

E 48

IMPREGNACIJA  
DRVETA



Dxf. 841 = 861

INŠTITUT ZA GOZDNO IN LESNO GOSPODARSTVO SLOVENIJE V LJUBLJANI

IMPREGNACIJA BALVANA I DAŠČICA SA  
NATRIJEVIM PENTAKLORFENOLATOM

Obradjivač:

Doc.Dr. Bogdan Ditrich

*Bogdan Ditrich*

(1960.)



Direktor:

*Bogdan Žagar*  
Ing. Bogdan Žagar

INSTITUT ZA GLEDNO IN LESNO \* KNIŽNICA

Ec. 48



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VOJNA POSTA BR. 5467 - 4

Br. 539

B E O G R A D

PREDMET: Spiskovi impregnisanog materijala

U prilogu Vam šaljem izveštaj o impregnaciji balvana i daščica sa natrijevim pentaklorfenolatom.

Savetujemo Vam, da se impregnacija katranskim uljem izvede tek krajem meseca marta, ili još bolje kasnije, jer je potrebno da se drvo dovoljno osuši.

Kad nas smo probali ubrzati sušenje drveta, time da smo ga složili u zatvorenu suhu prostoriju, no nakon nekog vremena <sup>obaznalo se</sup> opazili smo, da taj način sušenja ne odgovara, jer je drvo počelo da puca. S tog razloga smo ispostavili drvo polaganijem sušenju na otvorenom ~~otkrivenom~~ prostoru, što zahteva duže vreme sušenja.

Smatramo, da je od velike važnosti, da bude drvo što suvlje, pre nego se otpočne ~~katranskom~~ katranskom impregnacijom, koja otežava daljnje sušenje drveta, te bi drvo u unutrašnjosti ostalo vlažno i time bi bilo pogodno za truljenje.

Direktor :

Prilogi 3 izvoda.

Ing. Bogdan Žagar

Na osnovu ugovora br. 54, 67/4 između Inštituta za gozdno in lesno gospodarstvo, Ljubljana i Vojne pošte Beograd bilo je impregnirano sa 3 % rastvorom Natrijevog pentaklorofenolata:

22 komada jelovih balvana  
21 komada borovih balvana  
21 komada hrastovih balvana  
73 komada brestovih daščica  
70 komada borovih daščica  
70 komada ariševih daščica  
80 komada hrastovih daščica

Od svakog sortimenta drveta ostavljeno je po 7 komada neimpregniranih, koji će služiti kao uzorci za kontrolu. Iz priloženih tabela pregledni su eksperimentalni uslovi, pod kojima je bilo drvo impregnirano.

Ljubljana, 1960.

B R E S T

Broj	Datum	V a k u m		P r i t i s a k		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg/l	Upilo l/m <sup>3</sup>	Zašč. suvo sredst. kg/m <sup>3</sup>	Konc. suvo pre impr. gr/l	Konc. rast. posle impr. g/l	Izgled uzoraka
		sati	mm Hg	sati	7-8 atm.									
1	14.6.60	3 <sup>08</sup>	710	4 <sup>00</sup>	12-14	4,550	6,300	1,75	222,96	6,6885	3,0%	3,0%		
2	"	"	"	"	"	5,950	8,700	2,75	350,37	10,5105	"	"		
3	"	"	"	"	"	5,150	7,200	2,05	261,19	7,8351	"	"		
4	"	"	"	"	"	5,200	9,400	4,20	535,11	16,0524	"	"		
5	"	"	"	"	"	4,800	6,700	1,90	242,08	7,2618	"	"		
6	"	"	"	"	"	4,800	5,800	1,00	127,41	3,8220	"	"		
7	"	"	"	"	"	5,850	8,750	2,90	369,48	11,0838	"	"		
8	"	"	"	"	"	6,250	7,250	1,00	127,41	3,8220	"	"		
9	"	"	"	"	"	5,350	8,750	3,40	433,19	12,9948	"	"		
10	"	"	"	"	"	5,000	6,00	1,00	127,41	3,8220	"	"		
11	"	"	"	"	"	4,600	7,300	2,70	344,00	10,3194	"	"		
12	"	"	"	"	"	5,200	6,400	1,20	152,89	4,5864	"	"		
13	"	"	"	"	"	5,100	9,150	4,05	516,00	15,4791	"	"		
14	"	"	"	"	"	4,650	5,850	1,20	152,89	4,5864	"	"		
15	"	"	"	"	"	5,050	7,600	2,55	324,89	9,7460	"	"		
16	"	"	"	"	"	4,800	6,100	1,30	165,63	4,9686	"	"		
17	"	"	"	"	"	5,600	9,800	4,20	535,11	16,0524	"	"		
18	"	"	"	"	"	5,000	9,500	4,50	573,34	17,1990	"	"		
19	"	"	"	"	"	4,600	5,650	1,05	133,78	4,0131	"	"		
20	"	"	"	"	"	5,050	10,250	5,20	662,52	19,8774	"	"		
21	15.8.60	1 <sup>45</sup>	710	4 <sup>00</sup>	12-14	4,900	5,900	1,00	127,41	3,8820	"	"		
22	"	"	"	"	"	5,700	9,350	3,65	465,04	13,9503	"	"		
23	"	"	"	"	"	5,100	9,300	4,20	535,11	16,0524	"	"		
24	"	"	"	"	"	5,000	8,750	3,75	477,78	14,3325	"	"		
25	"	"	"	"	"	4,850	1,00	1,00	127,41	3,8220	"	"		
26	"	"	"	"	"	6,550	7,200	0,65	82,82	2,4843	"	"		

