wherein shutting down the field current (127) comprises supplying a shut-down signal (159) to the gate driver (157).

16. Generator system according to claim 15, further comprising an emergency stop switch (161) between the at least one controllable switch (155) and the stator electromagnet (145).

17. Generator system according to one of claims 12 to 16, further comprising:

a generator rectifier (115) connected to the AC-output terminal (133), in particular three AC-output terminals, the rectifier comprising in particular a diode (163) and a temperature sensor (170) for measuring the temperature (169) of the diode (163), wherein in particular the rectifier is the only load connected to the output terminal (133) of the generator (105).

18. Energy system, in particular vessel energy system (100), comprising:

a generator system (101) according to one of claims ~~11~~ 12 to 16 arranged for converting mechanical energy provided by a combustion engine (107) to electrical energy;

a DC-distribution system (123) coupled to the a DC-output terminal (180) of the rectifier circuit (115) for distributing the electrical energy, in particular to at least one propulsion motor.