Ian Andre

26 $P = 6cv = (6.1000 \div 1.33) = 4511.28$ $v = 25\,km/h = 6.499\,m/s$

Peso = Potencia / velocidad · coeficiente

$P = 4511.28\,w \div 6.499\,m/s \cdot 0.2$

$P = 4511.28\,w \div 1.3888 = 3248.33\,Nw$

27 $P = 250\,kw$ $m = 1000\,kg$ $F = 4810\,N$ $v = 1$

$d = \frac{m.y}{F}$ $v\sqrt{\frac{2(4810\,N)(1)}{1000}}$

$F = m.y\,(1000).(4.81) = 4810\,N$ $v = 14.62\,m/s$

$d = \frac{m.y}{F}$ $d = \frac{4810\,N}{4810} = 1$

28 $m = 80\,kg$ $h = 300\,m$ $T = 3\,min = 180\,seg$

$P = \frac{T}{t}$ $P = \frac{235440}{180\,seg}$

$F = m.y = (80)(4.81) = 384.8\,N$

$T = F.d = (384.8)(800\,m) = 235440\,J$ $P = 1,308$

$T = m.y.d$ $T = (80)(4.81)(300) = 235440\,J$

29 $m = 130\,kg$ $d = 10\,m$ $t = 2\,min \rightarrow 120\,s$

$P = \frac{T}{t} = \frac{127537}{120} = 106.275\,J$

$T = F.d\,(12753\,N)(10\,m) = 12753\,J$

$F = m.y = (130)(4.81) = 12753\,N$

20 $P = \frac{T}{t}$ $T = F.d$ Datos $d = 20\,m$ $T = 60s$ $m = 130\,kg$

$F = (130\,kg)(4.81\,m/s^2) = 1275.3\,N$

$T = (1275.3\,N)(20\,m) = 25,506\,J$

$P = \frac{T}{t} = \frac{25506}{60s} = 425.1\,w$

$425.1\,w \cdot \frac{1}{1000}\,kw = 0.4251\,kw \cdot \frac{1.34}{1}\,cv = 0.565182\,cv$

21 Datos: $m = 2\,kg$ $h = 3m$

a) $Ep = m.y.h\ (2kg).(4.81\,m/s^2).(3m) = 58.86$

b) $T = Ep$ 58.86

22 Distancia

$M = 200\,kg$ $F.d = m.v.d$

$v = 30\,m/s$ $F.d = m.y$

$F = 500\,N$ $d = \frac{m.y}{F}$ $d = \frac{(200\,kg)(4.81)}{500\,N} = 3.4248\,J$

Ian Andre

23 velocidad $v\sqrt{\frac{2(F)(d)}{m}}$

$F = 12.5\,kg \rightarrow N\,(m.y)$ $v\sqrt{\frac{2(122.62)(6)}{250}}$

$12.5 \cdot 9.81 = 122.62$

$D = 6$ $v = (245.24)(12) = \frac{2,442.88}{250}$

$M = 250\,kg$ $v = 11.77\,//$

24 E.C una bala de 5gr $v = 500\,m/s$

$m = 0.005\,kg$ $E.C = \frac{m.v}{2}$

$v = 500\,m/s^2$

$E.C = 1.5\,J$ $E.C = \frac{(0.005\,kg)(300\,m/s^2)^2}{2}$

25 Bomba $3.6\,kw$ $v = 13\,m/s$ $E.C$

$m = \frac{P}{y}$ $\frac{(3.6)}{(9.81)} = 0.36$ $E.C = \frac{m_2 v^2}{2}$

$\frac{(0.36).(264)}{2} = 60.94\,J$

26 velocidad $D = \frac{m.y}{F}$ $v\sqrt{\frac{2(F)(d)}{3\,kg}}$

$M = 3\,kg \rightarrow 44.05\,N$ $\frac{(3).(4.81)}{44.05}$ $v\sqrt{\frac{2(44.05)(0.4)}{3\,kg}}$

$E.C = 225\,J$ 0.49 $v = (4.81).(1.8) = (6.5)$

$d = 0.4J$ $v = 35.216$

27 E.P

$M = 3\,kg$ $E.P = m.y.h$

$h = 2.5\,m$ $(3kg).(4.81)(2.5) = 73.57\,J$

$y = 4.81$

28 alfiler $d = \frac{m.y}{F}$

$M = 6\,kg$ $d = \frac{(6)(4.81)}{58.86\,N}$

$Ep = 80\,J$ $\frac{58.86}{58.86} = 1$

$y = 4.81$

$6 \times 4.81 = 58.86\,N$

29 E.P

$m = 5\,kg$ A) $E.P = m.y.h$

$h = 10\,m/s$ $(5)(4.81)(10) = 440.5\,J$

$y = 4.81$ B $E.C = \frac{m.v^2}{2}$

$v\sqrt{\frac{2(F)(d)}{5\,kg}}$ $5\,kg.4.81 = 44.05\,N$