Broj	Datum	V a k u m		P r i t i s a k		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg/l	Upilo l/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. gr/l	Izgled uzoraka
		sati	mm Hg	sati	7-8 atm.									
27	15.6.60	1 <sup>54</sup>	710	4 <sup>00</sup>	12-14	5,400	8,050	2,65	337,63	10,1283	3,0%	3,0%		
28	"	"	"	"	"	5,000	6,550	1,55	197,48	5,9241	"	"		
29	"	"	"	"	"	5,100	9,600	4,50	573,34	17,1990	"	"		
30	"	"	"	"	"	4,950	10,400	5,45	694,37	20,8299	"	"		
31	"	"	"	"	"	6,000	8,400	2,40	305,78	9,1728	"	"		
32	"	"	"	"	"	5,250	6,550	1,30	165,63	4,9686	"	"		
33	"	"	"	"	"	5,000	6,500	1,50	191,11	5,7330	"	"		
34	"	"	"	"	"	4,850	6,300	1,45	184,74	5,5419	"	"		
35	"	"	"	"	"	4,300	7,100	2,80	356,74	10,7016	"	"		
36	17.6.60	6 <sup>15</sup>	710	6 <sup>00</sup>	12-14	4,800	7,300	2,500	318,52	9,5550	"	"		
37	"	"	"	"	"	5,050	10,500	5,45	694,37	20,8299	"	"		
38	"	"	"	"	"	5,350	10,600	5,25	668,89	20,0655	"	"		
39	"	"	"	"	"	4,850	7,400	2,55	394,89	9,7461	"	"		
40	"	"	"	"	"	5,450	6,900	1,45	184,74	5,5419	"	"		
41	"	"	"	"	"	4,750	6,600	1,85	235,70	7,0707	"	"		
42	18.6.60	5 <sup>25</sup>	700	4 <sup>00</sup>	12-14	5,150	9,000	3,85	490,52	14,7147	"	"		
43	"	"	"	"	"	4,950	9,050	4,10	522,37	15,6702	"	"		
44	"	"	"	"	"	4,700	6,950	2,25	286,67	8,5995	"	"		
45	"	"	"	"	"	5,000	8,900	3,90	496,89	14,9058	"	"		
46	"	"	"	"	"	5,350	10,700	5,35	681,63	20,4470	"	"		
47	"	"	"	"	"	5,000	10,100	5,10	649,78	19,4922	"	"		
48	"	"	"	"	"	5,800	7,850	2,05	261,18	7,8351	"	"		
49	"	"	"	"	"	4,650	6,550	1,90	242,07	7,26,18	"	"		
50	"	"	"	"	"	6,200	7,900	1,70	216,59	6,4971	"	"		
51	"	"	"	"	"	5,300	9,800	4,50	573,33	17,1990	"	"		
52	"	"	"	"	"	5,350	8,600	3,25	414,07	12,4215	"	"		
53	"	"	"	"	"	5,100	10,050	4,95	630,67	18,9189	"	"		
54	"	"	"	"	"	5,100	10,150	5,05	643,41	19,3011	"	"		

Broj	Datum	V a k u m		P r i t i s a k		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg/l	Upilo l/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. gr/l	Izgleđ uzoraka
		sati	mm Hg	sati	7-8 atm.									
55	18.6.60	5 <sup>25</sup>	700	4 <sup>00</sup>	12-14	5,250	10,300	5,05	643,41	19,3011	3,0 %	3,0 %		
56	"	"	"	"	"	5,750	8,850	3,10	394,96	11,8482	"	"		
57	"	"	"	"	"	5,800	10,400	4,60	586,07	17,5812	"	"		
58	20.6.60	4 <sup>30</sup>	690	5 <sup>00</sup>	12-14	5,700	10,250	4,55	579,70	17,3901	"	"		
59	"	"	"	"	"	5,200	10,000	4,80	611,56	18,3956	"	"		
60	"	"	"	"	"	4,950	8,350	3,40	433,19	12,9948	"	"		
61	"	"	"	"	"	5,600	7,550	1,95	248,44	7,4529	"	"		
62	"	"	"	"	"	5,400	9,000	3,60	458,67	13,7592	"	"		
63	"	"	"	"	"	4,900	8,300	3,40	433,19	12,9948	"	"		
64	"	"	"	"	"	5,650	10,100	4,45	566,97	17,0079	"	"		
65	"	"	"	"	"	5,950	9,700	3,75	477,78	14,3325	"	"		
66	"	"	"	"	"	4,500	8,500	4,00	509,63	15,2880	"	"		
67	"	"	"	"	"	5,150	6,750	1,60	203,85	6,1152	"	"		
68	"	"	"	"	"	6,400	7,500	1,10	140,15	4,2042	"	"		
69	"	"	"	"	"	4,800	6,700	1,90	242,07	7,2618	"	"		
70	"	"	"	"	"	5,200	9,950	4,75	605,19	18,1545	"	"		
71	"	"	"	"	"	5,850	9,950	4,10	522,37	15,6702	"	"		
72	"	"	"	"	"	5,350	10,100	4,75	605,19	18,1545	"	"		
73	"	"	"	"	"	5,750	10,200	4,45	566,97	17,0079	"	"		



