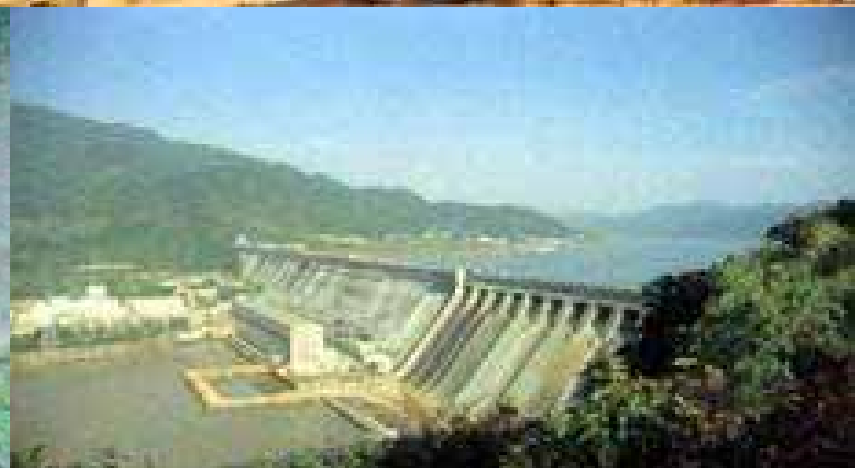
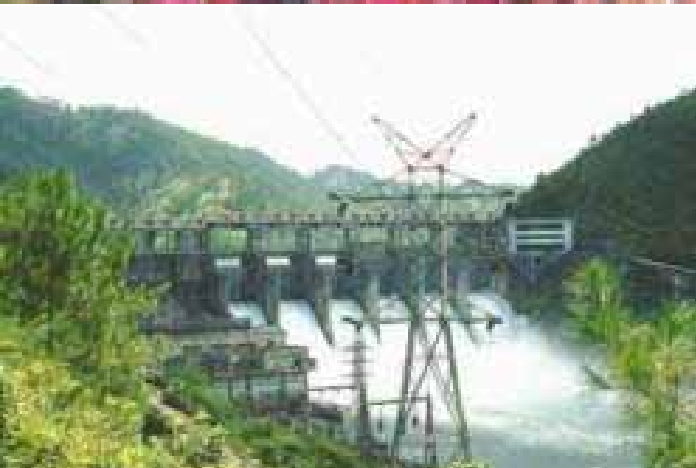


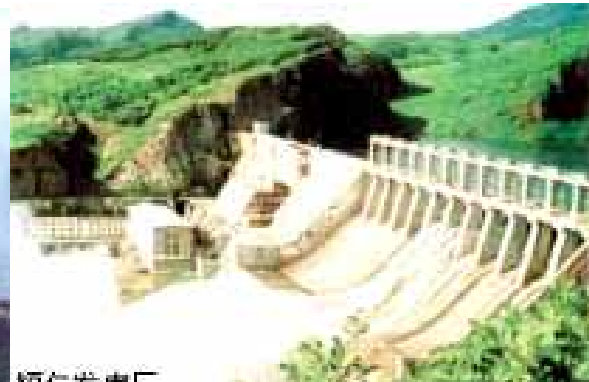
Hydro Power Plant



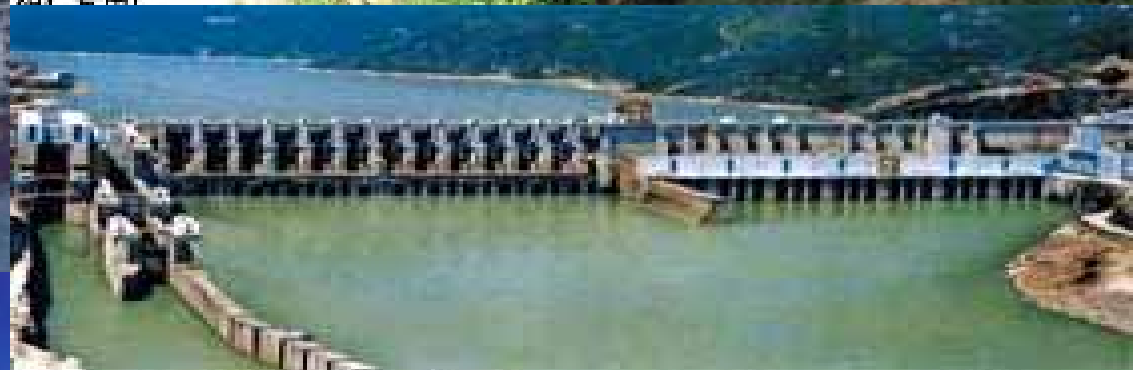
Allbest Creative Development Ltd. (ALLBEST)

