



**INTERNATIONAL TRAINING WORKSHOP ON FULLY MECHANIZED COAL
MINING TECHNOLOGY**

**MONGOLIAN TEAM
REPORT**

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CHINA COAL

- China National Coal Group Corp established in **July – 1982**,
- Second biggest state owned company ,
- Owned **46 coal mines**, 28 coal washing plant and **capacity 239 million tons**.
- **One of core business manufacture of complete set of fully mechanized coal mining.**
- technical level and market share in China
- 52 wholly-owned companies
- 110 thousands of registered employees
- total profit of **5.61 billion Yuan**
- As a subsidiary of CHINA COAL/CME, China Coal Overseas Development Co., Ltd. (**CODCO**)
- India, Turkey, Russia, Vietnam, Morocco, etc. which achieved good reputation from the overseas customers.



CHINESE COAL INDUSTRY

- **1341.2 billion** tons of coal reserves
- largest coal producer and consumer in the world
- **90% for underground 12500 coal mines,**
- 10% for open-cast mining more than 200
- **1501m** for the deepest (this coal mine is called Suncun Coal Mine)
- By 2015, coal productivity will reach **4.1 billion tons/per year**
- Concentrated in large bases and big groups
- higher utilization, safety, good economic benefit, less environment pollution



CHINA COAL OVERSEAS DEVELOPMENT (CODCO)

- capability for **EPC coal mine project**
- rich experience of overseas coal mine exploration, construction, equipment supply, installation and commissioning, coal production, technical service, training and supply of spare parts.
- **Last 3 year organized international workshop**
- exported a number of installations of **longwall equipment**, coal washery equipment.



KAILUAN GROUP, TONG HUAN TUO

- Established in **1878** with 135 years of history
- **46** branches, **60** subsidiaries and **1 listed company**
- capabilities of **coal production, coal preparation** and washery, coal chemical, modern logistics, power generation
- Built in modern coal mine **1907 with England in Tangshan**
- Since **1881 first railway**, cement plant power plant and port
- Mine start up in 2008, capacity **3 milion per year.**
- 3 different shearer for **9 different** coal seam.
- Fully mechanized **longwall mine** lifetime 49 year
- Water is big issue, **35 cubic meter per hour.**
- Depth 230-1200 m.
- Total employee **3860** person.
- Average salary **3500 RMB.**
- Coal seam angel **21⁰**
- Operation cost for **250 RMB** per ton.
- Each shift for 30 person.



TONG HUAN TUO



RESCUE BASE

- Total **7** rescue centers in China
- Controlling and connected **6** mines.
- Total staff **153** person.
2 parts
- **3 year** preparation for staff and 3 month training.
- Possible to work up to **40 years**.
- Advanced equipment and safety.

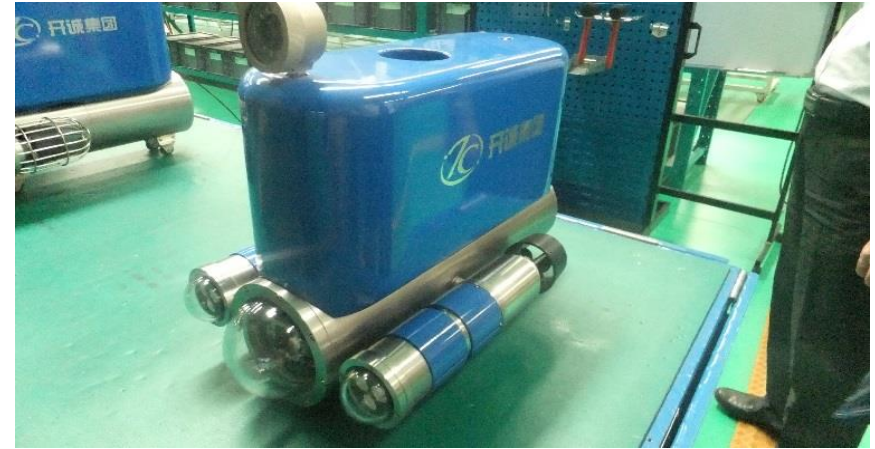


TANGSHAN ENERGY & TECHNICAL COLLEGE



- Kailuan group invested
- More than **3000 students**, more foreign
- Academic 3 year for Kailuan group plant and factory.
- Underground and simulation laboratory.

