentrated in the northern and central Adriatic Sea.

The first systematisation of research in the waters of the eastern Adriatic Sea, and subsequently of this type of amphora, was conducted by D. Vrsalović.⁹⁷ He distinguishes three types of flat-bottomed amphorae calling them elongated heart-shaped Roman amphorae, elongated oval-shaped Roman amphorae and oval-shaped Roman amphorae.⁹⁸ He cites the best-known example as the shipwreck near the island of Ilovik where these amphorae were the main cargo, discovered in 1962, and which for now, is the only of its kind in the Adriatic Sea.⁹⁹ Unfortunately, the shipwreck was ransacked and the estimates are that it contained over 2,000 amphorae of this type. Extensive excavation succeeded in uncovering more than 200 specimens. Orlić says that they are heart-shaped, and typology

94 Inventarni brojevi 1887H i 4321H.

95 Moguće je kako se radilo o brodu čija je posada bila s prostora na kojemu je govorni jezik bio grčki.

96 Ovaj tip amfora vrlo rijetko na sebi ima neki znak, a i tada se radi o grafitima, u pravilu teško čitljivim. Usporedi: E. Lapadula, 1997, 138, Fig. 9, 10; 148, Fig. 23c.

94 Inventory numbers 1887H and 4321H.

95 It is possible that it was a ship with the crew from an area where Greek was the spoken language.

96 This type of amphora rarely has a sign on it, and even then, it tends to be graffiti, and as a rule hardly legible. Cf.: E. Lapadula, 1997, 138, Fig. 9, 10; 148, Fig. 23c.

97 See: D. Vrsalović, 2011.

98 D. Vrsalović, 2011, 185-188.

99 For more on the shipwreck on the island of Ilovik and its cargo, see: M. Orlić, 1986.

podrobne analize svih poznatih primjeraka, da su nalazi amfora tipa Forlimpopoli brojniji u odnosu na amfore tipa Crikvenica. Najveći broj nalaza koncentriran je na sjevernom i osobito srednjem Jadranu.

Prvu sistematizaciju istraživanja u podmorju istočnoga Jadrana, pa tako i ovog tipa amfora, napravio je D. Vrsalović.⁹⁷ On razlikuje tri tipa amfora s ravnim dnom i naziva ih rimske amfore izdužena sroljika oblika, rimske amfore izdužena jajoljika oblika i rimske amfore jajoljika tijela.⁹⁸ Kao najpoznatiji primjer navodi brodolom kod otoka Ilovika otkriven 1962. god., za sada jedini u Jadranu, kojemu su ove amfore bile glavni teret.⁹⁹ Nažalost riječ je o opljačkanom brodolomu za koji se pretpostavlja da je sadržavao preko 2000 amfora ovog tipa. Intenzivnim istraživanjem uspjelo se pronaći više od 200 primjeraka. Orlić za njih kaže da imaju sroljiki oblik, a tipološki ih je podijelio na tri varijante – A, B i C.¹⁰⁰ Trajanov novčić, kovan između 115. i 116. god., određuje *terminus post quem*.¹⁰¹ Od ostalih pojedinačnih nalaza Vrsalović navodi još sljedeće pozicije: rt Verudica kod Pule, uvala Martinska kod Šibenika, rt Gradina i uvala Stivančica kod Rogoznice i Lukovo u Podvelebitskom kanalu.¹⁰²

Sljedeći koji se detaljnije posvetio analizi i sistematizaciji arheoloških nalaza iz podmorja Jadrana bio je M. Jurišić.¹⁰³ On navodi kako su sjevernoitalske amfore ravnog dna, kako ih on naziva, pronađene kao dio tereta brodoloma kod otočića Gušteranski kod otoka Žirja i rta Krbar na otoku Žutu. Od ostalih pojedinačnih nalaza Jurišić navodi još sljedeće pozicije: otok Unije,¹⁰⁴ uvala Krnica na istočnoj obali Istre, otok Plavnik, Jablanac, uvala Javorna na otoku Lošinju i uvala Čapljena kod Šibenika.¹⁰⁵

Među nalazima koji se spominju u literaturi navode se još lokacije: Valun na otoku Cresu, uvala Bok kod Osora na otoku Lošinju,¹⁰⁶ Veštar kod Rovinja,¹⁰⁷ otočić Kozina kod otoka Vrgade,¹⁰⁸ rt Sv. Petar kod Kupara,¹⁰⁹ Kumenat kod Biograda, otočić Galešnjak kod Turnja, otočić Karantunić,¹¹⁰ otok Velika Sestrica,¹¹¹ Janice u Pakoštanima,¹¹² uvale Gradina¹¹³ i Tankaraca¹¹⁴ na otoku Korčuli, uvala Caska na

categorises them into three variants – A, B and C.¹⁰⁰ Trajan's coin, minted between the years 115 and 116, determines the *terminus post quem*.¹⁰¹ The other individual finds that Vrsalović mentions are the following positions: Cape Verudica near Pula, Martinska Cove near Šibenik, Cape Gradina and Stivančica Cove near Rogoznica and Lukovo in the Velebit Channel.¹⁰²

The next person to focus on analysing in detail and systematising archaeological finds from the Adriatic seabed was M. Jurišić.¹⁰³ He notes that the flat-bottomed North-Italic amphorae, as he calls them, were found as part of the shipwrecked cargo near the islet of Gušteranski near the island of Žirje and Cape Krbar on the island of Žut. Among the other individual finds, Jurišić also mentions the following positions: island of Unije,¹⁰⁴ Krnica Cove on the eastern coast of Istria, the island of Plavnik, Jablanac, Javorna Cove on the island of Lošinj and Čapljena Cove near Šibenik.¹⁰⁵

Among the finds that are mentioned in the literature, the following locations are also referred to: Valun on the island of Cres, Bok Cove at Osor on the island of Lošinj,¹⁰⁶ Veštar in Rovinj,¹⁰⁷ the islet Kozina near the island of Vrgada,¹⁰⁸ St. Peter's Cape in Kupari,¹⁰⁹ Kumenat near Biograd, the islet of Galešnjak near Turanj, the islet of Karantunić,¹¹⁰ the island Velika Sestrica,¹¹¹ Janice in Pakoštane,¹¹² Gradina Cove¹¹³ and Tankaraca¹¹⁴ on the island of Korčula, the Caska Cove on the island of Pag,¹¹⁵ Stonca Cove on the island of Vis¹¹⁶ and Vis port on the island of Vis.¹¹⁷ At the depot of the Zadar Museum of Archaeology, there are several, mostly individual, specimens of flat-bottomed amphorae: 7 amphorae from unknown positions, 2 from the Kolovare Cove in Zadar, 2 from the South reef near the island of Silba and 1 from Cape Jurnovica at Pag Bridge, Frnaža Cove on the island of Ugljan and the islet of Lukar near the island of Pag¹¹⁸ (Map 1). Amphorae of this type are found in a number of museums and private collections, but since they have not been published, we lack elements with which to compare.¹¹⁹

97 Vidi: D. Vrsalović, 2011.

98 D. Vrsalović, 2011, 185-188.

99 Više o brodolomu kod otoka Ilovika i njegovom teretu vidi: M. Orlić, 1986.

100 M. Orlić, 1986, 17.

101 M. Orlić, 1986, 44.

102 D. Vrsalović, 2011, 185-188.

103 Vidi: M. Jurišić, 2000.

104 Na antičkom brodolomu koji je kao glavni teret sadržavao amfore tipa Porto Recanati, pronađena je i jedna amfora tipa Forlimpopoli.

105 M. Jurišić, 2000, 21.

106 M. Orlić, 1986, 17.

107 L. Bekić – J. Višnjic – M. Pešić – M. Bloier, 2011, 15.

108 M. Pešić – M. Meštrović, 2012, 46.

109 L. Bekić – M. Šimičić, 2013, 17.

110 M. Pešić, 2013, 41-42.

111 L. Bekić, 2013, 47.

112 M. Mustaček – M. Čurković – I. Martinović, 2013, 63.

113 I. Borzić, 2009, 86-87.

114 I. Borzić, 2013, 71.

100 M. Orlić, 1986, 17.

101 M. Orlić, 1986, 44.

102 D. Vrsalović, 2011, 185-188.

103 See: M. Jurišić, 2000.

104 One Forlimpopoli type amphora was found in the ancient shipwreck where its main cargo consisted of Porto Recanati type amphorae.