B O R

Broj	Datum	V a k u m		P r i t i s a k		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg/lit.	Upilo lit/m <sup>3</sup>	Zaščit.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impregn. gr/lit.	Konc.rast. posle impr. gr/lit.	Izgled uzoraka
		sati	mm Hg	sati	7-8 atn.									
81	16.6.60	2 <sup>03</sup>	710	6 <sup>00</sup>	12-14	3,400	7,050	3,65	465,039	13,95	3,0 %	3,0 %		
82	"	"	"	"	"	3,550	6,650	3,10	394,965	11,85	"	"		
83	"	"	"	"	"	3,750	7,350	3,60	458,669	13,76	"	"		
84	"	"	"	"	"	3,750	6,200	2,45	312,149	9,56	"	"		
85	"	"	"	"	"	3,800	6,500	2,70	344,001	10,32	"	"		
86	"	"	"	"	"	3,750	7,050	3,30	420,446	12,61	"	"		
87	21.6.60	4 <sup>30</sup>	700	6 <sup>00</sup>	12-14	3,900	8,700	4,80	611,558	18,34	"	"		
88	"	"	"	"	"	3,850	8,000	4,15	528,743	15,86	"	"		
89	"	"	"	"	"	4,000	6,700	2,70	344,001	10,32	"	"		
90	"	"	"	"	"	3,500	7,200	3,70	471,409	14,14	"	"		
91	"	"	"	"	"	3,450	7,200	3,75	477,780	14,33	"	"		
92	"	"	"	"	"	3,500	7,250	3,75	477,780	14,33	"	"		
93	22.6.60	4 <sup>15</sup>	710	6 <sup>00</sup>	12-14	3,700	6,500	2,80	356,742	10,70	"	"		
94	"	"	"	"	"	4,100	8,800	4,70	598,817	17,96	"	"		
95	"	"	"	"	"	3,700	6,550	2,85	363,113	10,89	"	"		
96	"	"	"	"	"	3,850	6,500	2,65	337,631	10,13	"	"		
97	"	"	"	"	"	3,650	7,100	3,45	439,557	13,18	"	"		
98	"	"	"	"	"	3,500	6,400	2,90	369,483	11,08	"	"		
99	23.6.60	4 <sup>00</sup>	700	4 <sup>00</sup>	12-14	3,800	8,350	4,55	579,706	17,39	%	"		
100	"	"	"	"	"	3,600	7,700	4,15	528,743	15,86	"	"		
101	"	"	"	"	"	3,600	8,600	5,00	637,040	19,11	"	"		
102	"	"	"	"	"	3,800	7,400	3,60	458,669	13,76	"	"		
103	"	"	"	"	"	3,200	6,500	3,30	420,446	12,61	"	"		
104	"	"	"	"	"	3,750	6,200	2,45	312,149	9,36	"	"		
105	"	"	"	"	"	3,450	6,650	3,20	407,705	12,23	"	"		
106	"	"	"	"	"	3,050	6,350	3,30	420,445	12,61	"	"		
107	"	"	"	"	"	3,650	7,450	3,80	484,150	14,52	"	"		

Broj	Datum	V a k u m P r i t i s a k		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg/lit.	Upilo lit/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impr. gr/lit.	Konc.rast. posle impr. gr/lit.	Izgled uzoraka	
		sati	mm Hg										sati 7-8 atn.
108	23.6.60	4 <sup>00</sup>	700	4 <sup>00</sup>	12-14	4.150	6.800	2.65	337.631	10.13	3,0 %	3,0%	
109	"	"	"	"	"	3.650	6.200	2.55	324.890	9,75	"	"	
110	"	"	"	"	"	3.850	7.000	3.15	401.335	12,04	"	"	
111	"	"	"	"	"	3.200	6.250	3.05	388.594	11,66	"	"	
112	"	"	"	"	"	3.700	6.600	2.90	369.483	11,08	"	"	
113	"	"	"	"	"	3.1950	6.750	2.80	356.742	10,70	"	"	
114	"	"	"	"	"	3.750	6.800	3.05	388.594	11,66	"	"	
115	24.6.60	5 <sup>45</sup>	700	4 <sup>00</sup>	12-14	3.500	7.400	3.90	496.891	14,90	"	"	
116	"	"	"	"	"	3.450	5.900	2.45	312.149	9,36	"	"	
117	"	"	"	"	"	3.700	6.400	2.70	344.001	10,31	"	"	
118	"	"	"	"	"	3.650	6.400	2.75	350.372	10,51	"	"	
119	"	"	"	"	"	3.700	7.300	3.60	458.668	13,76	"	"	
120	"	"	"	"	"	3.850	8.700	4.85	617.929	18,53	"	"	
121	"	"	"	"	"	3.400	6.800	3.40	433.187	12,99	"	"	
122	"	"	"	"	"	3.650	6.650	3.00	382.224	11,47	"	"	
123	"	"	"	"	"	3.150	6.500	3.35	426.816	12,80	"	"	
124	"	"	"	"	"	3.450	7.000	3.55	452.298	13,57	"	"	
125	"	"	"	"	"	3.650	6.300	2.65	337.631	10.13	"	"	
126	"	"	"	"	"	3.700	6.950	3.25	414.076	12.42	"	"	
127	"	"	"	"	"	3.500	6.750	3.25	414.076	12.42	"	"	
128	"	"	"	"	"	3.900	7.250	3.35	426.816	12.80	"	"	
129	25.6.60	5 <sup>00</sup>	710	4 <sup>00</sup>	12-14	3.750	7.800	4.05	516.002	15.48	"	"	
130	"	"	"	"	"	4.000	7.200	3.20	407.705	12.23	"	"	
131	"	"	"	"	"	3.700	7.500	3.80	484.150	14.52	"	"	
132	"	"	"	"	"	3.750	7.400	3.65	465.039	13,95	"	"	
133	"	"	"	"	"	3.700	7.600	3.90	496.891	14,90	"	"	
134	"	"	"	"	"	3.800	8.000	4.20	535.113	16.05	"	"	
135	27.6.60	4 <sup>00</sup>	780	6 <sup>00</sup>	12-14	3.500	7.100	3.60	458.668	13,76	"	"	

Broj	Datum	V a k u m		P r i t i s a k		% vlage	Težina pre impreg.	Težina posle impregn.	Upilo kg/lit.	Upilo lit/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impregn. gr/lit.	Konc.rast. posle impr. gr./lit	Izgled uzoraka
		sati	mm Hg	sati	7-8 atn.									
136	27.6.60	4 <sup>00</sup>	700	6 <sup>00</sup>	12-14	4.750	7.105	2.40	305.779	9.17	3,0%	3,0%		
137	"	"	"	"	"	3.800	7.800	4.00	509.632	15.28	"	"		
138	"	"	"	"	"	3.800	6.900	3.10	394.964	11.85	"	"		
139	"	"	"	"	"	3.850	7.000	3,15	401.335	12.04	"	"		
140	"	"	"	"	"	3.050	7.300	425	541.484	16.24	"	"		
141	28.6.60	5 <sup>30</sup>	700	6 <sup>00</sup>	12-14	3.400	6.400	3.00	382.224	11.46	"	"		
142	"	"	"	"	"	3.850	8.600	4.75	605.188	18,15	"	"		
143	"	"	"	"	"	3.800	6.800	2.40	305.779	9,17	"	"		
144	"	"	"	"	"	4.200	6.050	1.85	235.704	7.07	"	"		
145	"	"	"	"	"	3.900	6.950	3.05	388.594	11.66	"	"		
146	"	"	"	"	"	3.800	6.650	2.85	363.112	10.89	"	"		
147	29.6.60	3 <sup>30</sup>	700	6 <sup>00</sup>	12-14	3.500	6.100	2.60	331.260	9.74	"	"		
148	"	"	"	"	"	3.850	6.600	2.75	350.372	10.51	"	"		
149	"	"	"	"	"	3.300	6.900	3.60	458.668	13.75	"	"		
150	"	"	"	"	"	3.600	7.800	4.20	535.113	16.05	"	"		

