LAMPIRAN

TEGANGAN SAMBUNGAN

Diketahui

Fa= 875 N Fb= 1375 N Fc= 1465 N

Lo= 30 mm

t = 0.7 mm

Ditanya σ=?

$$\sigma = \frac{Fa}{A}$$

A= Lo x t

A= 30 mm x 0,7 mm

A= 21 mm^2

$$\sigma = \frac{875\ N}{21\ mm}$$

$$\sigma = 41{,}67\ N/mm^2$$

$$\sigma = \frac{Fb}{A}$$

A= Lo x t

A= 30 mm x 0,7 mm

A= 21 mm^2

$$\sigma = \frac{1375\ N}{21\ mm}$$

$$\sigma = 66{,}19\ N/mm^2$$

$$\sigma = \frac{Fc}{A}$$

A= Lo x t

A= 30 mm x 0,7 mm

A= 21 mm^2

$$\sigma = \frac{1465\ N}{21\ mm}$$

$$\sigma = 69{,}76\ N/mm^2$$

PERHITUNGAN REGANGAN SAMBUNGAN

Diketahui :

Lo(a,b,c)= 30 mm

$\Delta La = 3{,}125\ mm$

$\Delta Lb = 3{,}46\ mm$

$\Delta Lc = 7{,}04\ mm$

Ditanya :

ε

Jawab :

$$\varepsilon = \frac{\Delta L}{L1}\ x\ 100\%$$

$$\varepsilon = \frac{3{,}125}{30}\ x\ 100\%$$

$$\varepsilon = 10{,}41\%$$

$$\varepsilon = \frac{\Delta L}{L1}\ x\ 100\%$$

$$\varepsilon = \frac{33{,}46}{30}\ x\ 100\%$$

$$\varepsilon = 11{,}53\%$$

$$\varepsilon = \frac{\Delta L}{L1}\ x\ 100\%$$

$$\varepsilon = \frac{7{,}04}{30}\ x\ 100\%$$

$$\varepsilon = 23{,}46\%$$

PERHITUNGAN MODULUS ELASTISITAS

Diketahui :

$\sigma a = 41{,}67\ N/mm^2$ $\varepsilon c = 10{,}41\%$

$\sigma b = 66{,}19\ N/mm^2$ $\varepsilon b = 11{,}56\%$

$\sigma c = 69{,}76\ N/mm^2$ $\varepsilon c = 23{,}46\%$

Ditanya : E?

Jawab :

$$E = \frac{\sigma}{\varepsilon}$$

$$Ea = \frac{41{,}67}{0{,}104}$$

$$Ea = 400{,}67$$

$$E = \frac{\sigma}{\varepsilon}$$

$$Eb = \frac{66{,}19}{0{,}115}$$

$$Eb = 575{,}56$$

$$E = \frac{\sigma}{\varepsilon}$$

$$Ec = \frac{69{,}76}{0{,}234}$$

$$Ec = 298{,}11$$

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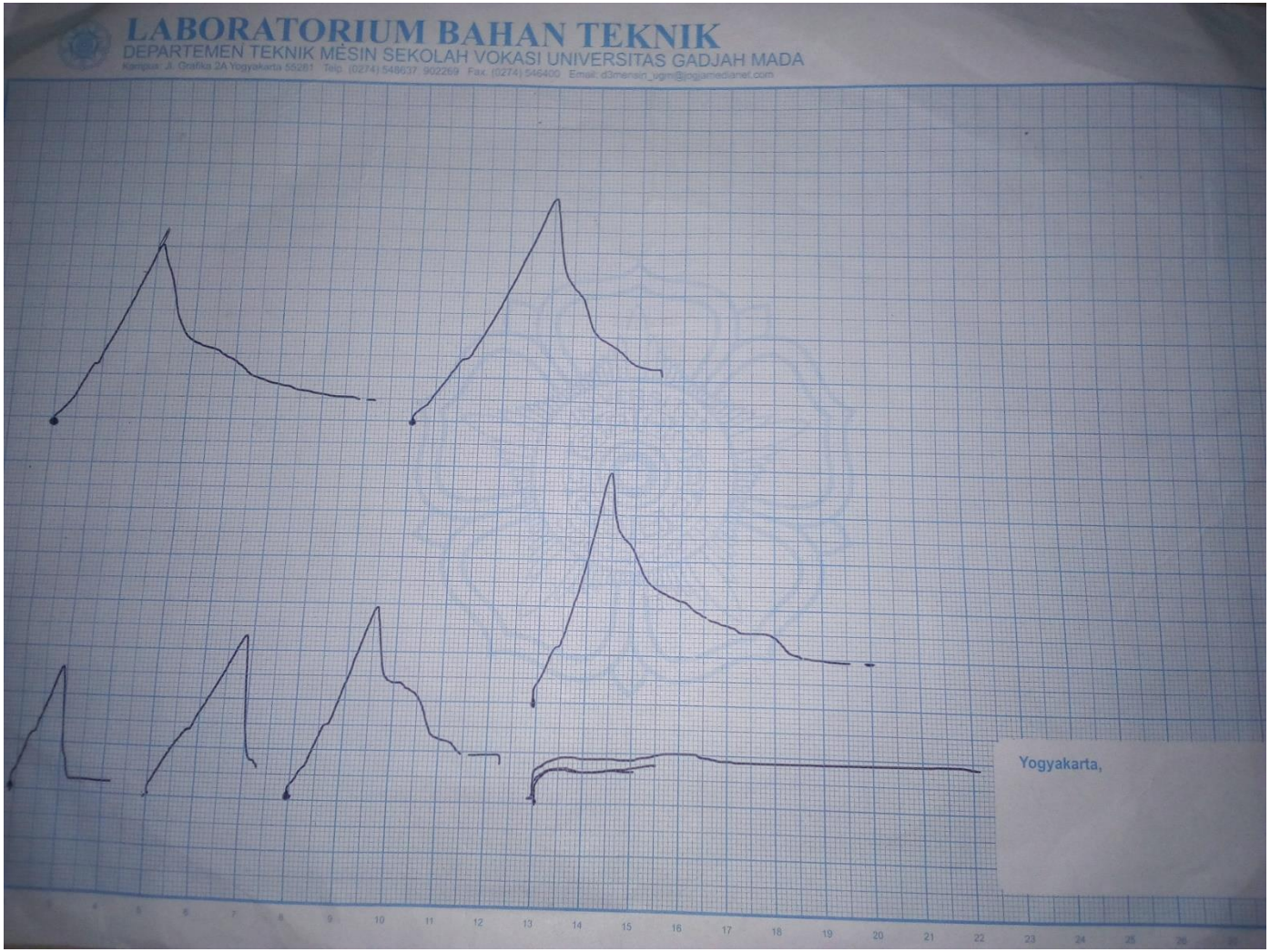

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