THERMAL POWER - CONTINUATIVE EXPERIMENTS

AES 5.1.1

Experiment 1:

How powerful is our turbine?
We measure the voltage derived from the turbine with generator to determine this parameter.



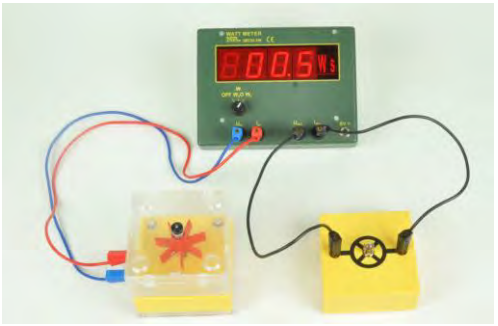
Action:

- Fix the turbine on the generator (see previous experiment)
- Set a measuring range of 10V (DC) on the meter
- Connect the brick with the meter
- Place the air pump on the ground next to the table
- Connect the flexible hose with the "pressure"-side of air pump
- Adjust the nozzle of the pressure hose to the turbine housing and onto the center of the "blade surfaces"
- Read off the voltage

Advice:
As the conducted power is not performing constantly, it is recommended to use a analog meter.

Experiment 2:

How can the conducted power be determined?



Action:

We use the "inno - Wattmeter" for this experiment. The energy supply is made by the turbine with generator. The lamp with 2.5 V of the brick is the consumer.

Advice:
As the supplied power is not performing constantly in this experiment, it is very difficult to measure exact values of the performance without the help of a power meter.
The "inno - Wattmeter" directly displays the performance (in W). Also, the performance in a certain time (Ws) can be displayed.

Interdisciplinary additional tasks:

Which percentage of the domestic energy demand gets produced by thermal power plants?

Which percentage of the domestic energy demand gets produced by nuclear power?

Determine the ressources operating kaloric power plants in your own country.

Name advantages and disadvantages of thermal power plants.

Name advantages and disadvantages of nuclear power plants.

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