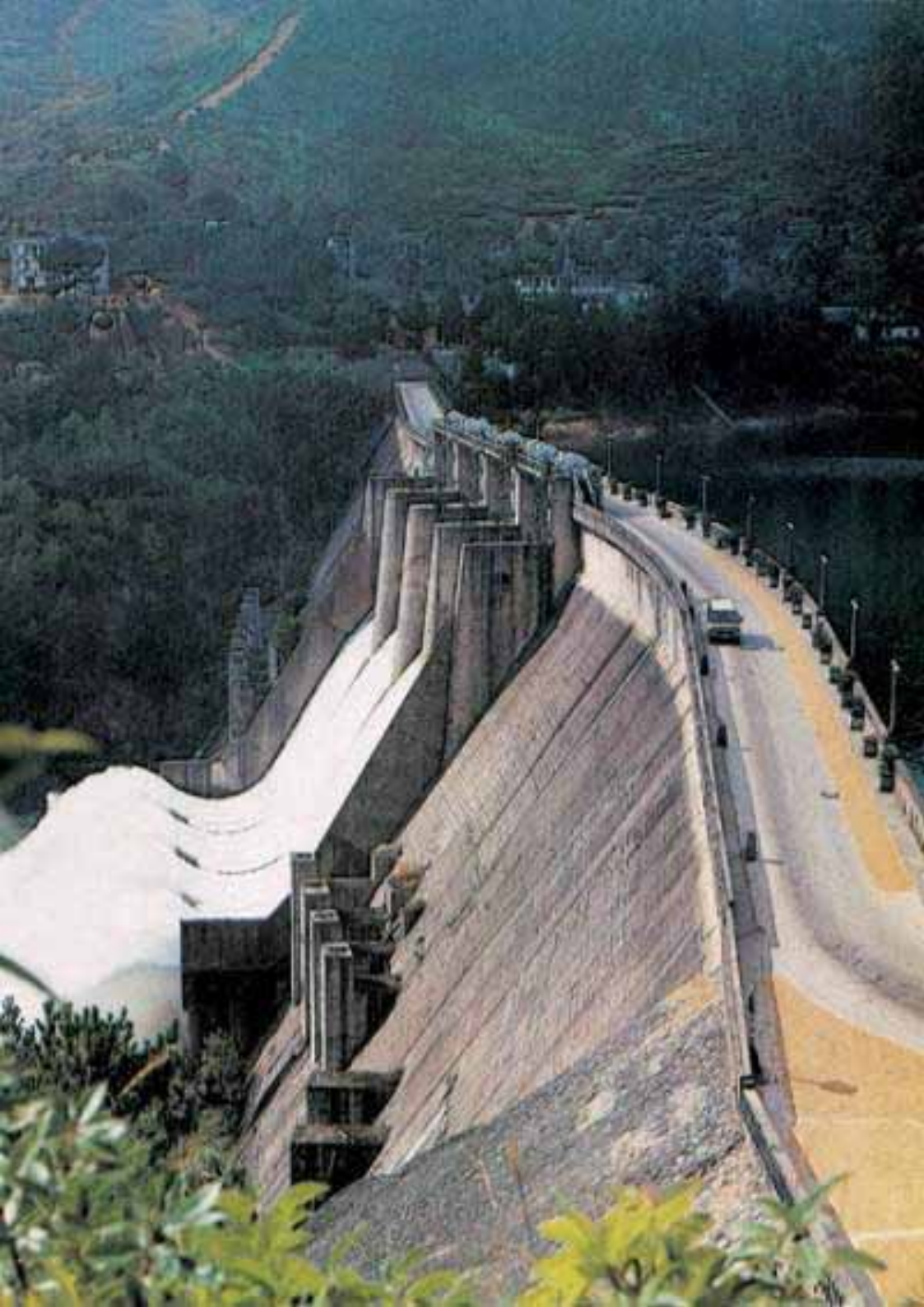
Integrated Technology & Equipment for Hydro Power Project





