



3D Printing Research and Activities

TEKNIKAL MALAYSIA MEKAHA

3D 打印耗材

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NORMAS





MALAYSIA

UTM

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سیتی تکنیکل ملیکا

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UTeV

يومر سیتی بتیسیا ملاک
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NORMAS

Caution
Laser





UTEM

اوتيم سیتی تیکنیکل ملیسيا ملاک

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ONLINE EQUIPMENT RESERVATION: http://www.superxms.com/schedule/g-trihee/equipment_reservation

$$k=1 \quad \text{ratio of poly ratio}$$



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ONLINE EQUIPMENT RESERVATION: http://www.supersans.com/schedule/g-tribe/equipment_reservation

$$k=1 \quad \text{P/W ellipticity ratio}$$

$$R' = \left(\frac{1}{1.5 \times 10^{-11}} + \frac{1}{6.35 \times 10^{-2}} \right)^{-1}$$

$$R.R. = 6.35 \times 10^2$$
$$E.S. = 2.08 \times 10^2$$

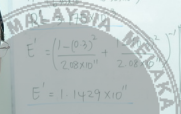
$$E' = \frac{1 - (0.3)^2}{2.08 \times 10^{11} + 2.08}$$

$$E' = 1.1429 \times 10^{11}$$

$$H_{min} = 3.63 \left(\frac{UM}{ER} \right)^{1.63} \times (\Delta E)^{0.69} \times \left(\frac{F}{P} \right)^{0.43}$$

$$= 3.63 \times \left(\frac{0.7779644 \times 0.04482}{1.1429 \times 10^{11} \times 3.85 \times 10^7} \right)^{1.63} \times \left(\frac{1.971 \times 10^4}{1.92 \times 10^3 \times 10.05 \times 10^3} \right)^{0.69} \times (1 - 0.3)^{0.43}$$

$$= 3.63 \times 1.5824 \times 10^{-11} \times 36.6218 \times 10^{-10}$$
$$= 1.8007 \times 10^{-10} \times 1.971 \times 10^4$$
$$= 1.8007 \times 10^{-6} \times 3.175$$
$$= 5.7173 \times 10^{-6}$$



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ONLINE EQUIPMENT RESERVATION: http://www.supersaas.com/schedule/g-tribeca/equipment_reservation

$k=1$ R_p/R_e elasticity ratio.

microelasticity \rightarrow dynamic viscosity \rightarrow current load $= \frac{F}{3.605553}$

$$k = 3.63 \left(\frac{m}{ER} \right)^{0.649} \times (dE)^{0.449} \times \left(\frac{F}{ER} \right)^{0.449} \times (1 - e^{-0.449t})$$

Pressure viscosity \rightarrow

$$\left(\frac{1}{6.35 \times 10^{-3}} + \frac{1}{6.35 \times 10^{-3}} \right)^{-1}$$
$$75 \times 10^{-3}$$
$$10.3 \times 10^{-3} + \frac{1 - (0.3)^2}{2.08 \times 10^{-3}}$$
$$1.429 \times 10^{-3}$$

$$2R_p = 6.35 \times 10^{-3}$$
$$6.35 = 2.08 \times 10^{-3}$$

$$63 \times \left(\frac{0.7979644 \times 0.0044821}{1.142146 \times 3.195 \times 10^{-3}} \right)^{0.649} \times (1.16 \times 10^8 \times 1.149 \times 10^3)^{0.449} \times (1 - e^{-0.449t})$$
$$3.63 \times 1.6674 \times 10^3 \times 36.6318 \times 1.7348 \times 0.4934$$
$$18007 \times 10^3$$

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B_p/R_p ellipticity ratio.
 $H_{min} = 3.63 \left(\frac{u_{in}}{E'R} \right)^{0.62} \times (\alpha E')^{0.49} \times \left(\frac{F}{E'R^2} \right)^{-0.49} \times (1 - e^{-0.49})$
 $R_p R_s = 6.35$
 $E_p E_s = 2.08$
 $3.63 \times \left(\frac{0.7779644 \times 0.044821}{1.1421 \times 10^6 \times 3.195 \times 10^{-2}} \right)^{0.62} \times (1.16 \times 10^4 \times 1.1429 \times 10^4)^{-0.49} \times (1 - e^{-0.49})$
 $= 1.8007 \times 10^3$
 $3.63 \times \frac{1.569 \times 10^4 \times 36.6318 \times 1.7488 \times 10^{-4}}{1.971 \times 10^5} = 1.8007 \times 10^3$
 $1.8007 \times 10^3 \times 3.175 \times 10^{-3} = 5.71 \times 10^0$
 6.0889×10^0
 1.429×10^{-11}
 $\frac{(-0.3)^2}{0.08 \times 10^{-11}} + \frac{1 - (-0.3)^2}{2.08 \times 10^{-11}}$
 $\approx 2 \times 10^8$
 $\approx 2 \times 10^9$
 $\frac{m}{s}$
 6.35×10^3
 $u = 0.7779644 \frac{m}{s}$
 $min\ velocity$
 $dynamic\ velocity$
 $Contact\ Load = 3.60555 \times 10^3$
 HL
 U



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