M A C E S E N

Broj	Datum	V a k u m		Pritisak		%	Težina pre impregn.	Težina posle impregn.	Upilo kg	Upilo l/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. g/l	Izgled uzoraka
		sati	mm Hg	sati	7-8 atm.									
161	29.VI.60	5 <sup>30</sup>	710	4 <sup>00</sup>	12-14		4,100	5,700	1,60	203,85	6,1152	3 %	3 %	
162	"	"	"	"	"		5,100	6,400	1,30	165,63	4,9686	"	"	
163	"	"	"	"	"		5,000	7,100	2,10	267,56	8,0262	"	"	
164	"	"	"	"	"		5,050	6,150	1,10	140,15	4,2042	"	"	
165	"	"	"	"	"		4,500	5,900	1,40	178,37	5,3508	"	"	
166	"	"	"	"	"		5,300	6,300	1,00	127,41	3,8220	"	"	
167	"	"	"	"	"		5,800	6,800	1,00	127,41	3,8220	"	"	
168	"	"	"	"	"		4,300	5,800	1,50	191,11	5,7330	"	"	
169	"	"	"	"	"		3,600	6,100	2,50	318,52	9,5550	"	"	
170	"	"	"	"	"		3,900	6,500	2,60	331,26	9,9372	"	"	
171	"	"	"	"	"		4,600	5,900	1,30	165,63	4,9686	"	"	
172	30.VI.60	5 <sup>00</sup>	710	4 <sup>00</sup>	12-14		5,200	6,150	0,95	121,04	3,6309	"	"	
173	"	"	"	"	"		5,000	5,900	0,90	114,67	3,4398	"	"	
174	"	"	"	"	"		4,500	5,600	1,10	140,15	4,2042	"	"	
175	"	"	"	"	"		4,500	6,400	1,90	242,07	7,2618	"	"	
176	"	"	"	"	"		4,500	6,100	1,60	203,85	6,1152	"	"	
177	"	"	"	"	"		5,000	6,400	1,40	178,37	5,3508	"	"	
178	"	"	"	"	"		5,800	7,000	1,20	152,89	4,5864	"	"	
179	"	"	"	"	"		5,100	6,800	1,70	216,59	6,4974	"	"	
180	"	"	"	"	"		5,000	6,000	1,30	165,63	4,9686	"	"	
181	"	"	"	"	"		5,250	6,300	1,05	133,75	4,0131	"	"	
182	"	"	"	"	"		5,100	6,200	1,10	140,15	4,2042	"	"	
183	"	"	"	"	"		4,900	6,000	1,10	140,15	4,2042	"	"	
184	"	"	"	"	"		5,300	6,800	1,30	165,63	4,9686	"	"	
185	"	"	"	"	"		5,100	6,300	1,20	152,89	4,5864	"	"	
186	30.VII.60	5 <sup>30</sup>	710	4 <sup>00</sup>	12-14		5,500	7,000	1,50	191,11	5,7330	"	"	
187	1.VII.60	4 <sup>30</sup>	710	4 <sup>00</sup>	12-14		5,00	6,000	1,00	127,41	3,8220	"	"	



Broj	Datum	V a k u m		Pritisak		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg	Upilo l/m <sup>3</sup>	Zašč. suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impreg. gr/l	Konc.rast. posle impr. g/l	Izgled uzoraka
		sati	mm Hg	sati	7-8 atm.									
188	1.VII.60	4 <sup>30</sup>	710	4 <sup>00</sup>	12-14	4,600	5,600	1,00	127,41	3,8220	3 %	3 %		
189	"	"	"	"	"	4,550	5,750	1,20	152,89	4,5864	"	"		
190	"	"	"	"	"	4,950	6,150	1,10	140,15	4,2042	"	"		
191	"	"	"	"	"	4,850	6,000	1,15	146,52	4,3953	"	"		
192	"	"	"	"	"	4,900	6,100	1,20	152,89	4,5864	"	"		
193	"	"	"	"	"	5,200	6,250	1,05	133,78	4,0131	"	"		
194	"	"	"	"	"	4,600	5,950	1,35	172,00	5,1597	"	"		
195	"	"	"	"	"	3,800	4,800	2,00	254,82	7,6440	"	"		
196	"	"	"	"	"	4,900	5,800	0,90	114,67	3,4398	"	"		
197	"	"	"	"	"	4,600	6,050	1,45	184,74	5,5419	"	"		
198	"	"	"	"	"	4,800	6,000	1,20	152,89	4,5864	"	"		
199	"	"	"	"	"	4,950	5,800	0,85	108,30	3,2487	"	"		
200	"	"	"	"	"	5,100	5,900	0,80	101,93	3,0576	"	"		
201	"	"	"	"	"	5,200	5,900	0,70	89,18	2,6754	"	"		
202	7.VII.60	5 <sup>00</sup>	720	4 <sup>00</sup>	12-14	4,650	5,600	0,95	121,04	3,6309	"	"		
203	"	"	"	"	"	4,900	5,600	0,70	89,18	2,6754	"	"		
204	"	"	"	"	"	4,900	5,800	0,90	114,67	3,4398	"	"		
205	"	"	"	"	"	5,600	6,650	1,05	133,78	4,0131	"	"		
206	"	"	"	"	"	4,800	6,000	1,20	152,89	4,5864	"	"		
207	"	"	"	"	"	5,450	6,600	1,15	146,52	4,3953	"	"		
208	"	"	"	"	"	5,600	7,300	1,70	216,59	6,4974	"	"		
209	"	"	"	"	"	5,150	6,500	1,55	172,00	5,1597	"	"		
210	"	"	"	"	"	4,800	6,600	1,80	299,33	6,8796	"	"		
211	"	"	"	"	"	4,900	5,900	1,00	127,41	3,8220	"	"		
212	"	"	"	"	"	4,900	6,000	1,10	140,15	4,2042	"	"		
213	"	"	"	"	"	5,600	6,600	1,00	127,41	3,8220	"	"		
214	"	"	"	"	"	4,000	5,300	1,30	165,63	4,9686	"	"		
215	"	"	"	"	"	4,800	6,200	1,40	178,37	5,3508	"	"		
216	"	"	"	"	"	5,000	6,200	1,20	152,89	4,5864	"	"		