柯仁发电厂





Types of Hydro Power Units

- Francis
- Kaplan
- Pelton
- Inclined Jet
- Pumped-storage
- Tubular



刘家峡转轮模型



葛洲坝转轮模型



斜流式转轮模型



贯流式转轮模型



天生桥 II 级转轮模型



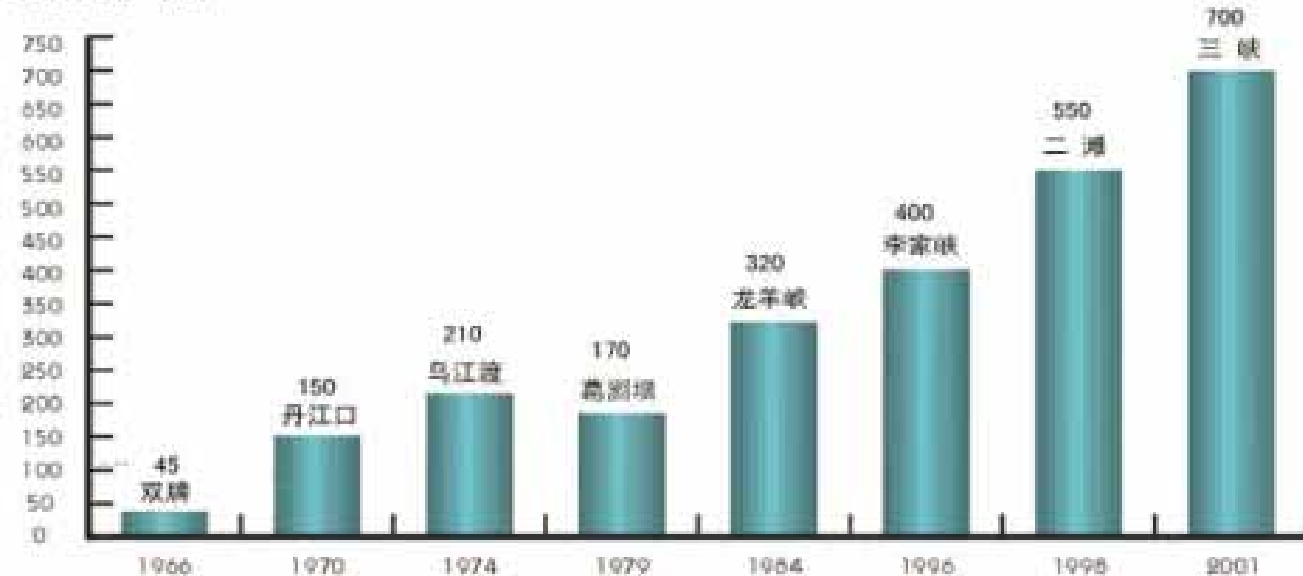
水斗式转轮模型



Max. Manufacturing Capabilities of Hydro Power Units

- Francis: 700 MW/Unit
- Kaplan: 255 MW/Unit
- Tubular: 30 MW/Unit
- Pelton: 13 MW/Unit

单机容量 (MW)



Introduced Manufacturing Technology

We developed our own technology and also introduced manufactured technology from:

- **Alstom/France**
- **Toshiba/Japan**
- **GE/USA,Canada**
- **ABB**
- **Kaeverner/Norway**
- **Voith/Germany**
- **Siemens/Germany**
- **Fuji/Japan**



Three Gorges Project(700 MW/Unit, 18200 MW)



