HW 6 ME 366 Will Buziak

1.
- molten metal
- make sheet (slit-die)
- maybe reheat
- Press into shape (drawing)
- maybe cut to finish

2. $\dot{V}_{mr} = vfd$

$4.5 \frac{rev}{s} = 4.5(2\pi)\ rad/s = (60)4.5(2\pi)(45)\ mm/min$

$v = 76.341\ mm/min$

$\dot{V}_{mr} = 76.341(.12)(.6) = 5496\ mm^3/min$

3. $VT^n = C$

$112\ ft/min \cdot T^{.105} = 220\ ft/min$

$\log v + n \log T = \log C$

$\log 112 + .105 \log T = \log 220$

$T = 620\ min$

4. a) $n = .1 - .5$ $\quad C = 250 \times 1^n = 125$

b) $n = .1 - .5$ $\quad C = 100 \times 1^n = 100$

5. [redacted] $\quad 47 \text{ in/s} \cdot 12 = 3.92 \text{ ft/s}$

$$= \frac{2200}{4.446} N. = 494.616$$

$$HP_c = \frac{494.6(3.92)}{33{,}000} = .059 \text{ HP}$$