



华中科技大学  
HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY



华中数控

# Your Global Partner for Numerical Control

**Wuhan Huazhong Numerical Control Co., Ltd**

June, 2012

# Contents

1. **Invitation for 2012 International Training Course on Numerical Control Technology**
2. **Training Schedule of 2012 International Training Course on Numerical Control**
3. **Introduction to CNC Technology and Products of HNC**
4. **HNC's International Scientific and Technological Cooperation**

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# Invitation for 2012 International Training Course on Numerical Control Technology

- **Sponsored by**

- Department of International Cooperation of the Ministry of Science and Technology (MOST) of the Chinese Government
- 15B Fuxing Road, Beijing 100862, P.R. China

- **Organized by**

- Wuhan Huazhong NC Corporation, Ltd (HCNC)
- East-Lake Development Zone, Wuhan 430223, P.R.China



# Invitation for 2012 International Training Course on Numerical Control Technology

- **Time:** Sept. 10, 2012 -Sept. 24, 2012
- **Venue:** Wuhan City, Hubei Province, China
- **Deadline for Enrollment:** August 1, 2012
- **Working language:** English



# Invitation for 2012 International Training Course on Numerical Control Technology

## Brief Introduction to the Training Content:

- Brief introduction to the present status of CNC development in China
- Working principles of CNC machine tools and systems
- Operation, programming and maintenance of CNC machine tools
- Multi-axis machining technology



# Invitation for 2012 International Training Course on Numerical Control Technology

## **Attention:**

There are several basic enrollment rules for the participants given by the organizer, Ministry of Science & Technology of China:

1. The participant should have working experience in the mechanical, electrical or automation related industry.
2. The participant should come from mechanical, electrical and automation related companies, universities or research institutes.
3. A maximum of 6 seats are available for each country.
4. The participant should be healthy and with no transmitted disease.

# Invitation for 2012 International Training Course on Numerical Control Technology

## **Training fares:**

The charges which will be covered by the organizer in Wuhan during the training program are listed below:

- Training course charges
- Accommodation (as arranged) charges
- Food (as arranged)
- Subsidy

**Note:** The participants shall bear the cost of international traveling expenses on their own.



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## Training Schedule of 2012 International Training Course on Numerical Control

We will provide a training program including theoretical knowledge and practical skills.

Some national renowned professors and experts are invited to give lectures on the advanced CNC technology.

Some experienced teachers will give guidance on the subjects of CNC machine tool operation, programming and maintenance etc.

# Training Schedule of 2012 International Training Course on Numerical Control

•Date	•Item
•Sept.12	•Introduction to HNC products and marketing strategy
•Sept. 13 -Setp. 15	•Operation and programming of machine tools
•Sept. 16	•One-day sightseeing
•Sept. 17	•CNC controller & electrical control of CNC machine tools
•Sept. 18	•Feeding servo system & frequency converter of the spindle
•Sept. 19	•PLC & machine tool precision check
•Sept. 20 to Sept. 22	•Visiting and investigations
•Sept. 23	•Five-axis machining
•Sept. 24	•Summary
	•Completion

# Training Schedule of 2012 International Training Course on Numerical Control

## Main Teaching Equipments and Types

No.	CNC Device	Type	Quantity	Specification & Main Usage	Unit price (RMB)
1	vertical machining center	XH714	10	3-axis linkage, spindle: 60-8000 rpm; used for machining center practical training	250,000
2	5-axis vertical machining center	XHK713	2	5-axis linkage, spindle 20000 rpm, used for practical training for 5-axis machining	500,000
3	vertical machining center	XHK715	2	4-axis linkage, spindle: 60-8000 rpm	300,000
4	CNC lathe	CK6136	5	Spindle: 3.7 KW, 180-2500 rpm, used for practical training for CNC lathe	80,000
5	CNC Lathe	CK6140	5	Spindle: 5.5 KW, 100-2000 rpm: used for practical training for CNC lathe	100,000
6	CNC milling machine	XK714	5	3-axis linkage, spindle: 7.5 KW, 60-8000 rpm: used for practical training for CNC milling machine	200,000

