



AUTOMOBILE

Application: Electric Traction (ELMAR)



E-Traction for automobiles is increasingly in demand.

The electric motor has the advantage of compactness and high efficiency.

Project: Rim-wheel Drive

Normally the electric motor is mounted on-board with a gearbox or differential to transmit torque and power to the wheels. An alternative approach is to integrate the motor directly into the wheel, without any mechanical production. This configuration is usually termed the “rim-wheel drive”. Each wheel has its own motor; this allows for excellent torque distribution between the wheels, improving stability and overall efficiency.

This approach was chosen for the ELMAR research project of the DHBW University in Mannheim

MACCON contribution

For ELMAR MACCON developed special outer rotor motors, which were designed to exactly match the dimensional requirements of the wheels. Tires are directly mounted around the motor rotors. The nominal supply voltage is 300V and power 10kW. An SWM Controller was chosen to drive each motor.