Supply for Three Gorges Project(700 MW/Unit)





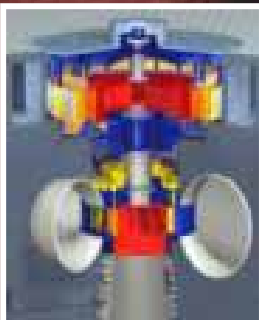




三峡左岸电厂中控室



Francis Unit



Kaplan Unit





Pelton Unit



Inclined Jet Unit, Deriaz



Tubular Unit



Pumped-storage station, TianHuangPing, Zhejiang (1,800 MW)



Crest of key dam: 503 M with height of 72 M

Pumped-storage station (Phase I & II), Guangzhou (2,400 MW)



upper



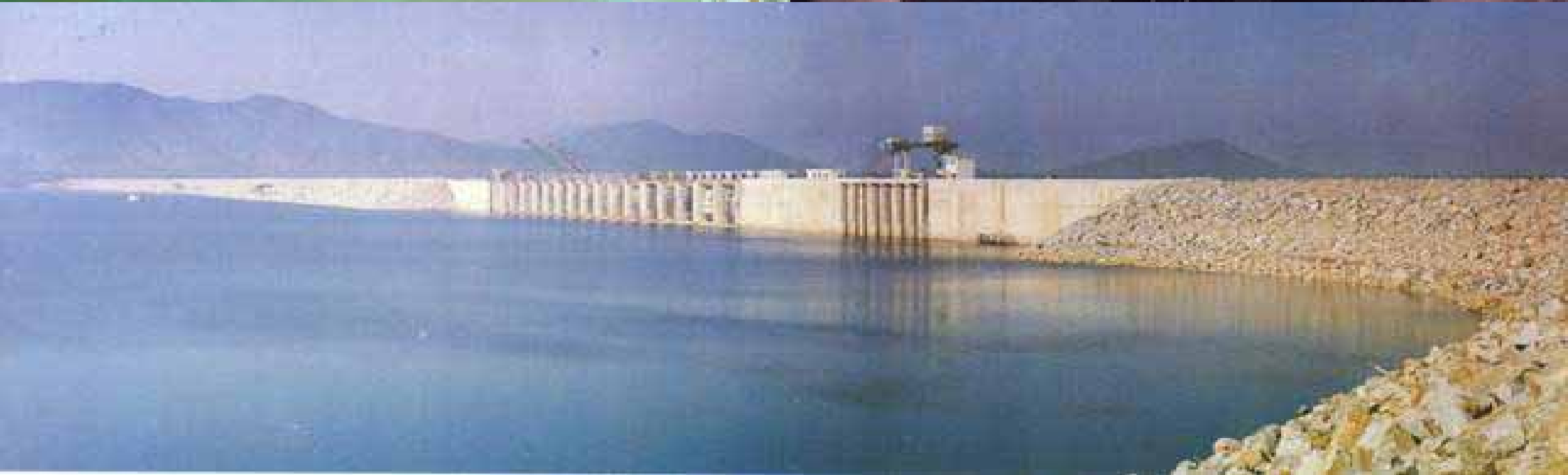
down

Hydro Generators









Automation & Governor, excitation, control system



Substation and Transmission Line

35 KV, 110 KV, 132 KV, 220 KV, (230 KV) and 500 KV

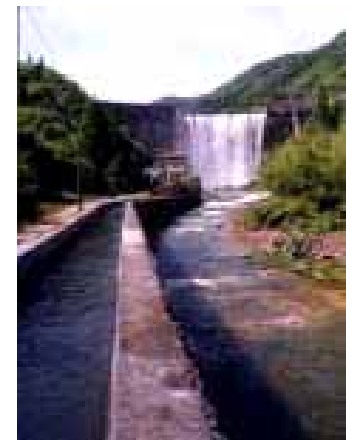


Small/Medium Hydro Power Station (250 kW-10 MW)