Broj	Datum	V a k u m		Pritisak sati 7-8 atm.	% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg	Upilo l/m <sup>3</sup>	Zašč. suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. gr/l	Izgled uzoraka
		sati	mm Hg										
217	8.VII.60	5 <sup>00</sup>	710	4 <sup>00</sup>	12-14	5,150	7,200	2,05	261,19	7,8351	3 %	3 %	
218	"	"	"	"	"	5,500	6,400	1,00	127,41	3,8220	"	"	
219	"	"	"	"	"	5,750	6,600	1,45	184,74	5,5419	"	"	
220	"	"	"	"	"	4,800	6,150	1,35	172,00	5,1597	"	"	
221	"	"	"	"	"	5,000	5,900	0,90	114,67	3,4398	"	"	
222	"	"	"	"	"	5,050	7,000	1,95	248,44	7,4529	"	"	
223	"	"	"	"	"	5,300	6,450	1,15	146,52	4,3953	"	"	
224	"	"	"	"	"	4,000	4,900	0,90	114,67	3,43 98	"	"	
225	"	"	"	"	"	4,700	6,000	1,30	165,63	4,9686	"	"	
226	"	"	"	"	"	4,600	6,100	1,50	191,11	5,7330	"	"	
227	"	"	"	"	"	4,350	6,300	1,95	248,44	7,4529	"	"	
228	"	"	"	"	"	5,250	6,800	1,55	197,48	5,9241	"	"	
229	"	"	"	"	"	4,200	6,550	2,35	299,41	8,9817	"	"	
230	"	"	"	"	"	4,800	6,650	1,85	235,70	7,0707	"	"	

H R A S T

Broj	Datum	V a k u m		Pritisak	%	Težina pre impregn.	Težina posle impregn.	Upilo kg	Upilo l/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impreg. gr/l	Konc.rast. posle impr. g/l	Izgled uzoraka
		sati	mm Hg	sati 7-8 atm.									
241	2.IX.60	5 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,100	8,050	1,95	248,44	7,4529	3 %	3 %	
242	"	"	"	"	"	6,150	7,350	1,20	152,89	4,5864	"	"	
243	7.IX.60	5 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,300	7,500	1,20	152,89	4,5864	"	"	
244	"	"	"	"	"	5,900	6,750	0,85	108,30	3,2487	"	"	
245	"	"	"	"	"	5,700	7,300	1,60	203,85	6,1152	"	"	
246	"	"	"	"	"	5,950	6,600	0,65	82, 81	2,4843	"	"	
247	"	"	"	"	"	6,150	8,400	2,25	286,87	8,5995	"	"	
248	"	"	"	"	"	5,800	7,700	1,90	242,07	7,2618	"	"	
249	8.IX.60	6 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,250	7,700	1,45	184,74	5,5419	"	"	
250	"	"	"	"	"	5,700	6,650	0,95	121,04	3,6309	"	"	
251	"	"	"	"	"	5,800	6,900	1,10	140,15	4,2042	"	"	
252	"	"	"	"	"	6,300	6,800	0,50	63,70	1,9110	"	"	
253	"	"	"	"	"	5,900	7,150	1,25	159,26	4,7775	"	"	
254	"	"	"	"	"	6,600	7,300	0,70	89,18	2,6754	"	"	
255	"	"	"	"	"	6,100	7,000	0,90	114,67	3,4398	"	"	
256	"	"	"	"	"	5,800	6,900	1,10	140,15	4,2042	"	"	
257	10.IX.60	5 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,100	6,950	0,85	108,30	3,2487	"	"	
258	"	"	"	"	"	6,150	8,500	2,35	299,41	8,9817	"	"	
259	"	"	"	"	"	6,400	7,200	0,80	101,93	3,0576	"	"	
260	"	"	"	"	"	5,900	7,600	1,70	216,59	6,4974	"	"	
261	"	"	"	"	"	6,300	7,200	0,90	114,67	3,4398	"	"	
262	"	"	"	"	"	6,550	8,200	1,65	210,22	6,3063	"	"	
263	"	"	"	"	"	6,650	8,300	1,65	210,22	6,3063	"	"	
264	"	"	"	"	"	5,450	8,300	2,85	363,11	10,8927	"	"	
265	14.IX.60	6 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,000	6,700	0,70	89,18	2,6754	"	"	
266	"	"	"	"	"	6,300	7,600	1,30	165,63	4,9686	"	"	
267	"	"	"	"	"	5,800	8,700	2,90	369,48	11,0838	"	"	

