## 明代古炮

明代,是軍用火器獲得較大發展的年代,不同類型的火器面世,亦有參照從歐洲傳入的火器樣板鑄造的火器,製作工藝明顯提高。這尊南明鐵炮重約 300 公斤,炮身有銘文,標示了鑄造年份為永曆四年、重量 500 斤,以及當時監工的都督、兩廣總督、廣東總兵等人的名字。

這項火器的設計特點是炮管從前端到末端逐漸加粗,符合火藥燃燒時膛壓由高 到低的原理。炮管外也鑄有多道環箍,使炮管更強韌。此外,炮身的重心處兩 側配有圓柱型炮耳,火炮以此為軸,可調節射角。

## 明代古炮

明代,是军用火器获得较大发展的年代,不同类型的火器面世,也有参照从欧洲传入的火器样板铸造的火器,制作工艺明显提高。这尊南明铁炮重约 300 公斤,炮身有铭文,标示了铸造年份为永历四年、重量 500 斤,以及当时监工的都督、两广总督、广东总兵等人的名字。

这项火器的设计特点是炮管从前端到末端逐渐加粗,符合火药燃烧时膛压由高 到低的原理。炮管外也铸有多道环箍,使炮管更强韧。此外,炮身的重心处两 侧配有圆柱型炮耳,火炮以此为轴,可调节射角。

## **Ming Dynasty Cannon**

During the Ming Dynasty, firearms developed rapidly. Different types of firearms were manufactured; some were based on firearms introduced from Europe, and the craftsmanship was substantially improved. This Southern Ming cast iron cannon weighs approximately 300 kg. The inscription on the barrel records the year of manufacture (the 4th year of the Wanli reign), the weight of the cannon (500 catties), and the names of the then Military Governor, the Viceroy of Guangdong and Guangxi, and the Lieutenant-General of Guangdong, who supervised the production. One of its design features is the barrel, which is wider in the rear than in the front. This can be explained by the decline in barrel pressure as the ammunition is burned. The exterior of the barrel has rings for added strength. The cylindrical trunnions at the pivoting point allowed the firing angle to be adjusted.