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## SPECIAL DEVICES FOR REDUCING THE AMPLITUDE OF TORSIONAL VIBRATIONS CRANKSHAFTS

*Torsional vibrations are observed in all mechanisms that involve rotational movement of shafts. For internal combustion engines, the problem of torsional vibrations of the crankshaft is relevant, since significant vibrations prevent its fatigue failure. In addition, torsional vibrations negatively affect engine performance, efficient fuel consumption, oil and sugar consumption, which leads to mechanical losses, noise and vibration.*

*Reducing the amplitude of torsional vibrations is possible by changing the system parameters and introducing additional special devices, the operation of which is based on one of the following results: balancing of disturbing moments, formation of frequency dynamics, distribution of vibration energy and their determination.*

*The principles and special designs of devices without energy sharing (antivibrators with deformable elements, pendulum antivibrators) and with energy sharing (dry friction dampers, viscous friction dampers, elastic-friction dampers, dampers with a rubber damping element, combined dampers) used to reduce increasing torsional vibrations of the crankshafts.*

**Key words:** *torsional vibrations, crankshaft, vibration amplitude, equivalent torsional system, pendulum antivibrator, flywheel mass, dry friction damper, viscous friction dampers.*

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