

Chassi

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Abstract

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The data is presented in Table 1 and Figure 1 is showing the a man on a motorcycle. The platform should be in steel [1] which also is confirmed during an interview with A.Andersson ¹.

Table 1: *Power demand*

Speed	Power demand at wheel	Power demand at clutch	Fraction rolling resistance	Fraction aerodynamic drag
60 km/h	7894.55	8771.72	0.635	0.265
80 km/h	12934.13	14371.26	0.517	0.383
120 km/h	29721.50	33023.89	0.337	0.563
262 km/h	217674.73	241860.81	0.101	0.799



Figure 1: *Steve McQueen on a motorcycle*

Exapmles of equations:

$$\begin{aligned}
 m_{unloaded} &= 2200 \text{ [kg]} \\
 m_{load} &= 230 \text{ [kg]} \text{ (3 occupants and luggage)} \\
 C_D &= 0.360 \\
 C_r &= 0.013 \\
 A_v &= 2.37 \text{ [m}^2\text{]} \\
 \rho_{air} &= 1.18 \text{ [kg/m}^3\text{]} \\
 \rho_{fuel} &= 750 \text{ [kg/m}^3\text{]} \\
 \eta_{transmission} &= 90\% \\
 Q_{LHV} &= 44.0 \text{ [MJ/kg]} \\
 \lambda &= 1
 \end{aligned}$$

¹Professor Anders Andersson, 5th of may 2014

$$P_b[kW] = \frac{bmep[kPa]V_d[dm^3]N[rps]}{2 \cdot 10^3} \quad (0.1)$$

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References

- [1] “Concave pin 2012 — slipstream longboards,” April 2014, <http://slipstreamlongboards.com/quiver2012/concave-pin-2012/>.