Broj	Datum	V a k u m		Pritisak		% vlage	Težina pre impregn.	Težina posle impregn.	Upilo kg/	Upilo l/m <sup>3</sup>	Zašč.suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impreg. gr/l	Konc.rast. posle impreg. gr/l	Izgled uzoraka
		sati	mm Hg	sati	7-8 atm.									
268	14.IX.60	6 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,900	8,000	1,10	140,15	4,2042	3 %	3 %		
269	"	"	"	"	"	6,600	8,000	1,40	178,37	5,3508	"	"		
270	"	"	"	"	"	5,850	8,300	2,45	312,15	9,3639	"	"		
271	"	"	"	"	"	6,300	7,500	1,20	152,89	4,5864	"	"		
272	"	"	"	"	"	6,650	7,300	0,65	82,81	2,4843	"	"		
273	16.IX.60	5 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,200	7,600	1,40	178,37	5,3508	"	"		
274	"	"	"	"	"	5,500	7,900	2,40	305,78	9,1728	"	"		
275	"	"	"	"	"	5,750	8,000	2,25	286,67	8,5995	"	"		
276	"	"	"	"	"	6,850	7,700	0,85	108,30	3,2487	"	"		
277	"	"	"	"	"	6,150	8,700	2,55	324,89	9,7461	"	"		
278	"	"	"	"	"	6,500	8,600	2,10	267,56	8,0262	"	"		
279	"	"	"	"	"	5,600	7,500	1,90	242,07	7,2618	"	"		
280	"	"	"	"	"	5,800	7,000	1,20	152,89	4,5864	"	"		
281	18.IX.60	"	"	"	12-14	6,200	8,350	2,15	273,93	8,2173	"	"		
282	"	"	"	"	"	6,300	8,900	2,60	331,26	9,9372	"	"		
283	"	"	"	"	"	6,000	7,950	1,95	248,44	7,4529	"	"		
284	"	"	"	"	"	6,300	6,800	0,50	63,70	1,9110	"	"		
285	"	"	"	"	"	6,000	7,250	1,25	159,26	4,7775	"	"		
286	"	"	"	"	"	6,100	7,750	1,65	210,22	6,3063	"	"		
287	"	"	"	"	"	6,100	6,700	0,60	76,44	2,2932	"	"		
288	"	"	"	"	"	6,100	6,050	0,95	121,04	3,6309	"	"		
289	20.IX.60	7 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6,400	7,700	1,30	165,63	4,9686	"	"		
290	"	"	"	"	"	6,500	7,200	0,70	89,18	2,6754	"	"		
291	"	"	"	"	"	6,300	7,550	1,25	159,26	4,7775	"	"		
292	"	"	"	"	"	5,700	8,000	2,30	293,04	8,7906	"	"		
293	"	"	"	"	"	6,550	8,100	1,55	197,48	5,9241	"	"		
294	"	"	"	"	"	6,650	7,350	0,70	89,18	2,6754	"	"		
295	"	"	"	"	"	6,000	7,200	1,20	152,89	4,5864	"	"		
296	"	"	"	"	"	6,650	8,950	2,30	293,04	8,7906	"	"		



Broj	Datum	V a k u m		Pritisak sati 7-8 atm.	% vlage	Težina pre impreg.	Težina posle impregn.	Upilo kg	Upilo l/m3	Zašč.suvo sredstvo kg/m3	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. g/l	Izgled uzoraka
		sati	mm Hg										
297	23.IX.60	6 <sup>00</sup>	710	6 <sup>00</sup>	12-14	6.350	7,600	1,25	159,26	4,7775	3 %	3 %	
298	"	"	"	"	"	6.550	7,800	1,25	159,26	4,7775	"	"	
299	"	"	"	"	"	6.750	7,600	0,85	108,30	3,24,87	"	"	
300	"	"	"	"	"	6.150	8,000	1,85	235,70	7,0707	"	"	
301	"	"	"	"	"	5.850	7,800	1,95	248,44	7,5529	"	"	
302	"	"	"	"	"	5.500	6.500	1,00	127,41	3,82,20	"	"	
303	"	"	"	"	"	5.650	6.900	1,25	159,26	4,7775	"	"	
304	%	"	"	"	"	5.600	8,600	3,00	382,22	11,46,60	"	"	
305	26.IX.60	"	"	"	"	6.305	8,200	3,20	407,71	12,2304	"	"	
306	"	"	"	"	"	5.950	7,200	1,25	159,26	4,7775	"	"	
307	"	"	"	"	"	6,200	8,400	2,20	280,30	8,4084	"	"	
308	"	"	"	"	"	7,000	8,200	1,20	152,89	4,5864	"	"	
309	"	"	"	"	"	6,000	6,600	0,60	76,44	2,2932	"	"	
310	"	"	"	"	"	6,450	7,300	0,85	108,30	3,2487	"	"	
311	"	"	"	"	"	6,350	7,600	1,25	159,26	4,7775	"	"	
312	%	"	"	"	"	6,700	8,000	1,30	165,63	4,9686	"	"	
313	28.IX.60	8 <sup>00</sup>	710	6 <sup>00</sup>	12-14	5,800	7,200	1,40	178,37	5,3508	"	"	
314	"	"	"	"	"	6,600	7,400	0,80	101,93	3,0576	"	"	
315	"	"	"	"	"	6,200	7,200	1,00	127,41	3,8220	"	"	
316	"	"	"	"	"	5,800	7,800	2,00	254,82	7,644	"	"	
317	"	"	"	"	"	5,900	7,000	1,10	140,15	4,2042	"	"	
318	"	"	"	"	"	6,100	7,700	1,60	203,85	6,1152	"	"	
319	"	"	"	"	"	6,000	7,900	1,90	242,07	7,2618	"	"	
320	"	"	"	"	"	5,950	8,100	2,15	273,93	8,2173	"	"	