KAICHENG GROUP



- Established in **1991**, Total **500** employee
- Coal Mining Explosion-Proof Electric **Drives, Sensors, MCC system, Automation systems, and Explosion-Proof Hazardous-Duty Robots** for underground mine rescue.



TANGSHAN SHENZHOU MANUFACTURING CO.,Ltd

- 22 year history, average sales **200 FGX units** per annum.
- Pilot test FGX-1, 10 ton per hour, mobile.
- **KZX dry dense medium** separation, since 2013.



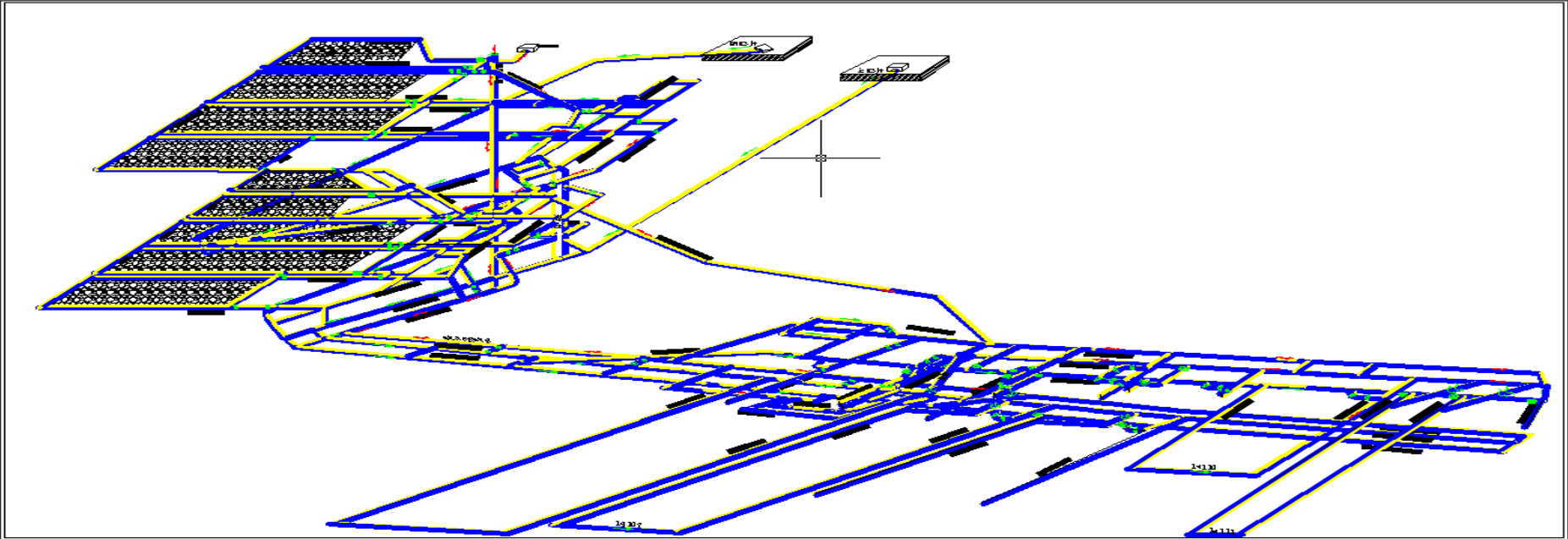
PINGSHUO MINING

- Shanxi province, Shoujou city,
- 4 underground and 3 strip mine, total capacity 123 million tons
- Washed ROM coal transported to [Qinhuangdao Port](#)

Underground mine:

- since 2003, **No1 in China**, Capacity 17.35 million tons per year.
- Steam coal caloric value 5000 ккал/kg.
- Total employee **619 person**, by 4 shifts,
- Operation on going in the 2 different coal seam, **230 m** depth.
- Mine mount sloping, Coal seam angle **12-18⁰**
- Thickness coal seam 8-10m and 10-12m, brittle coal.
- Coal recovery 90%, Shearer **height 3m**, Power support **4.5m**,
- Top coal caving, **3D design**,
- Most important is coal handling conveyor system.