105 M. Jurišić, 2000, 21.

106 M. Orlić, 1986, 17.

107 L. Bekić – J. Višnjic – M. Pešić – M. Bloier, 2011, 15.

108 M. Pešić – M. Meštrović, 2012, 46.

109 L. Bekić – M. Šimičić, 2013, 17.

110 M. Pešić, 2013, 41-42.

111 L. Bekić, 2013, 47.

112 M. Mustaček – M. Čurković – I. Martinović, 2013, 63.

113 I. Borzić, 2009, 86-87.

114 I. Borzić, 2013, 71.

115 I. Radić Rossi, 2010, 468.

116 I. Miholjek – I. Mihajlović, 2009, 655.

117 S. Glušćević, 2006, 69, T.I, 1-5.

118 S. Glušćević, 2012.

119 See Note 79.



otoku Pagu,¹¹⁵ uvala Stonca na otoku Visu¹¹⁶ i Viška luka na otoku Visu.¹¹⁷ U depou Arheološkog muzeja Zadar nalazi se nekoliko, uglavnom pojedinačnih, primjeraka amfora ravnog dna: sedam amfora s nepoznate pozicije, dvije iz uvale Kolovare kod Zadra, dvije s Južnog grebena kod otoka Silbe te po jedna s rta Jurnovica kod Paškog mosta, uvale Frnaža na otoku Ugljanu i otočića Lukar kod otoka Paga¹¹⁸ (Karta 1). Amfore ovog tipa još nalazimo u nizu muzeja i privatnih zbirki, ali budući da nisu objavljene, nemamo dovoljno elemenata za usporedbu.¹¹⁹

Karta 1. Pozicije s nalazima amfora tipa Forlimpopoli u istočnom Jadranu

Map 1. Positions with the finds of Forlimpopoli type amphorae in the eastern Adriatic

priređila / prepared by: D. Romanović

Conclusion

The ancient port in Zaton was well linked to all parts of the ancient Mediterranean. Judging by the material, intensive contacts were held with Asia Minor, North Africa, northern Italy and Greece, whereas the intensity of communication with Gaul and Spain, and the internal provinces such as Pannonia, was much weaker, which is reflected in the quantity of goods that can be attributed to production centres in these areas. Very rich archaeological layers do not speak just of a temporary post, but suggest that boats

115 I. Radić Rossi, 2010, 468.

116 I. Miholjek – I. Mihajlović, 2009, 655.

117 S. Gluščević, 2006, 69, T.I, 1-5.

118 S. Gluščević, 2012.

119 Vidi bilješku 79.

Zaključak

Antička luka u Zatonu je bila povezana sa svim krajevima antičkog Mediterana. Sudeći po materijalu intenzivni kontakti održavali su se s Malom Azijom, sjevernom Afrikom, sjevernom Italijom i Grčkom dok je intenzitet komunikacija s Galijom i Hispanijom, odnosno unutrašnjim provincijama npr. Panonijom, bio mnogo slabiji, a što se ogleda u količini robe koja se može pripisati proizvođačkim centrima na tim područjima. Vrlo bogati arheološki slojevi ne govore samo o privremenoj postaji, nego ukazuju na to da su se brodovi duže zadržavali i da je luka bila značajnije tranzitno pristanište. U slojevima luke pronađeno je ukupno 49, uglavnom ulomaka, amfora ravnog dna koje najvjerojatnije možemo pripisati proizvodnim centrima sjeverne Italije i atribuirati skupini amfora ravnog dna tipa Forlimpopoli.

U slojevima luke najbrojnije su bile upravo amfore tipa ravnog dna koje se najvećim dijelom mogu pripisati tipu Forlimpopoli odnosno podtipu A prema Aldiniju. U njima se prevozilo vino iz bogatih vinograda u nizinama sjeverne Italije. Primarno su se proizvodile u radioničkim centrima u pokrajini Emilia Romagna, i vremenski se njihova proizvodnja stavlja u razdoblje od sredine 1. do sredine odnosno treće četvrtine 3. stoljeća.¹²⁰ U isti vremenski okvir pada i vrijeme najintenzivnijeg korištenja antičke luke u Zatonu.

Premda spadaju u amfore ravnog dna, a u mnogim elementima su vrlo slične amforama tipa Forlimpopoli, pojedini elementi (obod, vrat, ručke) amfore nađene u Crikvenici ukazuju na novu varijantu amfora ravnog dna. Ta varijanta, klasificirana kao tip Crikvenica, predstavlja djelomičnu imitaciju amfora ravnog dna ili amfora tipa Forlimpopoli ali sa sasvim specifičnim rješenjem oboda. Proizvodila se u lokalnoj radionici i bila je namijenjena lokalnom tržištu.

Nažalost za samo mali broj amfora iz luke imamo relevantne stratigrafske podatke, ukupno za njih 20 (40,8%),¹²¹ koje najvećim dijelom potječu iz slojeva 3 i 4. Navedeni slojevi su datirani kronološki osjetljivim materijalom u vrijeme od sredine 1. do početka 3. st., što odgovara i vremenu proizvodnje navedenog tipa amfore.

Područje koje je do sada istraženo površinom je vrlo maleno, a nova su istraživanja usmjerena na probijanje lukobrana kako bi se eventualno utvrdila njegova originalna struktura. Dosadašnja istraživanja i pronađen materijal ukazuju da je život luke započeo sredinom 1. st. i da se intenzivno koristila do kraja 3. stoljeća. Luka je najvjerojatnije prestala egzistirati početkom ili polovicom 4. st., međutim nedaleka crkva sv. Andrije iz 6. st. nam govori kako se život na ovom području nastavio i nakon što je luka prestala funkcionirati u svom prvotnom obliku i namjeni.¹²²

stayed longer and that the port was an important transit port. The layers of the port provide a total of 49 flat-bottomed amphorae, of which most are fragments, and can most likely be attributed to production centres of northern Italy and attributed to the group of Forlimpopoli type flat-bottomed amphora.

Most of the amphorae in the port layers are flat-bottom types that are largely attributable to the Forlimpopoli type or the Aldine subtype A. They were used for transporting wine from the rich vineyards in the lowlands of northern Italy. The amphorae were mostly produced in the workshop centres in the province of Emilia Romagna, and the time of their production belongs to the period from mid-1st to the middle and second half of the 3rd century.¹²⁰ The same time frame also covers the most intensive use of the ancient port in Zaton.

Although they belong to the flat-bottomed amphora, and in many respects are very similar to the Forlimpopoli type amphora, certain elements (rim, neck, handles) of the amphorae found in Crikvenica indicate a new variant of the flat-bottomed amphora. This variant, classified as the Crikvenica type, represents a partial imitation of the flat-bottomed amphora or the Forlimpopoli type amphora, but with quite a specific rim design. It was produced in a local workshop and was intended for the local market.

Unfortunately, we have relevant stratigraphic data for only a small number of amphorae from the port, i.e. for 20 of them (40.8%),¹²¹ which mainly originated from layers 3 and 4. These layers are dated using chronologically sensitive material from the time of the mid-1st to the beginning of the 3rd century, which corresponds to the era of production of the mentioned amphora type.

The so far explored area is very small, and recent excavations have focused on penetrating the breakwater in order to determine possibly its original structure. Previous studies and the found material suggest that life in the port began in the mid-1st century and that it was extensively used until end of the 3rd century. The port most likely ceased to exist at the beginning or middle of the 4th century. However, the Church of St. Andrew from the 6th century tells us that the life in the area continued after the port ceased to function in its original form and purpose.¹²²

120 Lapadula, 1997, 128.

121 Vidi bilj. 43 i 45.

122 S. Gluščević, 2011, 15.

120 Lapadula, 1997, 128.

121 See Note 43 and 45.

122 S. Gluščević, 2011, 15.

KATALOG

U katalogu su korištene sljedeće kratice:

inv. br.: inventarni broj (H = hidroarheologija)

položaj nalaza: godina, kvadrant i sloj

faktura: tvrdoća (tvrda – ne može se zarezati tupim predmetom, mekana – može se zarezati tupim predmetom) i sastav gline (bez primjesa, vrlo malo primjesa – uglavnom mica¹²³) opisani vizualnim pregledom te boja gline prema Munsell tablicama

vis.: visina ili visina sačuvanog dijela u cm

šir.: najveća širina u cm

pr. oboda: promjer oboda u cm

vis. oboda: visina oboda u cm

šir. vrata: širina vrata u cm (mjera je uzeta na sredini vrata)

šir. ručke: širina ručke u cm

deb. ručke: debljina ručke u cm

vis. ručke: visina ručke u cm

šir. dna: širina dna u cm

opis: kratak opis

inv. br. 465H

položaj nalaza: Zaton 2002. kv. A3/4 sl. 3

faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown

vis.: 3,6 cm

šir.: 7,3 cm

pr. oboda: 7,3 cm

vis. oboda: 2,2 cm

Opis: dio oboda amfore, koji je visok i prstenasto zadebljan. U unutrašnjosti su vidljivi jedva zamjetni ostaci smolastog premaza.

inv. br. 632H

položaj nalaza: Zaton 2002. kv. A1/2 sl. 3

faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 2.5Y 6/3 light yellowish brown

vis.: 30,2 cm

šir.: 30,0 cm

šir. dna: 12,3 cm

Opis: široko konkavno dno s jačim prstenastim ojačanjem i umbom u sredini i dio donjeg dijela trbuha amfore. Lijepljeno iz 17 ulomaka. S unutrašnje strane ima smolasti premaz. Na površini su također vidljivi ostaci smole.

inv. br. 1237H

položaj nalaza: Zaton 2003. kv. A1/2 sl. 4

faktura: tvrda, bez primjesa, M: 10YR 7/3 very pale brown

vis.: 5,5 cm

šir.: 8,2 cm

pr. oboda: 6,3 cm

vis. oboda: 2,2 cm

Opis: obod amfore, koji je visok i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza.