## S M R Č A

Broj	Datum	Prečnik cm	Dužina cm	Kubatura cm <sup>3</sup>	Vakuum	Pritisak	Težina pre impr.	Težina posle impr.	Upilo kg	Zaštitno suvo sredstvo kg/m <sup>3</sup>	Zašt.sred. l/m <sup>3</sup>	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. gr/l
					sati 710 mm Hg	sati 7-8 atm.							
321	16.VI.60.	18,75	254	70022,72	2 <sup>03</sup>	6 <sup>00</sup>	43,80	66,60	22,80	925,6	9,77	3 %	3 %
322	21.VI.60	23,50	254	110114,08	4 <sup>30</sup>	6 <sup>00</sup>	57,30	76,85	19,55	177,5	5,33	"	"
323	22.VI.60	20,50	253	83464,70	4 <sup>15</sup>	6 <sup>00</sup>	43,50	61,25	17,25	206,7	6,20	"	"
324	25.VI.60	20,50	253	83464,70	5 <sup>00</sup>	4 <sup>00</sup>	43,50	67,00	23,50	281,5	8,45	"	"
325	27.VI.60	17,00	254	63726,06	4 <sup>00</sup>	6 <sup>00</sup>	27,50	36,50	9,00	141,2	4,24	"	"
326	28.VI.60	25,25	255	127522,95	5 <sup>30</sup>	6 <sup>00</sup>	62,70	91,90	29,20	228,9	6,87	"	"
327	7.IX.60	22,50	253	100544,73	5 <sup>00</sup>	6 <sup>00</sup>	46,50	60,00	13,50	134,3	4,03	"	"
328	8.IX.60	25,00	256	125601,28	6 <sup>00</sup>	6 <sup>00</sup>	65,50	82,20	16,70	132,9	3,99	"	"
329	10.IX.60	26,00	255	135,318,30	5 <sup>00</sup>	6 <sup>00</sup>	72,20	100,70	28,50	210,6	6,32	"	"
330	11.IX.60	23,50	255	110547,60	5 <sup>00</sup>	6 <sup>00</sup>	57,15	85,80	28,65	259,2	7,78	"	"
331	16.IX.60	25,00	251	123148,13	5 <sup>00</sup>	6 <sup>00</sup>	63,80	91,10	27,60	224,1	6,72	"	"
332	18.IX.60	22,50	253	100544,73	5 <sup>00</sup>	6 <sup>00</sup>	48,00	76,20	28,20	280,5	8,42	"	"
333	20.IX.60	18,00	252	64093,68	7 <sup>00</sup>	6 <sup>00</sup>	29,80	42,00	12,20	190,3	5,71	"	"
334	23.IX.60	20,00	254	79756,00	6 <sup>00</sup>	6 <sup>00</sup>	46,50	65,00	18,50	231,9	6,96	"	"
335	26.IX.60	23,50	255	110547,60	6 <sup>00</sup>	6 <sup>00</sup>	54,50	69,50	15,00	135,7	4,07	"	"
336	5.X.60	19,00	280	79349,20	6 <sup>20</sup>	6 <sup>00</sup>	43,70	48,90	5,20	65,50	1,97	"	"
337	6.X.60	20,50	253	83464,70	5 <sup>00</sup>	6 <sup>00</sup>	46,90	57,10	10,20	122,2	3,67	"	"
338	7.X.60	23,25	253	107261,88	8 <sup>15</sup>	6 <sup>00</sup>	52,70	79,30	26,60	247,9	7,44	"	"
339	8.X.60	20,00	253	79442,00	5 <sup>30</sup>	6 <sup>00</sup>	44,10	50,00	5,90	74,3	2,23	"	"
340	12.X.60	15,00	253	44687,39	11 <sup>00</sup>	6 <sup>00</sup>	29,50	40,40	10,90	243,9	7,32	"	"
341	13.X.60	14,50	255	42085,20	7 <sup>15</sup>	6 <sup>00</sup>	30,60	34,00	3,40	80,78	2,42	"	"
342	14.X.60	17,90	255	64135,05	3 <sup>35</sup>	6 <sup>00</sup>	35,00	45,15	10,15	158,2	4,75	"	"
Impregnirano 2 puta:													
326	28.IX.60				8 <sup>00</sup>	6 <sup>00</sup>							
329	29.IX.60				5 <sup>00</sup>	6 <sup>00</sup>							

Broj	Datum	Prečnik cm	Dužina cm	Kubatura cm <sup>3</sup>	Vakuum Pritisak		Težina pre im- pregn.	Težina posle impregn.	Upilo kg	Zaštitno sredstvo l/m <sup>3</sup>	Zaštitno suvo sred- stvo kg/m <sup>3</sup>	Konc.rast. pre impreg. gr/l	Konc.rast. posle impr. gr/l
					sati 710 mm Hg	sati 7-8 atm.							
✓351	17.6.60	25,50	252	128630,88	6 <sup>15</sup>	6 <sup>00</sup>	87,15	124,50	37,35	290,3	8,71	3 %	3 %
✓352	2.9.60	23,00	254	105478,58	6 <sup>00</sup>	6 <sup>00</sup>	69,50	97,35	27,85	264,0	7,92	"	"
✓353	17.10.60	24,00	254	114848,64	9 <sup>30</sup>	6 <sup>00</sup>	59,00	85,00	26,00	226,3	6,79	"	"
✓354	18.10.60	23,50	253	109680,56	8 <sup>10</sup>	6 <sup>00</sup>	71,70	122,00	50,30	458,6	13,76	"	"
✓355	19.10.60	22,35	255	99903,90	8 <sup>15</sup>	6 <sup>00</sup>	56,00	100,00	44,00	440,4	13,21	"	"
✓356	20.10.60	22,50	253	100544,73	5 <sup>15</sup>	6 <sup>00</sup>	66,50	94,50	28,00	278,4	8,35	"	"
✓357	22.10.60	22,25	252	97841,52	6 <sup>30</sup>	6 <sup>00</sup>	59,00	98,50	39,50	403,7	12,11	"	"
✓358	24.10.60	25,50	255	130162,20	6 <sup>30</sup>	6 <sup>00</sup>	78,30	121,60	43,30	322,6	9,98	"	"
✓359	25.10.60	23,00	255	105893,85	7 <sup>30</sup>	6 <sup>00</sup>	60,30	83,20	22,90	216,2	6,49	"	"
✓360	26.10.60	24,00	255	115300,80	7 <sup>00</sup>	6 <sup>00</sup>	71,60	113,00	41,40	359,0	10,77	"	"
361	28.10.60	23,00	255	105893,85	9 <sup>00</sup>	6 <sup>00</sup>	59,50	85,70	26,20	247,4	7,42	"	"
✓362	3.XI.60	26,00	253	134256,98	5 <sup>00</sup>	6 <sup>00</sup>	76,20	132,60	56,40	42,00	12,60	"	"
✓363	4.11.60	25,50	253	129141,32	5 <sup>30</sup>	6 <sup>00</sup>	71,80	141,20	69,40	537,3	16,20	"	"
✓364	5.11.60	23,50	253	109680,56	9 <sup>00</sup>	6 <sup>00</sup>	59,00	115,00	56,00	510,5	15,32	"	"
✓365	18.11.60	26,00	253	134256,98	3 <sup>00</sup>	6 <sup>00</sup>	77,40	127,90	50,50	376,1	11,28	"	"
✓366	19.11.60	24,40	255	119176,80	3 <sup>00</sup>	6 <sup>00</sup>	73,00	123,20	50,20	421,2	12,64	"	"
✓367	20.11.60	23,50	255	110547,60	3 <sup>15</sup>	6 <sup>00</sup>	66,50	95,00	28,50	257,8	7,73	"	"
✓368	21.11.60	25,80	256	133767,68	11 <sup>30</sup>	6 <sup>00</sup>	87,00	151,00	64,00	478,4	14,35	"	"
✓369	23.11.60	23,50	256	110981,12	11 <sup>00</sup>	6 <sup>00</sup>	68,00	126,00	58,00	522,6	15,68	"	"
✓370	25.11.60	24,80	259	125047,79	5 <sup>00</sup>	6 <sup>00</sup>	68,90	126,50	57,60	460,6	13,82	"	"
✓371	27.11.60	24,50	258	121567,02	5 <sup>00</sup>	6 <sup>00</sup>	82,50	142,20	59,70	491,0	14,73	"	"

