

火星岩芯取樣器 Sampling Tools for the Planet Mars

專為歐洲太空署而設計的樣品採集設備 Specially designed tools for the European Space Agency

> 理大與英國公開大學比林格教授帶領的小組合作贏得歐洲太空 署2003年火星探索計劃(MarsExpress)中登陸倉 "Beagle 2" 的設計建造合約。理大的小組成員負責設計及製造登陸船上探 尋火星生命的樣品採集設備。此儀器可鑽入火星地表,收集火 星的泥土及岩石樣本。



Mars Express: Mission to the planet Mars



碎石器 Grinder

特色與優點

- 最優化的重量 功能比例
- 能抵禦星球上的惡劣環境
- 具有抗"凍焊"(一種在太空探索中獨有現象)的能力
- 能抵禦強力的衝擊

能鑽入如火成岩等堅硬岩石,然後將岩石深層的碎片抽出以用作分析

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登陸倉 Lander

A project team, with members from the PolyU and the Open University, UK, has been contracted by the European Space Agency to build the Lander called "Beagle 2" for their 2003 Mars Express: Mission to the planet Mars. The team members from the PolyU are responsible for the design and manufacture of all the sample acquisition tools for the "Beagle 2" to search for life on Mars.

The tools are designed to drill into Mars to acquire earth and rock samples.

Special Features and Advantages

- Optimum function to weight ratio
- Tolerance to interplanetary environment
- Ability to prevent cold welding, a typical occurrence on interplanetary
- Ability to sustain high shock

Applications

To core into hard rocks and retrieve rock fragments from the depth of the rock for analysis

Award

Gold Award, Brussels Eureka 2001 - the 50th World Exhibition of Innovation, Research and New Technology (November 2001)



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