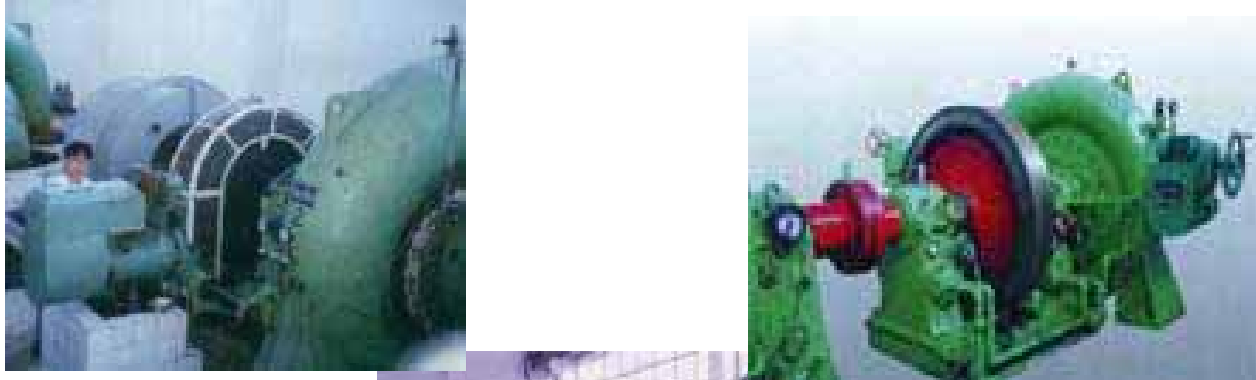
The development of small water works projects opened a large market for medium and small sized hydro power plant. Various types of hydro power plant are widely used in even remote villages in China ranging from 250 KW to 10 MW. The highest water head is 830 meters and the lowest head is only 3.5 meters.

Our hydro power units have been exported to USA, Canada, Philippines, Turkey, Buangza (Congo), Albania, Yugoslavia, Nepal and other countries.

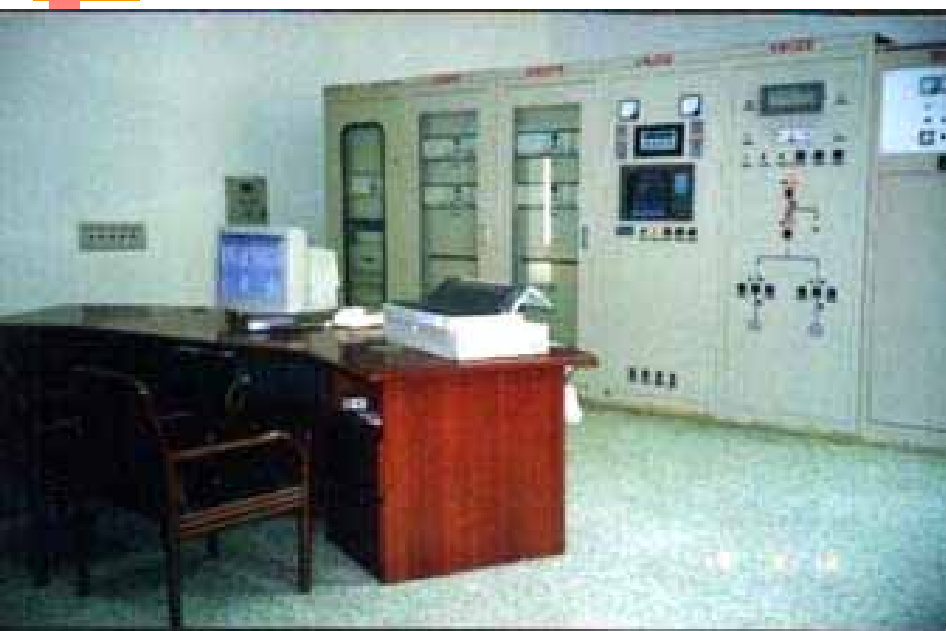
China is a country with rich experiences particularly in small hydro power plant. With good quality, state of art technology, reliability and economical cost, those small hydro power plant are especially suitable for developing countries.

