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TITLE

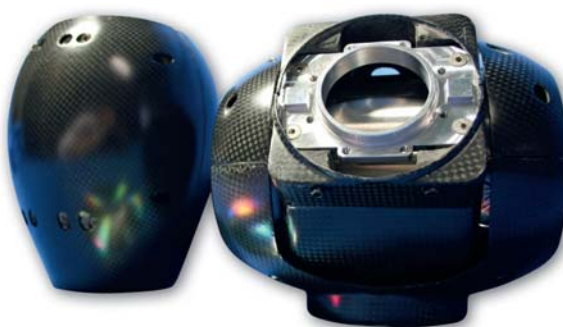
Elastic rotary actuator, particularly for robotic applications, provided with semi-active damping device

INVENTORS

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DESCRIPTION

These rotary actuators embed a flexible transmission system which allows the actuator to be safe (towards human and environment) and robust during interaction. Differently from existing compliant actuation solutions, these actuators incorporate a variable physical damping system which is in fact a semi active damper which is used to regulate oscillations, achieve high close loop bandwidth and fast and precise motions.



APPLICATIONS

This solution finds application in all those systems which require direct interaction of the robot with the human and environment, e.g. service/entertainment/rehabilitation/human-centred robotics, exoskeletons and medical devices.

KEYWORDS

Actuator, robotics, human-centred robotics, compliant actuation

BIBLIOGRAPHIC DATA

1) Attuatore rotante elastico, particolarmente per applicazioni robotiche con dispositivo di smorzamento semi-attivo

Application Number TO 2010 A 000360

Priority Date 28 April 2010

Applicants Fondazione Istituto Italiano di Tecnologia

2) Elastic rotary actuator, particularly for robotic applications, provided with a damping device

Application Number WO 2011/135537 A1

Priority Date 28 April 2010

Applicants Fondazione Istituto Italiano di Tecnologia

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