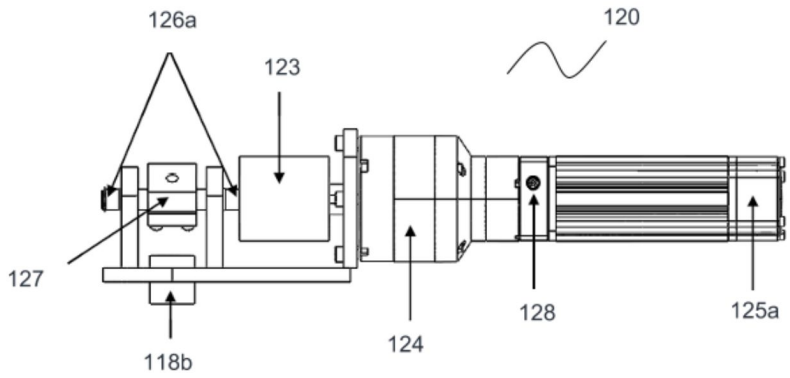
BITS Pilani
Pilani | Dubai | Goa | Hyderabad | Mumbai
An Institution of Eminence

विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

BITS Pilani
TECHNOLOGY
ENABLING
CENTRE
DST Supported

PENDING

(IN202111026889) An industrial manipulator test-rig and method thereof



NEED

In industrial automation, accurate manipulation and real-time performance evaluation of robotic arms remain challenging. The industrial manipulator test-rig enables efficient testing and control with lower power consumption while improving performance monitoring.

MARKET ANALYSIS

The global industrial automation market is expected to grow at a CAGR of 9.3%, reaching $330B by 2033 (source: MarketsandMarkets). Demand for energy-efficient, high-performance automation systems fuels market expansion.

TECHNOLOGY OVERVIEW

The industrial manipulator test-rig integrates multi-links, multi-joints, AC servo motors, and strain-rosettes for precise control and real-time performance monitoring. It ensures low power consumption and high accuracy in testing manipulator systems for industrial applications.

Target Industries

1) Industrial automation equipment manufacturers, 2) Robotics companies, 3) R&D labs focused on precision manufacturing technologies.

TECHNOLOGY KEY FEATURES

This system offers precise control of robotic arms with real-time data acquisition and low energy usage. It includes AC servo motors, interchangeable multi-links, and a control system to optimize performance.

AT A GLANCE

- SDG 9 (Industry, Innovation, and Infrastructure), SDG 7 (Affordable and Clean Energy)

Read more here

Technology is available for licensing/ co-development.

Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre,
BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

innovate achieve lead