

4* For an EMU 1500V=/ $15\text{kV}\sim$, a 1 MW modular electric drive is conceived with two induction motors with *hollow shaft drive*. One is installed at each end.

A The driving personal have two command handles: speed and effort. Choose a control circuit in order to allow operating the train under speed control or effort control: case of asynchronous drive (ISC).

B Evaluate the parameters for the calculation of speed controller.