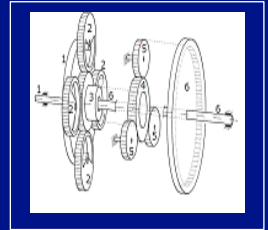


TECHNOLOGY OFFER

INERTIAL TORQUE CONVERTER WITH SYNCHRONOUS SPEED

The current torque converter and hydraulic coupling as part of rotary motion transmission mechanisms, require that the output shaft speed would be less than the input shaft because the power transferred comes from fluid coupling. This operating system limits the efficiency of torque converters and, often, leads to overheating problems. The proposed solution, based on inertial forces, is an alternative that improves the transmission efficiency in which, in an automatic way, the output shaft speed synchronizes with the input shaft one.



DESCRIPTION OF THE TECHNOLOGY

The torque converter transfers the power from an angular (or engine) movement source to an element receiver that works with a different speed and movement. Specifically, the proposed invention allows the substitution of current hydraulic coupling torque converters, enhancing their energy efficiency.

APPLICATION AND OBJECTIVE MARKET

The technology may apply to substitute torque converters and fluid couplings, in conveyors, winches, climbers, aero generators, etc. Particularly, the nautical and terrestrial transport field might benefit from it, since all cars with automatic transmission have one.

COMPETITIVE ADVANTAGES

The technology is an innovation because it accomplishes the same function of hydraulic coupling torque converters and introduces interesting advantages such as:

- Automatic synchronism without a clutch.
- Enhanced performance and energy efficiency.
- Applicability in situations where the hydraulic coupling torque converters are unable to use, either for size or for cost.

TIME-TO-MARKET

TRL- 4

Tested with a transmission of 100 W and 1500 rpm

Patented

BUSINESS OFFER

RESEARCH GROUP

Advanced Analyses
Materials for the
Structural Design
(AMADE)

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