Vezba 4:

Ulazni podaci: r. br. 7

Dimenzije lamella: 3,4x14cm Dimenzije nosaca: 0,5x0,5x5m

 0,034x0,14m

$\frac{0.5}{0,034}=14.7$ komada zapremina jedne letvice:

$\frac{0.5}{0,14}=3,57$ komada $0,034\*0,14\*5m=0,0238m^{3}$

|  |  |
| --- | --- |
| Broj I zapremina lamela | Uslov za krovni nosac |
| Broj lamela | Po visini | 15 |
| Po širini | 4 |
| Ukupna zapremina lamela | 1.428 |



$$d\_{char,n}=β\_{n}\*t$$

$$d\_{ef}=d\_{char,n}+k\_{0}d\_{0}$$

$d\_{char,n}$- Proracunskadebljinagareža

$β\_{n}$-Brzina ugljenisanja $0,7{mm}/{min}$

|  |  |
| --- | --- |
| Vreme | $$k\_{0}$$ |
| $$t<20min$$ | $${t}/{20}$$ |
| $$t\geq 20min$$ | 1 |

$$t=15min$$

$d\_{char,n}=0.7\*15k\_{0}d\_{0}=$2,1mm\*0.75 $d\_{ef}=d\_{char,n}+k\_{0}d\_{0}$

$$d\_{char,n}=10.5 mm=0.0105mk\_{0}d\_{0}=1.575mmd\_{ef}=0,0105+0,001575$$

$d\_{0}=20\%d\_{char,n}=0.2\* k\_{0}d\_{0}=$0.001575m $d\_{ef}=0,012075$

$$\frac{0.5121}{0.034}=15.06≈15$$

$$\frac{0.52415}{0.14}=3,74≈4$$

Nove dimezije nosača: 0.512075x0.52415x5m

|  |  |
| --- | --- |
| Broj I zapremina lamela | Br lamela po nosaču |
| Broj lamela | Po visini | 15.06$≈$15 |
| Po širini | 4zapremina jedne letvice: $$0,034\*0,14\*5m=0,0238m^{3}$$ |
| Ukupna zapremina lamela | 1.428 |

V=$0,0238m^{3}\*15\*4=1.428$

$$t=30min$$

$d\_{char,n}=0.7\*30k\_{0}d\_{0}=$4,2mm\*1$d\_{ef}=d\_{char,n}+k\_{0}d\_{0}$

$$d\_{char,n}=21mm=0.021mk\_{0}d\_{0}=4,2mmd\_{ef}=0.021+0.0042$$

$ k\_{0}d\_{0}=$0.0042m $d\_{ef}=0.0252m$

$$\frac{0.5252}{0.034}=15.45≈16$$

$$\frac{0.5504}{0.14}=3,93≈4$$

Nove dimezije nosača: 0.512075x0.52415x5m

|  |  |
| --- | --- |
| Broj I zapremina lamela | Br lamela po nosaču |
| Broj lamela | Po visini | 15.45$≈$16 |
| Po širini | 4zapremina jedne letvice: $$0,034\*0,14\*5m=0,0238m^{3}$$ |
| Ukupna zapremina lamela | 1.5232 |

V=$0,0238m^{3}\*16\*4=1.5232$

$$t=60min$$

$d\_{char,n}=0.7\*60k\_{0}d\_{0}=$8,4mm\*1 $d\_{ef}=d\_{char,n}+k\_{0}d\_{0}$

$$d\_{char,n}=42mm=0.042mk\_{0}d\_{0}=8,4mmd\_{ef}=0.042+0.0084$$

$ k\_{0}d\_{0}=$0.0084m $d\_{ef}=0.0504m$

$$\frac{0.5504}{0.034}=16,2≈17$$

$$\frac{0.5504}{0.14}=4,3≈5$$

Nove dimezije nosača: 0.512075x0.52415x5m

|  |  |
| --- | --- |
| Broj I zapremina lamela | Br lamela po nosaču |
| Broj lamela | Po visini | 16,2$≈$17 |
| Po širini | 4,3$≈5$zapremina jedne letvice: $$0,034\*0,14\*5m=0,0238m^{3}$$ |
| Ukupna zapremina lamela | 2,023 |

V=$0,0238m^{3}\*17\*5=2,023$