

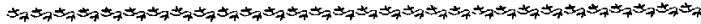
## Kinematic analysis and simulation for compensation mechanism of double-piston mortar pump

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**Abstract:** This paper describes working principle of double-piston mortar pump with swing rolls. A simulation model of the pump is established by kinematic analysis of its cam mechanism. After simulated in the Matlab environment, the model proved to be verified.

**Key words:** mortar pump; kinematic analysis; Matlab environment



## 纳米晶稀土贮氢合金

广州有色金属研究院开发的纳米晶稀土贮氢合金材料,具有优良的性能,适合于制作高容量的普通型及动力型的Ni/MH电池。该合金有适宜的平衡氢压, $p(\text{H}_2)=8.31 \times 10^4 \text{ Pa}$ ; 较低的磁滞 $\lg(p_s/p_a)=0.077$ ; 低的平台斜率 $\lg(p_3/p_{1.5})=0.035$ 。用该合金制备的模拟电池的0.2C放电比容量为 $340 \text{ mA} \cdot \text{h/g}$ 。用该合金制备的AA1800,AA2000电池具有高的重量比能量和体积比能量。用该纳米晶贮氢合金制备的动力型Ni/MH电池,其0.2C放电比容量为 $320 \text{ mA} \cdot \text{h/g}$ ,10C放电比容量大于 $230 \text{ mA} \cdot \text{h/g}$ ,高倍率放电能力HRD为80%,其充放电循环稳定性可与用进口贮氢合金粉制备的动力型电池相媲美。目前,已建成了纳米晶稀土贮氢合金的生产线。