

Electronically Controlled Motorized Steering System (E-Mo Steer)

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Abstract : In the current scenario, the steering system in automobiles is such that the motion from the steering wheel is transferred to driving wheel by mechanical linkages. In this paper, we propose a method to design a steering mechanism using servomotors to turn the wheels instead of linkages. In this method, a steering angle sensor senses the turn angle of the steering wheel and its output is processed by an electronical control module. Then the ECM compares the angle value to that of a standard value from a look-up database. Then it gives the appropriate input power and the turning duration to the motors. Correspondingly, the motors turn the wheels by means of bevel gears welded to both the motor output shafts and the wheel hubs. Thus, the wheels are turned without the complicated framework of linkages, reducing the driver's effort and fatigue considerably.

Keywords : electronic control unit, linkage-less steering, servomotors, E-Mo Steer

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