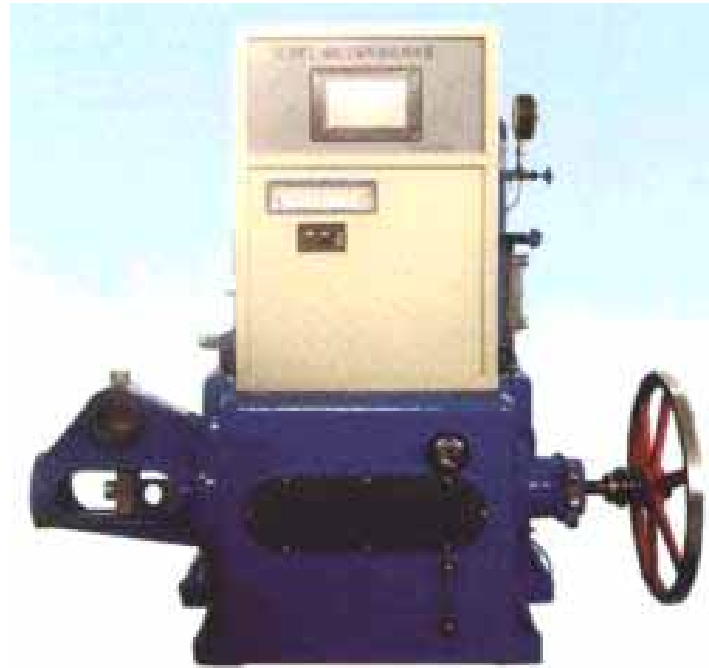






Governor, excitation, computer control for small/medium hydro power station





Modes of excitation

- DC Exciter
- Brushless excitation
- Excitation with double winding shunt reactor
- Thyristor excitation

