Connecting rod energy storage mechanism

A crank and connecting rod mechanism (or slider-crank linkage) is a mechanical system comprised of a rotating element (crank) and a sliding element (e.g. a piston), as can be seen in the accompanying animation. These elements are connected with a rod allowing the linear sliding motion to be converted into a circular motion, or vice versa.

Figure 2 shows the detailed unfolding process and structure of the self-actuated joint, which has an energy storage unit to unfold the mechanism. As seen in Fig. 2a, each joint is bonded with two connecting rods in parallel. ... The deployment mechanism has four layers of connecting rods according to Fig. 1. Obviously, those connecting rods ...

What is connecting rod? The connecting rod is a connection between the piston and a crankshaft. It joins the piston pin with the crankpin. The small end of the connecting rod is connected to the piston pin and the big end to the crank pin.. The purpose of the connecting rod is to convert the linear motion of the piston into the rotary motion of the crankshaft.

The goal of "Industry 4.0" is to promote the transformation of the manufacturing industry to intelligent manufacturing. Because of its characteristics, the digital twin perfectly meets the requirements of intelligent manufacturing. In this paper, through the signal and data of the S7-PLCSIM-Advanced Connecting TIA Portal and NX MCD, the conceptual design and simulation ...

As an important piece of equipment for hydrogen energy application, the hydrogen internal combustion engine is helpful for the realization of zero carbon emissions, where the aluminum connecting rod is one of the key core components. A semi-solid forging forming process for the 7075 aluminum alloy connecting rod is proposed in this work. The influence of ...

Crank-Connecting Rod Mechanism 239 Fig. 8 A foot-treadle flour-sifter illustrated in Tian Gong Kai Wu (left) Fig. 9 A foot-treadle flour sifter used in rural areas in Zhejiang province, China in the 1920s (right) Shui Ji Mian Luo The same mechanism was adopted in another traditional machine called the shui ji mian luo (), a flour-sifter driven by a piston-rod, a connecting-rod and

In this paper, the wax cicada, which has an excellent jumping ability, is used as a bionic prototype to design a jumping robot with a parallel single-degree-of-freedom six-link energy storage mechanism as the core, to solve the problem of insufficient energy storage in the ...

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