CATALOGUE

The catalogue uses the following abbreviations:

Inv. no.: inventory number (H = underwater archaeology)

Position of the find: year, square and layer

Fabric: hardness (hard – cannot be cut with a blunt object, soft – can be cut with a blunt object) and the composition of clay (no additives, very few additives – mainly mica¹²³) described by a visual inspection and the colour of the clay according to the Munsell tables

H: height or the height of the preserved part in cm

W: maximum width in cm

RD: rim diameter in cm

RH: rim height in cm

NW: neck width in cm (measure taken across the middle of the neck)

HW: handle width in cm

HT: handle thickness in cm

HH: handle height in cm

BW: base width in cm

Description: brief description

Inv. no. 465H

Position of the find: Zaton 2002 sq. A3/4 layer 3

Fabric: hard, without additives, M: 10YR 7/4 very pale brown

H: 3.6 cm

W: 7.3 cm

RD: 7.3 cm

RH: 2.2 cm

Description: part of an amphora rim, which is high and has a thickened annular shape. On the inside, there are hardly visible remains of a resinous coating.

Inv. no. 632H

Position of the find: Zaton 2002 sq. A 1/2 layer 3

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 2.5Y 6/3 light yellowish brown

H: 30.2 cm

W: 30.0 cm

BW: 12.3 cm

Description: wide concave base with a stronger annular reinforcement and an umbo in the middle and lower part of an amphora body. Glued from seventeen fragments. The inner side has a resinous coating. The surface also has visible remains of resin.

Inv. no. 1237H

Position of the find: Zaton 2003 sq. A 1/2 layer 4

Fabric: hard, without additives, M: 10YR 7/3 very pale brown

H: 5.5 cm

W 8.2 cm

RD: 6.3 cm

RH: 2.2 cm

Description: rim of an amphora, which is high and has a thickened annular shape. There are remains of a resinous coating on the inside.



465H



632H



1237H

inv. br. 1466H

položaj nalaza: Zaton 2005. kv. B1/3 sl. 4
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
 vis.: 16,7 cm
 šir.: 24,2 cm
 šir. dna: 11,5 cm

Opis: široko konkavno dno s jačim prstenastim ojačanjem i umbom u sredini i dio donjeg dijela trbuha amfore. Lijepljeno iz 4 ulomka. U unutrašnjosti su vidljivi ostaci smolastog premaza.

inv. br. 1577H

položaj nalaza: Zaton 2002. kv. A1/4 sl. 4
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown // 2.5Y 7/2 light grey
 vis.: 32,0 cm
 šir.: 28,5 cm
 pr. oboda: 6,3 cm
 vis. oboda: 2,6 cm
 šir. vrata: 8,3 cm
 šir. ručke: 4,6 cm
 deb. ručke: 2,2 cm
 vis. ručke: 22,0 cm

Opis: dio trbuha i ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom (povišena s koljenastim pregibom). Lijepljeno iz 3 ulomka. Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i cilindričan. S unutrašnje strane ima smolasti premaz. Na ručki ostaci inkrustacije.

inv. br. 1887H

položaj nalaza: Zaton 2002. kv. A2/1 sl. 3
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 2.5Y 6/2 light brownish gray
 vis.: 66,5 cm
 šir.: 32,5 cm
 pr. oboda: 7,3-7,5 cm (blago ovalan)
 vis. oboda: 1,6 cm
 šir. vrata: 8,1 cm
 šir. ručke: 4,3 cm
 deb. ručke: 2,4 cm
 vis. ručke: 16,5 cm
 šir. dna: 10,2 cm

Opis: amfora je dijelom rekonstruirana, a sačuvana je stajaća ploha koja u sredini ima manje udubljenje, dio trbuha i ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (blago povišene s koljenastim pregibom). Lijepljeno iz 18 ulomaka. Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. Na ramenu ima urezan grafit. S unutrašnje strane ima smolasti premaz.

Inv. no. 1466H

Position of the find: Zaton 2005 sq. B1/3 layer 4
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
 H: 16.7 cm
 W: 24.2 cm
 BW: 11.5 cm

Description: wide concave base with a stronger annular reinforcement and an umbo in the middle and lower part of an amphora body. Glued from four fragments. There are remains of a resinous coating on the inside.

Inv. no. 1577H

Position of the find: Zaton 2002 sq. A1/4 layer 4
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown // 2.5Y 7/2 light grey
 H: 32.0 cm
 W: 28.5 cm
 RD: 6.3 cm
 RH: 2.6 cm
 NW: 8.3 cm
 HW: 4.6 cm
 HT: 2.2 cm
 HH: 22.0 cm

Description: part of the body and shoulder, neck and rim of an amphora with one preserved ribbed strap handle (elevated with an elbow bend). Glued from three fragments. The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and cylindrical. The inner side has a resinous coating. The handle has remains of incrustation.

Inv. no. 1887H

Position of the find: Zaton 2002 sq. A2/1 layer 3
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 2.5Y 6/2 light brownish gray
 H: 66.5 cm
 W: 32.5 cm
 RD: 7.3-7.5 cm (slightly oval)
 RH: 1.6 cm
 NW: 8.1 cm
 HW: 4.3 cm
 HT: 2.4 cm
 HH: 16.5 cm
 BW: 10.2 cm

Description: amphora is partly reconstructed, the standing surface is preserved which has a smaller depression in the middle, part of the body and shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated with an elbow bend). Glued from eighteen fragments. The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. The shoulder has graffiti carved into it. The inner side has a resinous coating.



1466H



1577H



1887H

inv. br. 2046H

položaj nalaza: Zaton 2006. kv. C1/1 sl. 8

faktura: tvrda, bez primjesa, M: 10YR 7/3 very pale brown (površina) // 5YR 6/4 light reddish brown (unutrašnja stijenska)

vis.: 63,2 cm

šir.: 30,0 cm

šir. dna: 10,8 cm

pr. oboda: 7,0 cm

vis. oboda: 1,3 cm

šir. vrata: 9,1 cm

šir. ručke: 4,6 cm

deb. ručke: 2,1 cm

vis. ručke: 17,0 cm

Opis: dio stajaće plohe koja u sredini ima manje udubljenje, trbuha i ramena, vrat i obod amfore s dvije trakasto narebrenе ručke (vrlo blago povišene s pregibom pod pravim kutom). Lijepljeno iz 3 ulomka. Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. Na ramenu ima plitku kaneliru. U unutrašnjosti su vidljivi ostaci smolastog premaza. Na površini ostaci inkrustacije. Amfora je sačuvana u punoj visini i mogla bi se rekonstruirati.

inv. br. 2047H

položaj nalaza: Zaton 2006. kv. C1/1 sl. 8

faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 2.5Y 7/4 pale yellow

vis.: 26,0 cm

šir.: 27,7 cm

pr. oboda: 7,8 cm

vis. oboda: 1,2 cm

šir. vrata: 8,3 cm

šir. ručke: 3,8 cm

deb. ručke: 2,0 cm

vis. ručke: 17,3 cm

Opis: dio trbuha, rame, vrat i obod amfore s dvije trakasto narebrenе ručke (blago povišene s koljenastim pregibom). Lijepljeno iz 6 ulomaka. Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je izvijen, kratak i prstenasto zaobljen. U unutrašnjosti su vidljivi ostaci smolastog premaza.

inv. br. 2064H

položaj nalaza: Zaton 2006. kv. C1/1 sl. 7

faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 10YR 7/4 very pale brown

vis.: 24,0 cm

šir.: 24,7 cm

pr. oboda: 7,7 cm

vis. oboda: 1,9 cm

šir. vrata: 9,0 cm

šir. ručke: 4,6 cm

deb. ručke: 2,5 cm

vis. ručke: 17,7 cm

Opis: dio ramena i vrata i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (vrlo blago povišene bez izraženog koljenastog pregiba). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. U unutrašnjosti su vidljivi jedva zamjetni ostaci smolastog premaza. Na površini sitni ostaci inkrustacije.

Inv. no. 2046H

Position of the find: Zaton 2006 sq. C1/1 layer 8

Fabric: hard, without additives, M: 10YR 7/3 very pale brown (surface) // 5YR 6/4 light reddish brown (inner wall)

H: 63.2 cm

W: 30.0 cm

BW: 10.8 cm

RD: 7.0 cm

RH: 1.3 cm

NW: 9.1 cm

HW: 4.6 cm

HT: 2.1 cm

HH: 17.0 cm

Description: part of the standing surface, which in the middle has a smaller depression, part of the body and shoulder, neck and rim of an amphora with two ribbed strap handles (slightly elevated with a right-angled bend). Glued from three fragments. The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. The shoulder has a shallow fluting. There are remains of a resinous coating on the inside. There are remains of incrustation on the surface. The amphora is preserved in its full height and can be reconstructed.