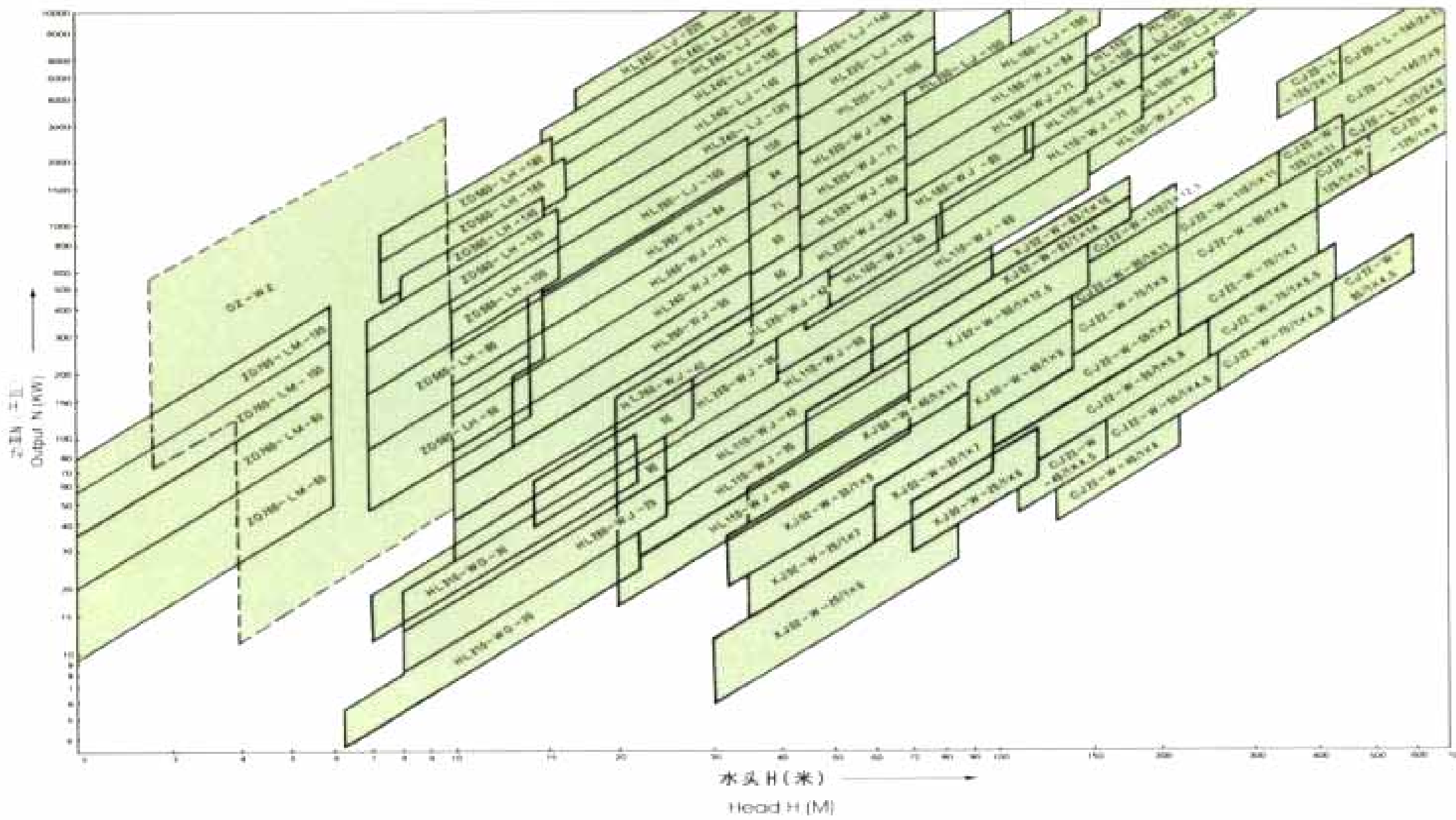
PLC Governor

PLC Exciter



Goventer & oil hydraulic devices

Range & Application for Small/Medium Hydro Turbines



Selected Typical Hydro Power Plant

Power Plant	Unit Capacity (KW)	Head (m)	Speed (r/min)	Rated Voltage of Generator (V)
1. Francis Type				
Longxihe	1050	43	750	6900
Guanting	10500	28.8-41	187.5	10500
Xinanjiang	75500	57.8-84.3	150	13800
Yanguoxia	45000	37-39.5	107	10500
Vaudejes, Albania	50000	52	136.4	10500
Danjiangkou	150000	63.5	100	15750
Liujiaxia	230000	70-114	125	15750
Liujiaxia	308000	70-114	125	18000
Wujiangdu	210000	120	150	15750
Firze, Albania	125000	118	166.7	13800
Buangza (Congo)	19200	6.75-71.5	300	10500
Baishan	306000	81-123	125	18000
Longyanxia	326500	122	125	15750
Lubuge	153000	295-372.5	333.3	15750
Camp Far West, USA	6800	40.2	300	4160
Adiguzel, Turkey	30600	116	300	13800
Abiqiu, USA	7090-9000	38.1-74.67	400	4600
Tianshengqiao	225000	174-204	200	18000

2. Kaplan, fixed blade axial flow				
Qingtongxia	37200	16.4-21.2	107	10500
Gezhouba	170000	18.6	62.5	13800
Gezhouba	129000	18.6	62.5	13800
Camanche, USA	3563	32	450	4160
Baligatan, the Philippines	6000	30	300	4160
Shuikou	204000	30.9-57.8	107	13800
Angat, Philippines	18000	96	400	13800
Manwan	255000	89	125	15750
3. Deriaz, Tubular				
Maojiacun	8330	27.5-77	428.6	6300
Longfengshan	1700	7-14.6	250	6300
4. Pelton				
Baizhangji	13000	330-356.6	500	6300
Mofanggou	13000	456-462	500	6300
Sifangdong	2640	830	1000	6300
Liujiaping	6710	475-500	600	6300

Service

- **Advanced and reliable technology & engineering**
- **Procurement, manufacture, and delivery of the goods**
- **Project management**
- **Construction, installation, and commissioning**
- **Technical service**
- **Training program**
- **Service after completion of the project**
- **Financing assistance and export credit**
- **Other services and functions upon request**

CREATE THE FUTURE



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