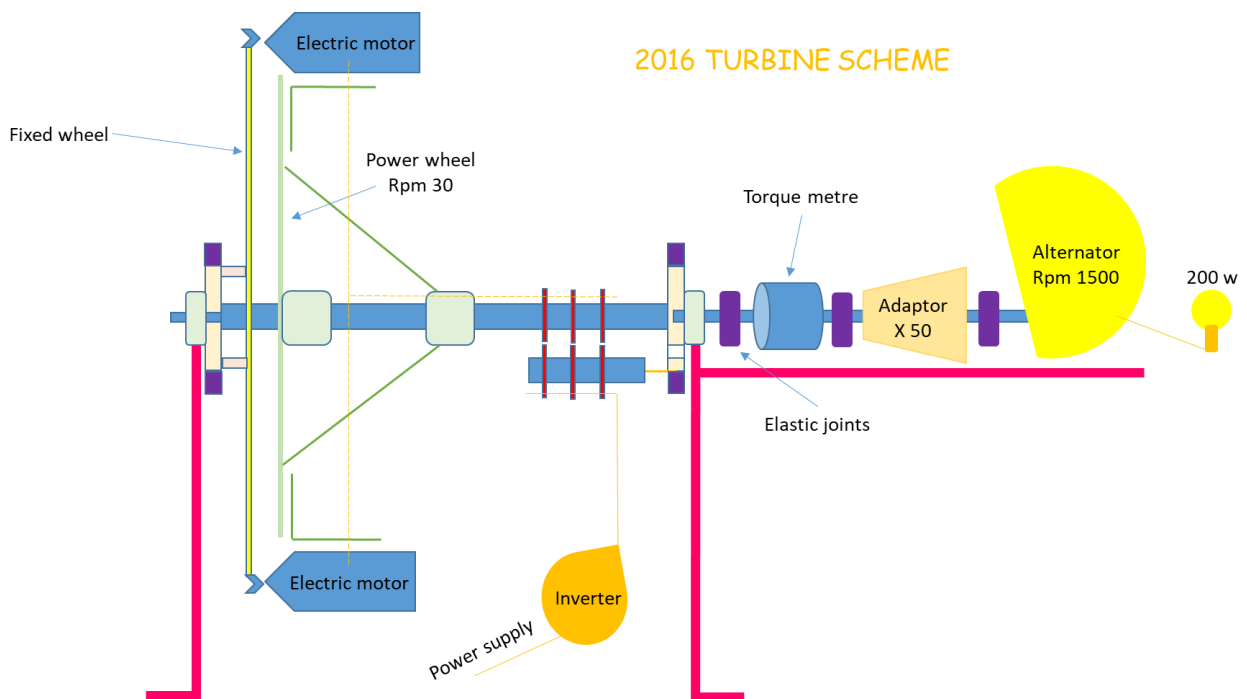


## MECHANICAL PRODUCTIVITY DEMONSTRATION > 100% WITH TORQUE METRE READING



- 2 1500 w - Rpm 1000 rototranslating three-phase motors
- In relation to the central axle the motors rototranslate with a frequency of 30 revolutions/minute, while the alternator shaft executes 1500 revolutions/minute (the mechanical adaptor multiplies by 50 the number of revolutions of the central shaft)
- The inverter regulates the motors on 32 Hz
- An 8 KWA con Rpm 1500 three-phase alternator

### FROM THE MEASUREMENTS READ ON THE TORQUE METRE WE CAN CALCULATE THE THEORIC PUSH MECHANICAL ENERGY

- Mechanical power read at the torque metre: from 850 to 1000 w, for the calculation we assume 850 w

To the mechanical power reading we add every fiction until we get the motor mechanical power (starting from the torque metre on the right to the left of the drawing):

- Elastic joint productivity: 0.9
- Turbine shaft productivity: 0,85
- Motor pulley-fixed wheel coupling productivity: 0,8 => It's actually much less

Theoric push power:  $850 / (0,9 \times 0,85 \times 0,8) = 1388$  w to these theoric push mechanical powers we must add the inertia of the 2 motors and of the masses at play (2 25-Kg motors + turbine iron => 100 w)

Theoric push mechanical power => 1500 w

## **MOTORS PUSH MECHANICAL POWER**

Motor power input:  $1500 \text{ w} \times 2 = 3000 \text{ w}$

Electric/mechanical productivity: 0,95

Couple productivity at 30 Hz with inverter: 0,85

Motor productivity at 32 Hz: 0,64

Calculation:  $n.2 \times 1500 \times (0,95 \times 0,85 \times 0,64) = 1.045 \text{ W}$  to which we subtract the mechanical inertia to move the 2 motors and the turbine iron= 100 W

Nett push mechanical power of the motors 950 w

## **ANALYSIS OF THE RESULTS**

**It's evident that if a turbine supports its own movement and it lights up a 200 w lightbulb, even thug it has less push power available (950 w) compared to the necessary one (1500 w), it means it's the TURBINE CCS system that multiplies the applied power gaining greater by 100%.**

**The mechanical power multiplied by its angular adaption is after deduction of every fiction of the turbine: motor mechanical power – fictions and inertias (motor pulley-fixed wheel pulley, turbine central shaft, elastic joints, mechanical adaptor, alternator + inertias) X adapted angular displacement (power wheel diameter/central shaft diameter).**

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