H R A S T

Broj	Datum	Prečnik cm	Dužina cm	Kubatura cm <sup>3</sup>	Vakuum	Pritisak	Težina pre impregn.	Težina posle impregn.	Upilo kg	Zaštitno sredstvo l/m <sup>3</sup>	Zaštitno suvo sredstvo kg/m <sup>3</sup>	Konc.rast. pre impr. gr/l	Konc.rast. posle impr. gr/l
					sati 710 mm Hg	sati 7-8 atm.							
380	28.11.60.	22,75	255	103,514,70	8 <sup>00</sup>	6 <sup>00</sup>	76,70	86,20	9,50	91,8	2,75	3 %	3%
381	1.12.60.	15,00	252	44510,76	5 <sup>00</sup>	6 <sup>00</sup>	37,50	47,20	9,70	217,9	6,54	"	"
382	3.12.60.	19,50	262	78204,38	3 <sup>00</sup>	6 <sup>00</sup>	69,50	78,50	9,00	115,0	3,45	"	"
383	4.12.60.	18,25	256	66854,40	4 <sup>00</sup>	6 <sup>00</sup>	58,70	63,40	4,70	70,3	2,11	"	"
384	5.12.60.	16,00	264	53053,44	3 <sup>00</sup>	6 <sup>00</sup>	42,50	45,30	2,80	52,77	1,58	"	"
385	6.12.60.	20,37	248	80699,20	3 <sup>30</sup>	6 <sup>00</sup>	73,20	84,10	10,90	135,0	4,05	"	"
386	7.12.60.	19,50	257	76711,93	3 <sup>00</sup>	6 <sup>00</sup>	67,90	78,20	10,30	134,2	4,03	"	"
387	8.12.60.	20,00	253	79442,00	5 <sup>30</sup>	6 <sup>00</sup>	53,80	62,75	8,95	112,7	3,38	"	"
388	9.12.60.	17,00	248	56263,76	5 <sup>00</sup>	6 <sup>00</sup>	43,70	56,20	12,50	222,3	6,67	"	"
389	10.12.60.	15,50	269	50730,71	5 <sup>00</sup>	6 <sup>00</sup>	45,60	53,40	7,80	153,7	4,61	"	"
390	13.12.60.	17,70	242	59512,64	6 <sup>00</sup>	6 <sup>00</sup>	57,50	67,40	9,90	166,3	4,99	"	"
391	14.12.60.	15,00	262	46277,06	4 <sup>30</sup>	6 <sup>00</sup>	42,80	51,60	8,80	190,1	5,70	"	"
392	14.12.60.	13,00	252	33432,84	4 <sup>30</sup>	6 <sup>00</sup>	32,80	39,70	6,90	206,3	6,19	"	"
393	14.12.60.	19,50	258	77010,42	3 <sup>00</sup>	6 <sup>00</sup>	70,50	78,00	7,50	97,4	2,92	"	"
394	15.12.60.	13,75	247	36662,21	3 <sup>30</sup>	6 <sup>00</sup>	31,70	39,80	8,10	220,9	6,63	"	"
395	15.12.60.	15,00	243	42921,09	3 <sup>30</sup>	6 <sup>00</sup>	45,00	54,50	9,60	221,3	6,64	"	"
396	15.12.60.	18,00	209	53157,06	3 <sup>00</sup>	6 <sup>0</sup>	46,70	52,30	5,60	105,3	3,16	"	"
397	15.12.60.	20,50	238	78513,82	3 <sup>00</sup>	6 <sup>00</sup>	76,20	84,20	8,00	101,8	3,05	"	"
398	16.12.60.	17,00	250	56717,57	4 <sup>30</sup>	6 <sup>00</sup>	59,80	66,50	6,70	118,1	3,54	"	"
399	16.12.60.	20,50	248	88812,72	5 <sup>00</sup>	6 <sup>00</sup>	68,50	75,50	7,00	85,6	2,57	"	"
400	17.12.60.	20,50	246	81152,94	5 <sup>00</sup>	6 <sup>00</sup>	69,90	80,70	10,80	133,1	3,99	"	"



reimpugnarea dintr-o parte a balneari deșine

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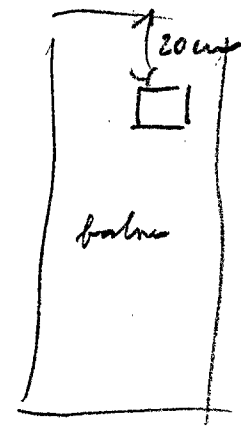
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