Inv. no. 2047H

Position of the find: Zaton 2006 sq. C1/1 layer 8

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 2.5Y 7/4 pale yellow

H.: 26.0 cm

W: 27.7 cm

RD: 7.8 cm

RH: 1.2 cm

NW: 8.3 cm

HW: 3.8 cm

HT: 2.0 cm

HH: 17.3 cm

Description: part of the body, shoulder, neck and rim of an amphora with two ribbed strap handles (slightly elevated with an elbow bend). Glued from six fragments. The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is bent outwards, short and has a rounded annular shape. There are remains of a resinous coating on the inside.

Inv. no. 2064H

Position of the find: Zaton 2006 sq. C1/1 layer 7

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 10YR 7/4 very pale brown

H: 24.0 cm

W: 24.7 cm

RD: 7.7 cm

RH: 1.9 cm

NW: 9.0 cm

HW: 4.6 cm

HT: 2.5 cm

HH: 17.7 cm

Description: part of the shoulder and neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated without a pronounced elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. On the inside, there are hardly visible remains of a resinous coating. There are small remains of incrustation on the surface.



2046H



2047H



2064H

inv. br. 2096H

položaj nalaza: Zaton 2006. kv. B2/1 sl. 4
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
 vis.: 21,3 cm
 šir.: 18,3 cm
 pr. oboda: 7,1-7,6 cm (nepravilan)
 vis. oboda: 2,8 cm
 šir. vrata: 8,9 cm
 šir. ručke: 5,0 cm
 deb. ručke: 1,9 cm

Opis: dio ramena, vrat i obod amfore sa sačuvanim gornjim dijelom dvije trakasto narebrene ručke (povišene s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza. Na površini sitni ostaci inkrustacije.

inv. br.: 2397H

položaj nalaza: Zaton 2007. kv. C1/1 sl. 8
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown // 2.5Y 6/3 light yellowish brown
 vis.: 18,9 cm
 šir.: 14,5 cm
 pr. oboda: 7,1 cm
 vis. oboda: 2,7 cm
 šir. vrata: 7,6 cm
 šir. ručke: 4,1 cm
 deb. ručke: 2,0 cm

Opis: vrat i obod amfore sa sačuvanim gornjim dijelom jedne trakasto narebrene ručke (povišena s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

inv. br. 2473H

položaj nalaza: Zaton 2007. kv. C1/2 sl. 7
 faktura: tvrda, vrlo malo primjesa (mica), M: 2.5Y 7/4 pale yellow
 vis.: 20,8 cm
 šir.: 18,0 cm
 pr. oboda: 7,2 cm
 vis. oboda: 2,2 cm
 šir. vrata: 8,1 cm
 šir. ručke: 4,3 cm
 deb. ručke: 1,8 cm

Opis: dio ramena, vrat i obod amfore sa sačuvanim gornjim dijelom jedne trakasto narebrene ručke (povišena s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. Na vratu ima valovitu plitku kaneliru. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

Inv. no. 2096H

Position of the find: Zaton 2006 sq. B2/1 layer 4
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
 H: 21.3 cm
 W: 18.3 cm
 RD: 7.1-7.6 cm (irregular)
 RH: 2.8 cm
 NW: 8.9 cm
 HW: 5.0 cm
 HT: 1.9 cm

Description: part of the shoulder, neck and rim of an amphora with the preserved upper part of two ribbed strap handles (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. There are remains of a resinous coating on the inside. The surface has small remains of incrustation.

Inv. no. 2397H

Position of the find: Zaton 2007 sq. C1/1 layer 8
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown // 2.5Y 6/3 light yellowish brown
 H: 18.9 cm
 W: 14.5 cm
 RD: 7.1 cm
 RH: 2.7 cm
 NW: 7.6 cm
 HW: 4.1 cm
 HT: 2.0 cm

Description: the neck and rim of an amphora with the preserved upper part of one ribbed strap handle (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. The inner side has a resinous coating. The surface has small remains of incrustation.

Inv. no. 2473H

Position of the find: Zaton 2007 sq. C1/2 layer 7
 Fabric: hard, very few additives (mica), M: 2.5Y 7/4 pale yellow
 H.: 20.8 cm
 W: 18.0 cm
 RD: 7.2 cm
 RH: 2.2 cm
 NW: 8.1 cm
 HW: 4.3 cm
 HT: 1.8 cm

Description: part of the shoulder, neck and rim of an amphora with the preserved upper part of one ribbed strap handle (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. The neck features a wavy shallow fluting. The inner side has a resinous coating. The surface has small remains of incrustation.



2096H



2397H



2473H

inv. br. 2913H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown
 vis.: 20,3 cm
 šir.: 19,2 cm
 pr. oboda: 8,0 cm
 vis. oboda: 2,4 cm
 šir. vrata: 8,8 cm
 šir. ručke: 5,3 cm
 deb. ručke: 2,3 cm

Opis: vrat i obod amfore sa sačuvanim gornjim dijelom dvije trakasto narebrene ručke (povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je visok i blago koničan. U unutrašnjosti su vidljivi jedva zamjetni ostaci smolastog premaza. Na površini sitni ostaci inkrustacije.

inv. br. 2949H

položaj nalaza: Zaton 2005. kv. B2/3 sl. 4
 faktura: tvrda, vrlo malo primjesa (mica), M: 2.5Y 7/3 pale yellow
 vis.: 30,5 cm
 šir.: 26,0 cm
 šir. dna: 9,5 cm

Opis: stajaća ploha koja u sredini ima manje udubljenje i dio donjeg dijela narebrenog trbuha amfore. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

inv. br. 2950H

položaj nalaza: Zaton 2006. kv. A1/4 sl. 6
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 10YR 7/4 very pale brown // 2.5Y 6/1 gray
 vis.: 47,7 cm
 šir.: 32,5 cm
 šir. dna: 11,8 cm

Opis: široko konkavno dno s jačim prstenastim ojačanjem bez umba u sredini, dio trbuha i ramena amfore. Lijepljeno iz 12 ulomaka. S unutrašnje strane ima smolasti premaz.

inv. br. 2954H

položaj nalaza: Zaton 2002. kv. B3/2 sl. 4
 faktura: mekana, bez primjesa, M: 2.5Y 7/4 pale yellow // 1 6/10Y greenish gray
 vis.: 41,7 cm
 šir.: 30,7 cm
 šir. dna: 9,8 cm

Opis: konkavno dno s prstenastim ojačanjem i umbom u sredini i dio trbuha i ramena amfore. Lijepljeno iz 8 ulomaka. Na gornjem dijelu trbuha i ramenu teče nekoliko plitkih žljebova. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

Inv. no. 2913H

Position of the find: Zaton 1979 without data on square and layer
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown
 H: 20.3 cm
 W: 19.2 cm
 RD: 8.0 cm
 RH: 2.4 cm
 NW: 8.8 cm
 HW: 5.3 cm
 HT: 2.3 cm

Description: neck and rim of an amphora with the preserved upper part of two ribbed strap handles (elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is high and slightly conical. On the inside, there are hardly visible remains of a resinous coating. The surface has small remains of incrustation.

Inv. no. 2949H

Position of the find: Zaton 2005 sq. B2/3 layer 4
 Fabric: hard, very few additives (mica), M: 2.5Y 7/3 pale yellow
 H: 30.5 cm
 W: 26.0 cm
 BW: 9.5 cm

Description: standing surface, which has a smaller depression in the middle and part of the lower ribbed body of an amphora. The inner side has a resinous coating. The surface has small remains of incrustation.

Inv. no. 2950H

Position of the find: Zaton 2006 sq. A1/4 layer 6
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 10YR 7/4 very pale brown // 2.5Y 6/1 grey
 H: 47.7 cm
 W: 32.5 cm
 BW: 11.8 cm

Description: wide concave base with a stronger annular reinforcement without an umbo in the middle, part of the body and shoulder of an amphora. Glued from twelve fragments. The inner side has a resinous coating.

Inv. no. 2954H

Position of the find: Zaton 2002 sq. B3/2 layer 4
 Fabric: soft, without additives, M: 2.5Y 7/4 pale yellow // 1 6/10Y greenish grey
 H: 41.7 cm
 W: 30.7 cm
 BW: 9.8 cm

Description: concave base with an annular reinforcement and an umbo in the middle, and part of the body and shoulder of an amphora. Glued from eight fragments. Running along the upper part of the body and shoulder are several shallow grooves. The inner side has a resinous coating. There are small remains of incrustation on the surface.



