

Title (en)
DAMPENING FOR A DOLLY WHEEL WITHIN A STEERING SYSTEM

Title (de)
DÄMPFUNG FÜR EIN NACHLÄUFERRAD IN EINEM LENKSYSTEM

Title (fr)
AMORTISSEMENT D'UNE ROUE SERVANTE DANS UN SYSTEME DE DIRECTION

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Application
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Abstract (en)

[origin: WO03103365A1] A dolly wheel steering system includes a dolly wheel, a dolly wheel spindle in communication with the dolly wheel such that the dolly wheel and the dolly wheel spindle are fixedly secured to one another and are rotatable as a single unit. The dolly wheel spindle is in communication with a coupling device and a steering control system. The steering control system and the coupling device are each in communication with a controller to regulate actuation of each. When a signal from the controller requests utilization of steering control, the coupling device applies a restraining force to the dolly wheel spindle to limit free rotation of the dolly wheel. When the rotation of the dolly wheel spindle is thus restrained, the steering control system can effectuate direct steering control of the dolly wheels to provide precise directional control. When the control indicates the normal dolly wheel capability is desired, the restraining force applied to the dolly wheel spindle by the coupling device is relieved and the steering control system is overridden. The coupling device by its characteristics can provide varying resistance to free dolly wheel spindle rotation for restriction of dolly wheel shimmying and oscillation and where otherwise advantageous to reduce free rotation.

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