# Training Schedule of 2012 International Training Course on Numerical Control

## Main Teaching Equipments and Types

No.	CNC Device	Type	Quantity	Specification & Main Usage	Unit price (RMB)
7	CNC milling machine	XK713	5	3-axis linkage, spindle: 5.5 KW, 60-3000 rpm: used for practical training for CNC milling machine	180,000
8	CNC Experimental bench	HED-21	5	2-axis linkage, spindle: 0.55 KW, 100-1390 rpm; Used for assembly, commissioning and maintenance of CNC system	100,000
9	Integrated experimental device of CNC lathe	HED-ST	5	2-axis linkage, spindle: 0.37KW,100-2800rpm; Used for assembly, commissioning and maintenance of CNC system	60,000
10	Integrated experimental device of CNC milling machine	HED-SM	5	2-axis linkage, spindle: 0.4KW,3000-24000rpm;	80,000

# Training Schedule of 2012 International Training Course on Numerical Control

CNC Training Center of HNC Covering an Area of 2000 Square Meters





# Training Schedule of 2012 International Training Course on Numerical Control

## CNC Training of Lathe





# Training Schedule of 2012 International Training Course on Numerical Control

## CNC Training of Milling Machine



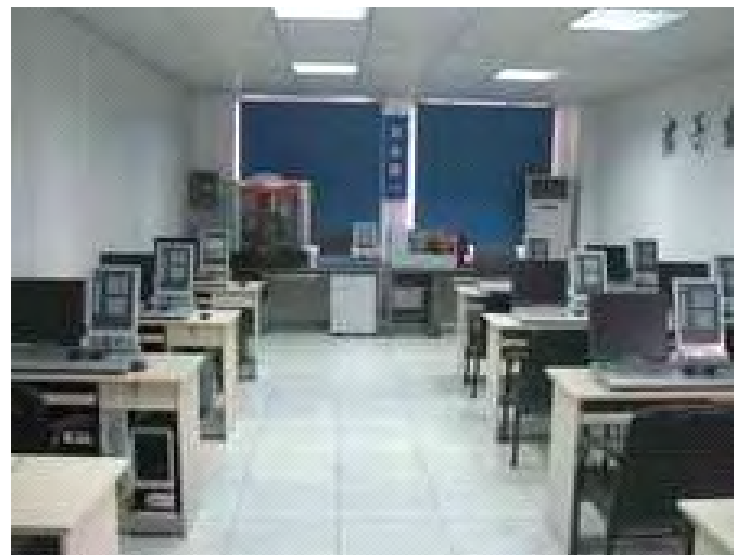
# Training Schedule of 2012 International Training Course on Numerical Control

## CNC Training of Machining Center



# Training Schedule of 2012 International Training Course on Numerical Control

Computer Center





# Training Schedule of 2012 International Training Course on Numerical Control



Practice Room for Electrical Control and maintenance



Training Room (with Capacity of 80 People)

# Training Schedule of 2012 International Training Course on Numerical Control

## Training Materials



# Training Schedule of 2012 International Training Course on Numerical Control



**Reception Center in HUST**



**Accommodation Room**



# Training Schedule of 2012 International Training Course on Numerical Control



**Food Service Center**



# Training Schedule of 2012 International Training Course on Numerical Control

## Teaching Staff

NO.	Name	Sex	Age	Company	Position	Professional title	First degree	Final degree
1	Chen Jihong	Male	46	HNC	President	Professor	Bachelor degree	Doctor
2	Xiang Hua	Male	41	HNC	General manager	Senior engineer	Bachelor degree	Doctor
3	Zheng Xiaonian	Male	46	HNC	Deputy general manager	Professor	Bachelor degree	Master degree
4	Xiong Qingping	Male	46	HNC	Deputy general manager	Professor	Bachelor degree	Master degree
5	Xu Jianchun	Male	37	HNC	Minister	Senior engineer	Bachelor degree	Master degree
6	Hu Tao	Male	46	HNC	Minister	Senior engineer	Bachelor degree	Bachelor degree
7	Sun Hailiang	Male	33	HNC	Minister	Senior engineer	Bachelor degree	Bachelor degree
8	Tang Xiaoqi	Male	54	HUST	Dean	Professor	Bachelor degree	Doctor degree
9	Peng Fangyu	Male	38	HUST	Deputy dean	Professor	Bachelor degree	Doctor degree

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# Introduction to CNC technology and products of HNC



- 2008: First Series of National Independent Innovation Enterprise; Excellent Innovative Enterprise of China Machine Tool Industry; the Executive Member National CNC System Standards Committee.
- 2009: Excellent Enterprise of National Machine Tool Industry; the First Grade Prize of Science and Technology Progress of Hubei province and Ministry of Education.
- 2011: On January 13, HNC issued shares on the GEM market at Shenzheng stock exchange. It is the first listed domestic CNC enterprise.

