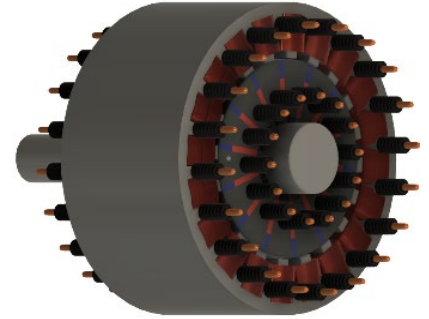


Integrated electrical machine

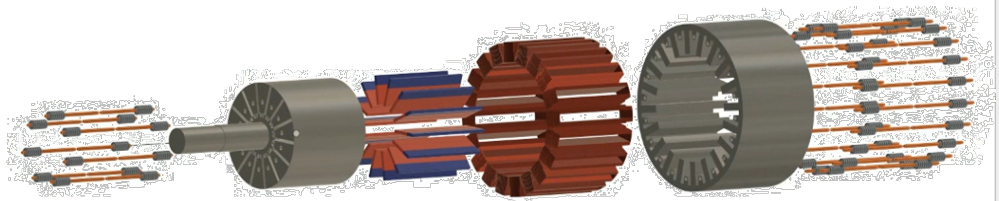
Technology

Multiphase electric machine with:

- . 2 voltage inverters in its chassis
- . Passive heat pipe, stator and rotor cooling system



This configuration increases the tolerance to power failures and reduces heat propagation in the machine, improving its performance.



Benefits

- Increased **functional reliability** of the electric machine
- Better **thermal management** of the electric machine:
- Reducing **heat propagation** through heat pipes
- No outside source of **cooling** is required
- Best **overall performance**
- Spatial distribution of **voltage sources** (one inverter on either side of the axial ends of the machine)
- Reduce **EMC issues** by removing cables between the UPS and the electric machine
- Reducing the **size of the machine**

Applications

Any system requiring electrical drive with fault tolerance, thermal management and EMC issues constraints:

- . Areas of mobility and transport: electric vehicles, rail, aeronautics
- . Energy sector: off-shore wind turbines, power plants



Keywords

- Integrated electrical machine
- Tolerance power failure
- Reduction of heat propagation



Intellectual Property

1st filing date
23/12/2020 under
number FR2014060
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Development Status

- Prototype made
- Testing and validation in progress



Partnership

Industrial to adapt
technology for licensing.

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