2913H



2949H



2950H



2954H

inv. br. 2955H

položaj nalaza: Zaton 2005. bez konteksta
 faktura: mekana, bez primjesa, M: 2.5Y 7/3 pale yellow // 2.5Y 7/2 light grey
 vis.: 32,5 cm
 šir.: 31,2 cm
 šir. vrata: 8,9 cm
 šir. ručke: 5,3 cm
 deb. ručke: 2,2 cm

Opis: dio trbuha, ramena i vrat amfore sa sačuvanim gornjim dijelom jedne trakasto narebrene ručke (povišena s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod nedostaje. S unutrašnje strane ima smolasti premaz.

inv. br. 3345H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 2.5Y 7/2 light grey
 vis.: 26,5 cm
 šir.: 24,3 cm
 pr. oboda: 7,3 cm
 vis. oboda: 2,5 cm
 šir. vrata: 8,0 cm
 šir. ručke: 4,5 cm
 deb. ručke: 2,0 cm
 vis. ručke: 22,0 cm

Opis: dio ramena, vrat i obod amfore s dvije trakasto narebrene ručke (povišene s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i blago zaobljen. Na vratu ima plitku kaneliru. S unutrašnje strane ima smolasti premaz.

inv. br. 3348H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
 vis.: 23,9 cm
 šir.: 22,4 cm
 pr. oboda: 7,0 cm
 vis. oboda: 1,2 - 2,0 cm (nepravilan)
 šir. vrata: 8,8 cm
 šir. ručke: 4,8 cm
 deb. ručke: 2,1 cm
 vis. ručke: 21,8 cm

Opis: dio ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je nizak i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza.

Inv. no. 2955H

Position of the find: Zaton 2005 without context
 Fabric: soft, without additives, M: 2.5Y 7/3 pale yellow // 2.5Y 7/2 light grey
 H: 32.5 cm
 W: 31.2 cm
 NW: 8.9 cm
 HW: 5.3 cm
 HT: 2.2 cm

Description: part of the body, shoulder and neck of an amphora with the preserved upper part of one ribbed strap handle (elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is missing. The inner side has a resinous coating.

Inv. no. 3345H

Position of the find: Zaton 1979 without data on square and layer
 Fabric: hard, without additives, M: 2.5Y 7/2 light grey
 H: 26.5 cm
 W: 24.3 cm
 RD: 7.3 cm
 RH: 2.5 cm
 NW: 8.0 cm
 HW: 4.5 cm
 HT: 2.0 cm
 HH: 22.0 cm

Description: part of the shoulder, neck and rim of an amphora with two ribbed strap handles (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and slightly rounded. The neck features a shallow fluting. The inner side has a resinous coating.

Inv. no. 3348H

Position of the find: Zaton 1979 without data on square and layer
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
 H: 23.9 cm
 W: 22.4 cm
 RD: 7.0 cm
 RH: 1,2 - 2,0 cm (irregular)
 NW: 8.8 cm
 HW: 4.8 cm
 HT: 2.1 cm
 HH: 21.8 cm

Description: part of the shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is low and has a thickened annular shape. There are remains of a resinous coating on the inside.



2955H



3345H



3348H

inv. br. 3349H

položaj nalaza: Zaton 1967. bez podataka o kvadrantu i sloju
faktura: mekana, bez primjesa, M: 10YR 7/4 very pale brown //
2.5Y 6/2 light brownish gray

vis.: 20,8 cm
šir.: 23,6 cm
pr. oboda: 7,4 cm
vis. oboda: 1,5 cm
šir. vrata: 7,0 cm
šir. ručke: 3,7 cm
deb. ručke: 2,0 cm
vis. ručke: 16,5 cm

Opis: dio ramena, vrat i obod amfore s dvije trakasto narebene ručke (vrlo blago povišene bez izraženog koljenastog pregiba). Lijepljeno iz 3 ulomka. Vrat je kratak i cilindričan bez naglašenog ojačanja u visini baze ručke. Obod je nizak i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza. Na površini ostaci inkrustacije.

inv. br. 3361H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow (površina) //
10YR 7/4 very pale brown (unutrašnja stijenka)

vis.: 26,8 cm
šir.: 25,0 cm
pr. oboda: 7,3 - 7,6 cm (blago ovalan)
vis. oboda: 0,8 cm
šir. vrata: 8,8 cm
šir. ručke: 4,4 cm
deb. ručke: 2,1 cm
vis. ručke: 17,0 cm

Opis: dio trbuha, ramena, vrat i obod amfore s dvije trakasto narebene ručke (blago povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. Na ramenu ima plitku kaneliru. U unutrašnjosti su vidljivi ostaci smolastog premaza. Na površini sitni ostaci inkrustacije.

inv. br. 3364H

položaj nalaza: Zaton 2005. kv. B1/3 sl. 4
faktura: tvrda, bez primjesa, M: 2.5Y 6/2 light brownish gray //
2.5Y 7/2 light gray

vis.: 40,5 cm
šir.: 29,5 cm
šir. vrata: 7,2 cm
šir. ručke: 4,4 cm
deb. ručke: 2,2 cm
vis. ručke: 23,0 cm

Opis: dio trbuha, ramena i vrat amfore s jednom sačuvanom trakasto narebrenom ručkom (povišena s koljenastim pregibom). Lijepljeno iz 7 ulomaka. Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod nedostaje. S unutrašnje strane ima smolasti premaz.

Inv. no. 3349H

Position of the find: Zaton 1967 without data on the square and layer

Fabric: soft, without additives, M: 10YR 7/4 very pale brown //
2.5Y 6/2 light brownish grey

H: 20.8 cm
W: 23.6 cm
RD: 7.4 cm
RH: 1.5 cm
NW: 7.0 cm
HW: 3.7 cm
HT: 2.0 cm
HH: 16.5 cm

Description: part of the shoulder, neck and rim of an amphora with two ribbed strap handles (slightly elevated without a pronounced elbow bend). Glued from three fragments. The neck is short and cylindrical without pronounced reinforcement at the level of the handle base. The rim is low and has a thickened annular shape. There are remains of a resinous coating on the inside. There are remains of incrustation on the surface.

Inv. no. 3361H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow (surface) //
10YR 7/4 very pale brown (inner wall)

H: 26.8 cm
W: 25.0 cm
RD: 7.3 to 7.6 cm (slightly oval)
RH: 0.8 cm
NW: 8.8 cm
HW: 4.4 cm
HT: 2.1 cm
HH: 17.0 cm

Description: part of the body, shoulder, neck and rim of an amphora with two ribbed strap handles (slightly elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. The shoulder has a shallow fluting. There are remains of a resinous coating on the inside. The surface has small remains of incrustation.

Inv. no. 3364H

Position of the find: Zaton 2005 sq. B1/3 layer 4

Fabric: hard, without additives, M: 2.5Y 6/2 light brownish grey //
2.5Y 7/2 light grey

H: 40.5 cm
W: 29.5 cm
MW: 7.2 cm
HW: 4.4 cm
HT: 2.2 cm
HH: 23.0 cm

Description: part of the body, shoulder and neck of an amphora with one preserved ribbed strap handle (elevated with an elbow bend). Glued from seven fragments. The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is missing. The inner side has a resinous coating.



3349H



3361H



3364H

inv. br. 3366H

položaj nalaza: Zaton 2005. kv. B1/3 sl. 4
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown
 vis.: 57,0 cm
 šir.: 30,5 cm
 pr. oboda: 7,5 - 7,8 cm (blago ovalan)
 vis. oboda: 1,7 cm
 šir. vrata: 8,0 cm
 šir. ručke: 4,8 cm
 deb. ručke: 2,3 cm
 vis. ručke: 20,0 cm

Opis: dio trbuha, ramena, vrat i obod amfore s dvije trakasto narebrenе ručke (povišene s koljenastim pregibom). Amfori nedostaje dno i mogla bi se cijela rekonstruirati. Lijepljeno iz 10 ulomaka. Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je nizak i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz. Ostaci smole vidljivi su i na vanjskoj strani.

inv. br. 3497H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
 vis.: 24,3 cm
 šir.: 20,0 cm
 pr. oboda: 8,0 cm
 vis. oboda: 2,6 cm
 šir. vrata: 9,0 cm
 šir. ručke: 5,3 cm
 deb. ručke: 1,8 cm
 vis. ručke: 21,0 cm

Opis: dio ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (blago povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je visok i blago koničan. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

inv. br. 3691H

položaj nalaza: Zaton bez podataka o godini, kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
 vis.: 34,7 cm
 šir.: 29,0 cm
 pr. oboda: 9,3 - 9,7 cm (blago ovalan)
 vis. oboda: 2,2 cm
 šir. vrata: 10,1 cm
 šir. ručke: 5,0 cm
 deb. ručke: 1,9 cm
 vis. ručke: 21,7 cm

Opis: dio trbuha, ramena, vrat i obod amfore s dvije trakasto narebrenе ručke (blago povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je širok i prstenasto zadebljan. Na vratu ima plitku kaneliru. S unutrašnje strane ima smolasti premaz.

Inv. no. 3366H

Position of the find: Zaton 2005 sq. B1/3 layer 4
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown
 H: 57.0 cm
 W: 30.5 cm
 RD: 7.5 to 7.8 cm (slightly oval)
 RH: 1.7 cm
 NW: 8.0 cm
 HW: 4.8 cm
 HT: 2.3 cm
 HH: 20.0 cm

Description: part of the body, shoulder, neck and rim of an amphora with two ribbed strap handles (elevated with an elbow bend). The amphora is missing the bottom and the whole thing can be reconstruct. Glued from ten fragments. The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is low and has a thickened annular shape. The inner side has a resinous coating. The remains of a resin are visible also on the outside.