# Introduction to CNC technology and products of HNC

HNC has established research and production base and achieved an annual production of 10000 sets of CNC systems. And it has set up production lines for various CNC products.





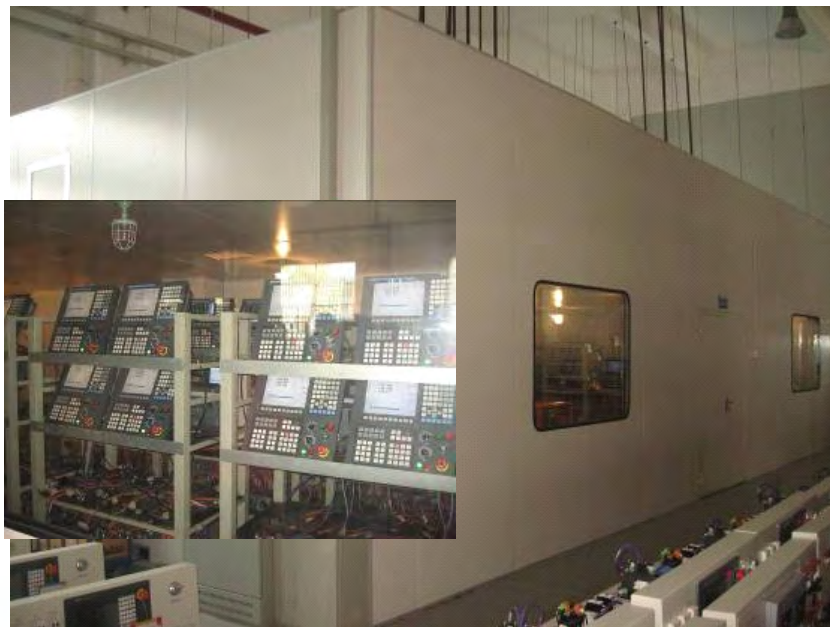
# Introduction to CNC technology and products of HNC

HNC has established research and production base and achieved an annual production of 10000 sets of CNC systems. And it has set up production lines for various CNC products.



# Introduction to CNC technology and products of HNC

HNC has established an advanced quality inspection center where devices are provided for the tests of electromagnetic compatibility, electrical surge, vibration and environments.



# Introduction to CNC technology and products of HNC

## CNC Products of HNC



HNC has achieved the annual production of 10000 sets of CNC systems that takes up 30% of domestic CNC systems.

It provides a wide range of CNC systems, and its products are well received by users.

HNC has comprehensive system matching capabilities and it is a leading manufacturer for CNC systems.



# Introduction to CNC technology and products of HNC



Motor drives developed by HNC

## 2. CNC Products of HNC

Series 180U motor drives



**HSV-180U-  
25A/50A/75A**



**HSV-180U-  
100A/150A**



**HSV-180U-  
200A/300A/450A**



## Introduction to CNC technology and products of HNC



ON, January, 13, 2011, HNC became a listed company.



# Introduction to CNC technology and products of HNC

HNC systems are used by more than 60 domestic famous machine tool enterprises.







**Vertical machining center of Dalian Machine Tool Group Co., Ltd that use s HNC systems**





**14/12/2011 16:30**  
**Workshop of Dalian Machine Tool Group Co., Ltd that uses HNC systems**





**Workshop of Shenyang Machine Tool CO.Ltd. that uses HNC -210B CNC system**

2010.05.21





**Workshop of Beijing Mechanical and Electrical College that uses HNC systems**





**More than 30 sets of high-end machine tools of Lunan Machine Tool Group that uses HNC CNC systems including CNC Gantry milling machine, horizontal machining center and vertical machining center**





