



## C92K系列数控全液压模锻锤性能特点

Performance Characteristics of C92K Series CNC Fully Hydraulic Die Forging Hammer

### 数控全液压模锻锤性能特点

Performance Characteristics

- ◆ 打击能量、打击工序可得到智能化控制，打击能量可得到数字化精确控制。对于不同锻件，通过大屏幕的触摸屏，可编制不同的程序，而且程序可以贮存。根据需要可随时调出使用。
- ◆ 锻件精度高：采用整体“U”形机身，刚性大，加上锤头导轨采用特殊“X”形导轨，保证锤头与导轨间隙控制在0.2mm以内，使得精密模锻成为可能，为今后各种锻件的少切削和无切削提供了条件。
- ◆ 打击频次很高：由于该产品采用短行程设置，下腔又常通蓄能器，系统压力高，因此打击频次比普通模锻锤提高一倍以上，从而提高模锻行业的生产效率。
- ◆ 提高设备和模具的使用寿命：锻造过程中多余的打击能量不仅大量消耗浪费能量和产生噪音，而且极大影响设备和模具因吸收多余能量而带来的寿命问题。数控锤可以精确控制打击能量，极大地提高了设备和模具的使用寿命，噪音也得到很好地控制。
- ◆ 材料利用率高。
- ◆ 锻件质量稳定。
- ◆ 有顶料装置。
- ◆ 易于实现自动化生产。
- ◆ 环保。
- ◆ Hit energy and working procedures are intelligent controlled. Hit energy are precisely digital controlled; Working procedures are programmable for different forging pieces through touch screen, the working procedures can be saved up in the system and ready to use on requirements.
- ◆ High precision forgings. The hammer body is adopte "U" type whole piece castings, large rigidity, coupled with special "X" type guide rail, which ensures the space between tup and guide rail controlled within 0.2mm, thus making it possible for precision closed die forgings and providing the conditions for all kinds of forgings at minimum machining in future.
- ◆ High hit frequency: Due to short stroke of this hammer, and lower chamber always connects with the accumulator, the system pressure is high, so the hit frequency is more than doubled than the conventional electro hydraulic die forging hammer, thus improves the production efficiency.
- ◆ Increase the working life of machine and die: The extra hit energy occurs in forging process is not only largely consumed and wasted and occurs noise, but also greatly affects the life of machine and die due to the absorption of extra energy. CNC fully hydraulic die forging hammer can precisely control the hit energy, greatly increase the working life of machine and die, well controls the noise too.
- ◆ High material utilization rate.
- ◆ Stable performance and equality of forging quality.
- ◆ Ejection system.
- ◆ Easy to realize automated production line.

用户培训基地



## C92KT系列普通模锻锤数控化改造

C92KT Series CNC Hammer Converted from Conventional Die Forging Hammer

利用数控锤技术，对原蒸汽锤或电液锤进行数控化改造

(一)改造原理

液压原理基本同数控锤整机原理，因此针对蒸汽锤或电液锤的独特性（行程大，导轨间距小，头部连接板平面尺寸小，安装整体数控制动力头困难等），设计上与整机相比有如下特征：

(1) 一吨、二吨旧锤改造，采用整体大油箱顶置，更换大的连接板连接；三吨以上旧锤改造，采用主副油箱设置（主油箱顶置原连接板上，机身两侧设置落地框架支撑两个副油箱），主副油箱之间全部采用软连接结构。

(2) 更换具有“X”型导轨结构的新锤头，导轨同时更换。从而达到提高抗偏载能力和提高锻造精度的目的。

(3) 由于旧锤行程太大，因而在上锤头上设置上模座，既达到降低行程的目的，又保证了保护锤头燕尾的目的。

(4) 根据用户是否需要顶料装置，决定是否更换新模座和配置顶料液压站。

(二)改造后的效果基本达到了数控锤整机各项性能，克服了旧锤原有的各种弊端，从而提高了产品档次。

Convert the original steam-air hammer and electro hydraulic forging hammer to CNC fully hydraulic die forging hammer by mean of the advanced numerical control technology.

1. The Conversion Principle :

The hydraulic principle is almost same with the brand new CNC fully hydraulic die forging hammer, so for the speciality of steam-air hammer or electro hydraulic hammer (long stroke, small guide rail space, small size of connecting plate at top of the arms, and difficulty in installing the numerical control power head), the conversion in design has following characteristics compared with brand new CNC fully hydraulic die forging hammer:

(1) For the conversion of 1T and 2T old hammers, it is adopted integrated big oil tank setting on the top of the hammer, and changed by big connecting plate; For the conversion of old hammers above 3T, it is adopted the main and auxiliary oil tanks setting(i.e. the mail oil tank is set on the top of the original connecting plate, and the two auxiliary oil tanks are set on the two sides of power head supported by the steel frame), the connections between the main and auxiliary oil tanks are flexible structure.

(2) Meanwhile change the new tup with "X" type guide structure, the guide rails of the hammer body are changed accordingly, thus improve the ability of inclined loading and increase the precision of forgings.

(3) Due to the long stroke of old hammer, thus we design a top die seat on the tup, so decrease the stroke as well as protect the coattail of tup.

(4) The ejection system and new die seat can be designed and supplied as per customers requirements.

2. The performance of converted hammers are almost same with that of brand new CNC fully hydraulic die forging hammers, which not only overcomes the disadvantages of old hammers, but also upgrades the hammer to a higher status.

### 主要技术参数

Main technical parameters

#### C92KT系列普通模锻锤数控化改造参数

Technical Parameters of C92KT Series CNC Hammer Converted from Conventional Die Forging Hammer

项 目 Item	单 位 Unit	C92KT-25	C92KT-50	C92KT-75	C92KT-125	C92KT-250	C92KT-400
打击能量 Hit energy	KJ	25	50	75	125	250	400
落下部分质量 Weight of falling parts	Kg	1700	3400	5400	8500	17000	27000
最大打击行程 Max. stroke	mm	685	745	810	1000	1100	1200
最大打击频次 Max hit frequency	min-1	90	85	75	70	50	40
电机功率 Motor power	KW	75	75×2	90×2	132×2	90×4	160×4