Inv. no. 3497H

Position of the find: Zaton 1979 without data on the square and layer
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
 H: 24.3 cm
 W: 20.0 cm
 RD: 8.0 cm
 RH: 2.6 cm
 NW: 9.0 cm
 HW: 5.3 cm
 HT: 1.8 cm
 HH: 21.0 cm

Description: part of the shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is high and slightly conical. The inner side has a resinous coating. There are small remains of incrustation on the surface.

Inv. no. 3691H

Position of the find: Zaton without data on the year, square and layer
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
 H: 34.7 cm
 W: 29.0 cm
 RD: 9.3 - 9.7 cm (slightly oval)
 RH: 2.2 cm
 NW: 10.1 cm
 HW: 5.0 cm
 HT: 1.9 cm
 HH: 21.7 cm

Description: part of the body, shoulder, neck and rim of an amphora with two ribbed strap handles (slightly elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is wide and has a thickened annular shape. The neck features a shallow fluting. The inner side has a resinous coating.



3366H



3497H

173



3691H

inv. br. 3694H

položaj nalaza: Zaton 2002. kv. A1/3 sl. 6
faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
vis.: 41,5 cm
šir.: 31,5 cm
šir. dna: 13,1 cm

Opis: široko konkavno dno s jačim prstenastim ojačanjem i umbom u sredini, dio trbuha i ramena amfore. Lijepljeno iz 8 ulomaka. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

inv. br. 4177H

položaj nalaza: Zaton 2005. kv. A1/1 sl. 6
faktura: mekana, bez primjesa, M: 2.5Y 6/2 light brownish gray
vis.: 23,2 cm
šir.: 30,0 cm
šir. vrata: 9,1 cm
šir. ručke: 4,2 cm
deb. ručke: 2,5 cm
vis. ručke: 15,5 cm

Opis: dio ramena, vrat i obod amfore s dvije trakasto narebrene ručke (vrlo blago povišene bez izraženog koljenastog pregiba). Vrat je kratak i blago koničan bez naglašenog ojačanja u visini baze ručke. Obod nedostaje. Na ramenu ima plitku kaneliru. Stjenke su malo deblje. S unutrašnje strane ima smolasti premaz.

inv. br. 4179H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/4 pale yellow
vis.: 18,5 cm
šir.: 18,4 cm
pr. oboda: 6,9 - 7,2 cm (blago ovalan)
vis. oboda: 2,2 - 2,6 cm (nepravilan)
šir. vrata: 7,7 cm
šir. ručke: 4,7 cm
deb. ručke: 1,9 cm

Opis: vrat i obod amfore sa sačuvanim gornjim dijelom dvije trakasto narebrene ručke (povišene s koljenastim pregibom). Vrat je kratak i blago koničan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. Na ramenu ima plitku kaneliru. U unutrašnjosti su vidljivi jedva zamjetni ostaci smolastog premaza.

Inv. no. 3694H

Position of the find: Zaton 2002 sq. A1/3 layer 6
Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
H: 41.5 cm
W: 31.5 cm
BW: 13.1 cm

Description: wide concave base with a stronger annular reinforcement and an umbo in the middle, part of the body and shoulder of an amphora. Glued from eight fragments. The inner side has a resinous coating. There are small remains of incrustation on the surface.

Inv. no. 4177H

Position of the find: Zaton 2005 sq. A1/1 layer 6
Fabric: soft, without additives, M: 2.5Y 6/2 light brownish grey
H: 23.2 cm
W: 30.0 cm
NW: 9.1 cm
HW: 4.2 cm
HT: 2.5 cm
HH: 15.5 cm

Description: part of the shoulder, neck and rim of an amphora with two ribbed strap handles (slightly elevated without a pronounced elbow bend). The neck is short and slightly conical without pronounced reinforcement at the level of the handle base. The rim is missing. The shoulder has a shallow fluting. The walls are a little thicker. The inner side has a resinous coating.

Inv. no. 4179H

Position of the find: Zaton 1979 without data on the square and layer
Fabric: hard, without additives, M: 2.5Y 7/4 pale yellow
H: 18.5 cm
W: 18.4 cm
RD: 6.9 - 7.2 cm (slightly oval)
RH: 2.2 - 2.6 cm (irregular)
NW: 7.7 cm
HW: 4.7 cm
HT: 1.9 cm

Description: neck and rim of an amphora with the preserved upper part of two ribbed strap handles (elevated with an elbow bend). The neck is short and slightly conical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. The shoulder has a shallow fluting. On the inside, there are hardly visible remains of a resinous coating.



3694H



4177H



4179H

inv. br. 4180H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 2.5Y 7/2
 light gray
 vis.: 19,5 cm
 šir.: 23,4 cm
 pr. oboda: 7,2 cm
 vis. oboda: 1,6 cm
 šir. vrata: 8,5 cm
 šir. ručke: 4,6 cm
 deb. ručke: 2,1 cm
 vis. ručke: 15,7 cm

Opis: dio ramena, vrat i obod amfore s jednom sačuvanom trakastom narebrenom ručkom i gornjim dijelom druge (blago povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. Na ramenu ima plitku kaneliru. S unutrašnje strane ima smolasti premaz.

inv. br. 4182H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow // 2.5Y 7/2
 light gray
 vis.: 42,3 cm
 šir.: 30,8 cm
 pr. oboda: 8,7 cm
 vis. oboda: 2,8 cm
 šir. vrata: 9,2 cm
 šir. ručke: 5,4 cm
 deb. ručke: 2,4 cm
 vis. ručke: 23,0 cm

Opis: dio trbuha i ramena, vrat i obod amfore s dvije trakasto narebene ručke (povišene s koljenastim pregibom). Vrat je blago koničan s jačim ojačanjem u visini baze ručke. Obod je visok i blago zaobljen. S unutrašnje strane ima smolasti premaz. Na površini ostaci inkrustacije.

inv. br. 4316H

položaj nalaza: Zaton 1967. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown
 vis.: 22,8 cm
 šir.: 19,5 cm
 pr. oboda: 7,3 cm
 vis. oboda: 2,7 cm
 šir. vrata: 8,2 cm
 šir. ručke: 4,6 cm
 deb. ručke: 2,1 cm
 vis. ručke: 20,3 cm

Opis: dio ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (blago povišene s koljenastim pregibom). Vrat je cilindričan sa slabijim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza. Na površini sitni ostaci inkrustacije.

Inv. no. 4180H

Position of the find: Zaton 1979 without data on the square and layer
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 2.5Y 7/2
 light grey
 H: 19.5 cm
 W: 23.4 cm
 RD: 7.2 cm
 RH: 1.6 cm
 NW: 8.5 cm
 HW: 4.6 cm
 HT: 2.1 cm
 HH: 15.7 cm

Description: part of the shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. The shoulder has a shallow fluting. The inner side has a resinous coating.

Inv. no. 4182H

Position of the find: Zaton 1979 without data on the square and layer
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow // 2.5Y 7/2
 light grey
 H: 42.3 cm
 W: 30.8 cm
 RD: 8.7 cm
 RH: 2.8 cm
 NW: 9.2 cm
 HW: 5.4 cm
 HT: 2.4 cm
 HH: 23.0 cm

Description: part of the body and shoulder, neck and rim of an amphora with two ribbed strap handles (elevated with an elbow bend). The neck is slightly conical with a stronger reinforcement at the level of the handle base. The rim is high and slightly rounded. The inner side has a resinous coating. There are remains of incrustation on the surface.

Inv. no. 4316H

Position of the find: Zaton 1967 without data on the square and layer
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown
 H.: 22.8 cm
 W: 19.5 cm
 RD: 7.3 cm
 RH: 2.7 cm
 NW: 8.2 cm
 HW: 4.6 cm
 HT: 2.1 cm
 HH: 20.3 cm

Description: part of the shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated with an elbow bend). The neck is cylindrical with a weaker reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. There are remains of a resinous coating on the inside. The surface has small remains of incrustation.



4180H



4182H



4316H

inv. br. 4317H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown

vis.: 22,2 cm

šir.: 21,2 cm

pr. oboda: 7,0 cm

vis. oboda: 2,5 cm

šir. vrata: 7,8 cm

šir. ručke: 4,8 cm

deb. ručke: 2,2 cm

vis. ručke: 21,5 cm

Opis: vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (povišene s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i blago zaobljen. U unutrašnjosti su vidljivi ostaci smolastog premaza. Na vratu slabo vidljivi otisci prstiju.

inv. br. 4318H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/2 light gray

vis.: 36,5 cm

šir.: 25,2 cm

pr. oboda: 9,2 cm

vis. oboda: 2,4 - 2,6 cm (nepravilan)

šir. vrata: 9,6 cm

šir. ručke: 5,4 cm

deb. ručke: 2,3 cm

vis. ručke: 21,5 cm

Opis: dio trbuha i ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (blago povišene s koljenastim pregibom). Lijepljeno iz 2 ulomka. Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je širok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz.

inv. br. 4319H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/4 pale yellow

vis.: 21,7 cm

šir.: 20,4 cm

pr. oboda: 7,3 cm

vis. oboda: 2,2 cm

šir. vrata: 7,7 cm

šir. ručke: 5,2 cm

deb. ručke: 2,2 cm

Opis: vrat i obod amfore sa sačuvanim gornjim dijelom dvije trakasto narebene ručke (povišene s koljenastim pregibom). Vrat je blago koničan s jačim ojačanjem u visini baze ručke. Obod je visok i blago zaobljen. U unutrašnjosti su vidljivi ostaci smolastog premaza.