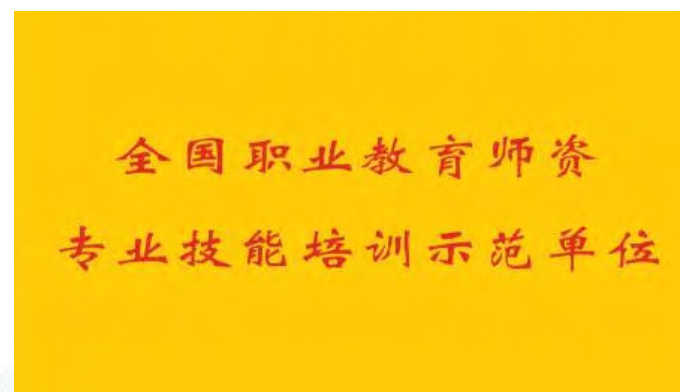
**Workshop of Guizhou Aviation Group Co., Ltd that uses HNC systems**  
**2008/08/07**





**Vertical turning machine of Wuhan Heavy Industrial Co.,Ltd, that uses HNC system**

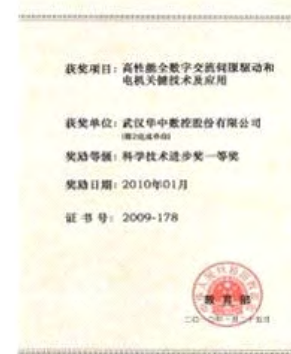
## Introduction to CNC technology and products of HNC





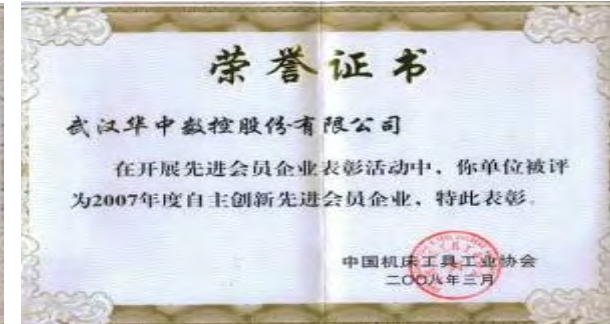
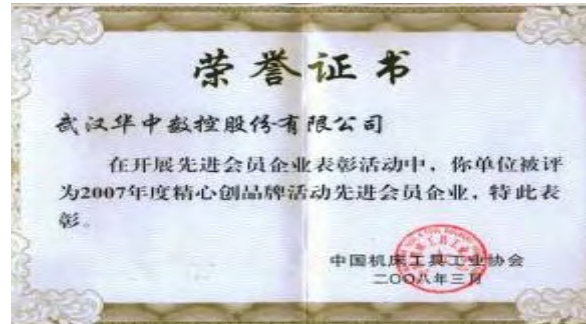
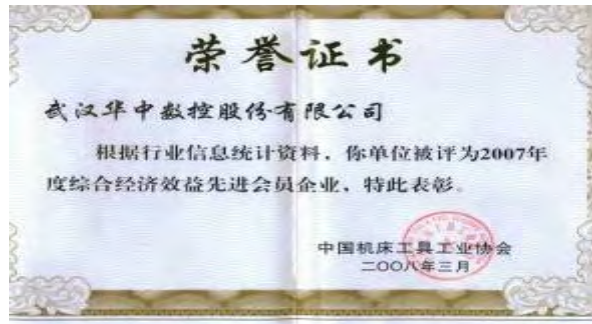
# Introduction to CNC technology and products of HNC

## Awards





# Introduction to CNC technology and products of HNC



## Awards and Certificates



# Introduction to CNC technology and products of HNC





# Introduction to CNC technology and products of HNC

## Series HNC-8 bus-based CNC systems



**HNC-808**



**HNC-818**



**HNC-848**

Supporting a maximum of 10 channels

Each channel supports a maximum of 9 coordinate axes and a maximum of 4 spindles.

## Introduction to CNC technology and products of HNC



**Workshop in Dongfang Turbine CO., LTD. that uses HNC 6-axis CNC belt grinder**



## Introduction to CNC technology and products of HNC

DLH-20 high-speed turning center of Dalian Machine Tool CO., LTD that uses HNC-8 bus-based system and dual-axis closed-loop raster ruler. It features high precision, high rigidity, and the cutting feed rate is 60 m per minute. The comprehensive performance of the machine has reached the international advanced level.