Inv. no. 4317H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 10YR 7/4 very pale brown

H: 22.2 cm

W: 21.2 cm

RD: 7.0 cm

RH: 2.5 cm

NW: 7.8 cm

HW: 4.8 cm

HT: 2.2 cm

HH: 21.5 cm

Description: the neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and slightly rounded. There are remains of a resinous coating on the inside. There are poorly visible fingerprints on the neck.

Inv. no. 4318H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/2 light grey

H: 36.5 cm

W: 25.2 cm

RD: 9.2 cm

RH: 2.4 - 2.6 cm (irregular)

NW: 9.6 cm

HW: 5.4 cm

HT: 2.3 cm

HH: 21.5 cm

Description: part of the body and shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated with an elbow bend). Glued from two fragments. The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is wide and has a thickened annular shape. The inner side has a resinous coating.

Inv. no. 4319H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/4 pale yellow

H: 21.7 cm

W: 20.4 cm

RD: 7.3 cm

RH: 2.2 cm

NW: 7.7 cm

HW: 5.2 cm

HT: 2.2 cm

Description: neck and rim of an amphora with the preserved upper part of two ribbed strap handles (elevated with an elbow bend). The neck is slightly conical with a stronger reinforcement at the level of the handle base. The rim is high and slightly rounded. There are remains of a resinous coating on the inside.



4317H



4319H



4318H

inv. br. 4320H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow

vis.: 25,0 cm

šir.: 23,5 cm

pr. oboda: 8,0 cm

vis. oboda: 2,2 cm

šir. vrata: 8,9 cm

šir. ručke: 4,9 cm

deb. ručke: 1,9 cm

vis. ručke: 22,0 cm

Opis: dio ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

inv. br. 4321H

položaj nalaza: Zaton 1967. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/4 pale yellow

vis.: 20,7 cm

šir.: 14,2 cm

pr. oboda: 8,6 - 9,0 cm (blago ovalan)

vis. oboda: 2,6 cm

šir. vrata: 9,3 cm

šir. ručke: 5,0 cm

deb. ručke: 2,1 cm

Opis: vrat i obod amfore sa sačuvanim gornjim dijelom jedne trakasto narebrene ručke (blago povišena s koljenastim pregibom). Vrat je blago koničan s jačim ojačanjem u visini baze ručke. Obod je širok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz. Na vratu se nalazi grafit u obliku „obrnutog slova S“.

inv. br. 4323H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow

vis.: 33,9 cm

šir.: 26,2 cm

pr. oboda: 8,2 cm

vis. oboda: 2,5 cm

šir. vrata: 9,5 cm

šir. ručke: 4,8 cm

deb. ručke: 2,5 cm

vis. ručke: 23,5 cm

Opis: dio trbuha i ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je širok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz.

Inv. no. 4320H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow

H: 25.0 cm

W: 23.5 cm

RD: 8.0 cm

RH: 2.2 cm

NW: 8.9 cm

HW: 4.9 cm

HT: 1.9 cm

HH: 22.0 cm

Description: part of the shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. The inner side has a resinous coating. There are small remains of incrustation on the surface.

Inv. no. 4321H

Position of the find: Zaton 1967 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/4 pale yellow

H.: 20.7 cm

W: 14.2 cm

RD: 8.6 - 9.0 cm (slightly oval)

RH: 2.6 cm

NW: 9.3 cm

HW: 5.0 cm

HT: 2.1 cm

Description: neck and rim of an amphora with the preserved upper part of one ribbed strap handle (slightly elevated with an elbow bend). The neck is slightly conical with a stronger reinforcement at the level of the handle base. The rim is wide and has a thickened annular shape. The inner side has a resinous coating. There is graffiti in the shape of an „inverted S“ on the neck.

Inv. no. 4323H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow

H.: 33.9 cm

W: 26.2 cm

RD: 8.2 cm

RH: 2.5 cm

NW: 9.5 cm

HW: 4.8 cm

HT: 2.5 cm

HH: 23.5 cm

Description: part of the body and shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is wide and has a thickened annular shape. The inner side has a resinous coating.



4320H



4321H



4323H

inv. br. 4324H

položaj nalaza: Zaton bez podataka o godini, kvadrantu i sloju
 faktura: mekana, bez primjesa, M: 10YR 7/4 very pale brown
 vis.: 29,5 cm
 šir.: 25,4 cm
 pr. oboda: 7,3 cm
 vis. oboda: 1,4 cm
 šir. vrata: 9,6 cm
 šir. ručke: 4,4 cm
 deb. ručke: 1,8 cm
 vis. ručke: 19,8 cm

Opis: dio trbuha i ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom i gornjim dijelom druge (blago povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. Na ramenu ima plitku kaneliru. U unutrašnjosti su vidljivi ostaci smolastog premaza.

inv. br. 4325H

položaj nalaza: Zaton bez podataka o godini, kvadrantu i sloju
 faktura: mekana (dosta brašnasta), bez primjesa, M: 10YR 7/3 very pale brown // 2.5Y 5/1 gray
 vis.: 28,5 cm
 šir.: 28,5 cm
 pr. oboda: 6,9 cm
 vis. oboda: 2,0 - 2,2 cm (nepravilan)
 šir. vrata: 8,2 cm
 šir. ručke: 4,1 cm
 deb. ručke: 2,2 cm
 vis. ručke: 17,3 cm

Opis: dio trbuha i ramena, vrat i obod amfore s jednom sačuvanom trakasto narebrenom ručkom (vrlo blago povišena s pregibom pod pravim kutom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je nizak i prstenasto zadebljan. U unutrašnjosti su vidljivi jedva zamjetni ostaci smolastog premaza.

inv. br. 4326H

položaj nalaza: Zaton bez podataka o godini, kvadrantu i sloju
 faktura: tvrda, vrlo malo primjesa (mica), M: 10YR 7/4 very pale brown
 vis.: 13,8 cm
 šir.: 18,0 cm
 pr. oboda: 6,7 cm
 vis. oboda: 2,0 cm
 šir. vrata: 7,9 cm
 šir. ručke: 3,9 cm
 deb. ručke: 1,9 cm

Opis: vrat i obod amfore sa sačuvanim gornjim dijelom dvije trakasto narebrene ručke (blago povišene s koljenastim pregibom). Vrat je kratak i blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je nizak i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz.

Inv. no. 4324H

Position of the find: Zaton without data on the year, square and layer
 Fabric: soft, without additives, M: 10YR 7/4 very pale brown
 H: 29.5 cm
 W: 25.4 cm
 RD: 7.3 cm
 RH: 1.4 cm
 NW: 9.6 cm
 HW: 4.4 cm
 HT: 1.8 cm
 HH: 19.8 cm

Description: part of the body and shoulder, neck and rim of an amphora with one preserved ribbed strap handle and the upper part of the other (slightly elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. The shoulder has a shallow fluting. There are remains of a resinous coating on the inside.

Inv. no. 4325H

Position of the find: Zaton without data on the year, square and layer
 Fabric: soft (rather floury), without additives, M: 10YR 7/3 very pale brown // 2.5Y 5/1 grey
 H: 28.5 cm
 W: 28.5 cm
 RD: 6.9 cm
 RH: 2.0 - 2.2 cm (irregular)
 NW: 8.2 cm
 HW: 4.1 cm
 HT: 2.2 cm
 HH: 17.3 cm

Description: part of the body and shoulder, neck and rim of an amphora with one preserved ribbed strap handle (slightly elevated with a right-angle bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is low and has a thickened annular shape. On the inside, there are hardly visible remains of a resinous coating.

Inv. no. 4326H

Position of the find: Zaton without data on the year, square and layer
 Fabric: hard, very few additives (mica), M: 10YR 7/4 very pale brown
 H.: 13.8 cm
 W: 18.0 cm
 RD: 6.7 cm
 RH: 2.0 cm
 NW: 7.9 cm
 HW: 3.9 cm
 HT: 1.9 cm

Description: the neck and rim of an amphora with the preserved upper part of two ribbed strap handles (slightly elevated with an elbow bend). The neck is short and slightly conical with a weaker reinforcement at the level of the handle base. The rim is low and has a thickened annular shape. The inner side has a resinous coating.



4324H



4325H



4326H

inv. br. 4327H

položaj nalaza: Zaton bez podataka o godini, kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/4 pale yellow

vis.: 23,0 cm

šir.: 13,0 cm

pr. oboda: 7,2 cm

vis. oboda: 2,3 cm

šir. ručke: 4,5 cm

deb. ručke: 1,6 cm

vis. ručke: 22,4 cm

Opis: dio vrata i oboda amfore s jednom sačuvanom trakasto narebrenom ručkom (povišena s koljenastim pregibom). Vrat je vjerojatno bio cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz.

inv. br. 4334H

položaj nalaza: Zaton 1967. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown

vis.: 22,0 cm

šir.: 18,6 cm

pr. oboda: 7,1 cm

vis. oboda: 2,4 cm

šir. vrata: 8,0 cm

šir. ručke: 4,2 cm

deb. ručke: 1,8 cm

vis. ručke: 21,3 cm

Opis: dio ramena, vrata i oboda amfore s jednom sačuvanom trakasto narebrenom ručkom (povišena s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza.

inv. br. 4364H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown //10YR 6/4 light yellowish brown

vis.: 20,6 cm

šir.: 14,1 cm

pr. oboda: 7,8 cm

vis. oboda: 2,3 cm

šir. vrata: 9,0 cm

Opis: vrat i obod amfore sa sačuvanim bazama dvije trakasto narebene ručke. Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. Na vratu ima plitku kaneliru. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

Inv. no. 4327H

Position of the find: Zaton without data on the year, square and layer

Fabric: hard, without additives, M: 2.5Y 7/4 pale yellow

H: 23.0 cm

W: 13.0 cm

RD: 7.2 cm

RH: 2.3 cm

HW: 4.5 cm

HT: 1.6 cm

HH: 22.4 cm

Description: part of the neck and rim of an amphora with one preserved ribbed strap handle (elevated with an elbow bend). The neck was probably cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. The inner side has a resinous coating.

Inv. no. 4334H

Position of the find: Zaton 1967 without data on the square and layer

Fabric: hard, without additives, M: 10YR 7/4 very pale brown

H.: 22.0 cm

W: 18.6 cm

RD: 7.1 cm

RH: 2.4 cm

NW: 8.0 cm

HW: 4.2 cm

HT: 1.8 cm

HH: 21.3 cm

Description: part of the shoulder, neck and rim of an amphora with one preserved ribbed strap handle (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. There are remains of a resinous coating on the inside.

Inv. no. 4364H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 10YR 7/4 very pale brown // 10YR 6/4 light yellowish brown

H: 20.6 cm

W: 14.1 cm

RD: 7.8 cm

RH: 2.3 cm

NW: 9.0 cm

Description: neck and rim of an amphora with the preserved bases of two ribbed strap handles. The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. The neck features a shallow fluting. The inner side has a resinous coating. There are small remains of incrustation on the surface.



4327H



4334H



4364H

inv. br. 4422H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown
 vis.: 19,3 cm
 šir.: 11,3 cm
 pr. oboda: 7,2 cm
 vis. oboda: 2,4 cm
 šir. vrata: 8,1 cm

Opis: vrat i obod amfore sa sačuvanim bazama dvije trakasto narebrenе ručke. Lijepljeno iz 3 ulomka. Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i blago zaobljen. U unutrašnjosti su vidljivi ostaci smolastog premaza.

inv. br. 4458H

položaj nalaza: Zaton 2005., površinski sloj
 faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow
 vis.: 23,8 cm
 šir.: 19,0 cm
 šir. vrata: 8,1 cm

Opis: dio ramena, vrat i mali dio oboda amfore sa sačuvanim bazama dvije trakasto narebrenе ručke. Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Sačuvan je dio oboda koji je visok i prstenasto zadebljan. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

inv. br. 4752H

položaj nalaza: Zaton 2005. kv. B1/2 sl. 3
 faktura: tvrda, bez primjesa, M: 2.5Y 7/2 light gray
 vis.: 15,8 cm
 šir.: 21,4 cm
 pr. oboda: 7,5 cm
 vis. oboda: 1,6 cm
 šir. ručke: 4,0 cm
 deb. ručke: 2,1 cm

Opis: dio vrata i obod amfore sa sačuvanim gornjim dijelom dvije trakasto narebrenе ručke koje su nejednake (blago povišene s koljenastim pregibom). Lijepljeno iz 4 ulomka. Nedostaje veći dio vrata sa slabijim ojačanjem u visini baze ručke. Obod je kratak i prstenasto zaobljen. U unutrašnjosti su vidljivi ostaci smolastog premaza.

inv. br. 5136H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
 faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown
 vis.: 20,6 cm
 šir.: 14,2 cm
 pr. oboda: 7,3 cm
 vis. oboda: 2,6 cm
 šir. vrata: 7,9 cm
 šir. ručke: 4,4 cm
 deb. ručke: 1,8 cm

Opis: dio vrata i obod amfore sa sačuvanim gornjim dijelom jedne trakasto narebrenе ručke (povišena s koljenastim pregibom). Vrat je cilindričan s jačim ojačanjem u visini baze ručke. Obod je visok i prstenasto zadebljan. U unutrašnjosti su vidljivi ostaci smolastog premaza.

Inv. no. 4422H

Position of the find: Zaton 1979 without data on the square and layer
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown
 H: 19.3 cm
 W: 11.3 cm
 RD: 7.2 cm
 RH: 2.4 cm
 NW: 8.1 cm

Description: neck and rim of an amphora with the preserved bases of two ribbed strap handles. Glued from three fragments. The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and slightly rounded. There are remains of a resinous coating on the inside.

Inv. no. 4458H

Position of the find: Zaton 2005, surface layer
 Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow
 H: 23.8 cm
 W: 19.0 cm
 NW: 8.1 cm

Description: part of the shoulder, neck, and a small portion of the rim of an amphora with the preserved bases of two ribbed strap handles. The neck is cylindrical with a stronger reinforcement at the level of the handle base. Part of the rim that is high and that has a thickened annular shape has been preserved. The inner side has a resinous coating. There are small remains of incrustation on the surface.

Inv. no. 4752H

Position of the find: Zaton 2005 sq. B1/2 layer 3
 Fabric: hard, without additives, M: 2.5Y 7/2 light grey
 H.: 15.8 cm
 W: 21.4 cm
 RD: 7.5 cm
 RH: 1.6 cm
 HW: 4.0 cm
 HT: 2.1 cm

Description: part of the neck and rim of an amphora with the preserved upper part of two ribbed strap handles that are unequal (slightly elevated with an elbow bend). Glued from four fragments. A greater part of the neck is missing which has a weaker reinforcement at the level of the handle base. The rim is short and has a rounded annular shape. There are remains of a resinous coating on the inside.

Inv. no. 5136H

Position of the find: Zaton 1979 without data on the square and layer
 Fabric: hard, without additives, M: 10YR 7/4 very pale brown
 H: 20.6 cm
 W: 14.2 cm
 RD: 7.3 cm
 RH: 2.6 cm
 NW: 7.9 cm
 HW: 4.4 cm
 HH: 1.8 cm

Description: part of the neck and rim of an amphora with the preserved upper part of one ribbed strap handle (elevated with an elbow bend). The neck is cylindrical with a stronger reinforcement at the level of the handle base. The rim is high and has a thickened annular shape. There are remains of a resinous coating on the inside.



4422H



4458H



5136H



4752H

inv. br. 5137H

položaj nalaza: Zaton 1967. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 2.5Y 7/3 pale yellow

vis.: 12,5 cm

šir.: 21,1 cm

šir. dna: 12,2 cm

Opis: široko konkavno dno s jačim prstenastim ojačanjem i umbom u sredini i dio donjeg dijela trbuha amfore. S unutrašnje strane ima smolasti premaz.

inv. br. 5138H

položaj nalaza: Zaton 1979. bez podataka o kvadrantu i sloju
faktura: tvrda, bez primjesa, M: 10YR 7/4 very pale brown // 2.5Y 7/1 light gray

vis.: 29,0 cm

šir.: 30,0 cm

šir. vrata: 8,4 cm

šir. ručke: 4,6 cm

deb. ručke: 2,0 cm

vis. ručke: 21,0 cm

Opis: dio trbuha, ramena te vrat amfore s dvije trakasto narebrenе ručke (blago povišene s koljenastim pregibom). Vrat je blago koničan sa slabijim ojačanjem u visini baze ručke. Obod nedostaje. S unutrašnje strane ima smolasti premaz. Na površini sitni ostaci inkrustacije.

Inv. no. 5137H

Position of the find: Zaton 1967 without data on the square and layer

Fabric: hard, without additives, M: 2.5Y 7/3 pale yellow

H: 12.5 cm

W: 21.1 cm

BW: 12.2 cm

Description: wide concave base with a stronger annular reinforcement and an umbo in the middle and lower part of the body of an amphora. The inner side has a resinous coating.

Inv. no. 5138H

Position of the find: Zaton 1979 without data on the square and layer

Fabric: hard, without additives, M: 10YR 7/4 very pale brown // 2.5Y 7/1 light grey

H: 29.0 cm

W: 30.0 cm

NW: 8.4 cm

HW: 4.6 cm

HT: 2.0 cm

HH: 21.0 cm

Description: part of the body, shoulder and neck of an amphora with two ribbed strap handles (slightly elevated with an elbow bend). The neck is slightly conical with a weaker reinforcement at the level of the handle base. The rim is missing. The inner side has a resinous coating. There are small remains of incrustation on the surface.

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