## Introduction to CNC technology and products of HNC

In November, 2011, Series ADG high-speed CNC lathe and turning center of Anyang Xisheng Machine Tool CO.,Ltd. that uses HNC-8 systems went into operation in the auto parts manufacturing industry.



# Introduction to CNC technology and products of HNC

5-axis high-speed Gantry milling machine, with the maximum speed of 80 m/m, dual-axis synchronization control





## Introduction to CNC technology and products of HNC

HNC has established more than 300 CNC technical practical centers , and provided thousands of CNC machines for more than 10 million CNC technical personnel.

Year	2004	2005	2006	2007	2008	2009	2010	Total
Number of practice center	50	392	321	313	320	320	629	2345
Number of CNC practice center	26	100	49	51	49	39	58	372
Proportion of CNC practice center	52.00%	25.51%	15.26 %	16.29%	15.31%	12.2%	9.22%	15.87%
Total price of CNC equipments (RMB )	1.116 billion	3.296 billion	1.42 billion	1.46 billion	1.34 billion	1.57 billion	2.13 billion	12.33 billion



## Introduction to CNC technology and products of HNC



CNC technical practice center of Lingbo  
Yinzhou Vocational and Technical Center



CNC technical practice center of  
Wuxi Vocational and Technical Center

## Introduction to CNC technology and products of HNC



CNC technical practice center of Baotou  
Vocational and Technical College



CNC technical practice center of Tianjin  
Electromechanical Technical School

## Introduction to CNC technology and products of HNC



**CNC technical practice center  
of Changzhou Vocational College**



**CNC technical practice center of  
Chongqing Lixing Vocational  
Education Center**



## Introduction to CNC technology and products of HNC



2006



2008



2010

Undertaking 2006, 2008,  
2010 CNC skills competition

# Introduction to CNC technology and products of HNC



• 2008

• 2009



• 2010

Undertaking 2008, 2009,  
2010 CNC skills competition

# Introduction to CNC technology and products of HNC



• 2008

• 2009

• 2010

Undertaking 2008, 2009,  
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## HNC's International Scientific and Technological Cooperation

In 2004 and 2005, HNC organized two terms of international CNC training courses to promote the cooperation and exchange of CNC technology between countries all over the world.

HNC has cooperated with  
Laser research institute in  
Pakistan and Hanoi  
University of Science.



## HNC' s International Scientific and Technological Cooperation





## HNC' s International Scientific and Technological Cooperation

In 2009, worked together with Jiujiang Vocational college, HNC undertook vocational Education Seminar for African countries to study teaching methods and training teacher for vocational colleges in Africa.



## HNC' s International Scientific and Technological Cooperation

In 2011, under the support of Chinese government, HNC worked together with Dalian Machine Tool Group Co., Ltd., and reached a cooperation agreement with Kenya government. In the agreement it specifies that HNC provides hundreds of CNC equipments for Kenya and establishes dozens of CNC training centers to develop skilled personnel for Kenya manufacturing industry and vocational colleges.





## HNC' s International Scientific and Technological Cooperation



**XK7132 CNC milling machine  
exported to Columbia**

**CJK6032 CNC lathe exported to Columbia**



## HNC's International Scientific and Technological Cooperation

HNC established more than 20 CNC training centers in Colombia.



## HNC' s International Scientific and Technological Cooperation

- Since 2009, HNC has actively expanded overseas business in Southeast Asia and other developing countries, and achieved good results. In cooperative with Luoyang Bearing Research Institute, HNC signed a cooperation agreement with PMK Precision Machinery Cooperation of India to provide dozens of CNC machines for India.
- In 2011, under the support of Chinese government, HNC worked together with Dalian Machine Tool Group Co., Ltd., and reached a cooperation agreement with Kenya government. In the agreement it specifies that HNC provides hundreds of CNC equipments for Kenya and establishes dozens of CNC training centers to develop skilled personnel for Kenya manufacturing industry and vocational colleges.

## HNC's International Scientific and Technological Cooperation



Exploring global CNC market



--- taking part in Chicago machine tool exhibition



## HNC's International Scientific and Technological Cooperation



Exploring global CNC market--- taking part in Chicago machine tool exhibition

# Thank you!