PINGSHUO UNDERGROUND MINE



PINGSHUO STRIP MINE

- Since in 1983, capacity **30 million** per year.
- Left right rules.
- Coal reserves around 700 million tons.
- Mine depth around **180 m**. Coal ratio **1:5**
- Coal seam angle **3-5° to 10-20° болно**.
- KAMATSU truck **290 tons** for 32 pcs, **170 tons** for 30 pcs.
- Joy Global P&H electrical, bucket **34m³ & 55m³**
- 150 person per shifts, 3 shifts per day,
- 1 ton coal operation coal **100 RMB**.
- No waste dump, back side,
- Coal 1 cycle 25 minutes, waste 15-18 minutes,
- Semi mobile coal receiving station, 2 stage crusher.

PINGSHUO STRIP MINE

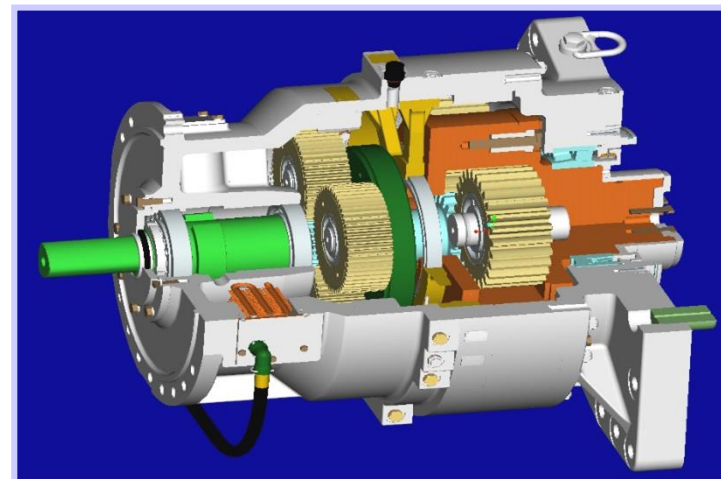
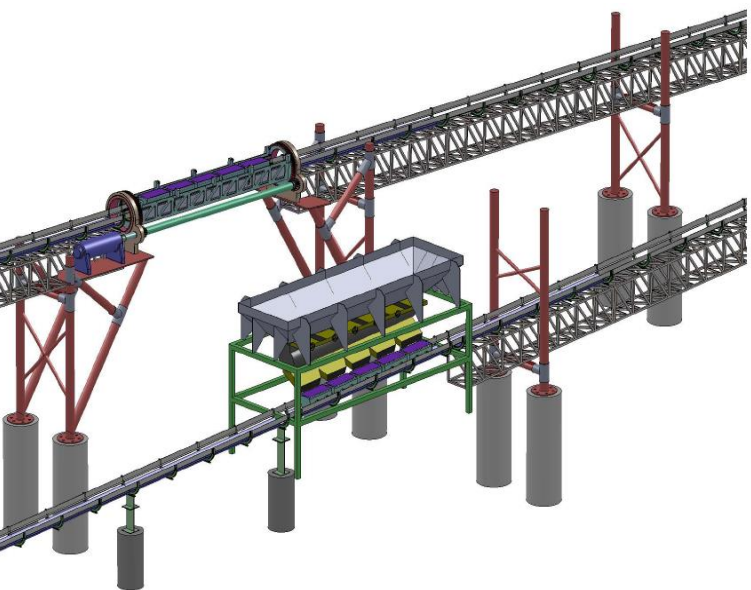


ZHANGJIAKOU COAL MINING MACHINERY

- Since in **1926**, 4800 employee, branch office in 6 countries,
- Leader of coal mining machinery industry, **60% of china**,
- **Largest, oldest, and strongest enterprise**
- Subsidiary of China National Coal Group Corp.
- **Longwall Conveying System, Fully Automatic Plough, Belt Conveyor, Coal Washing and Preparation Equipment, Gearbox, Round Link Chain**
- **Parsons Chain China joint venture**



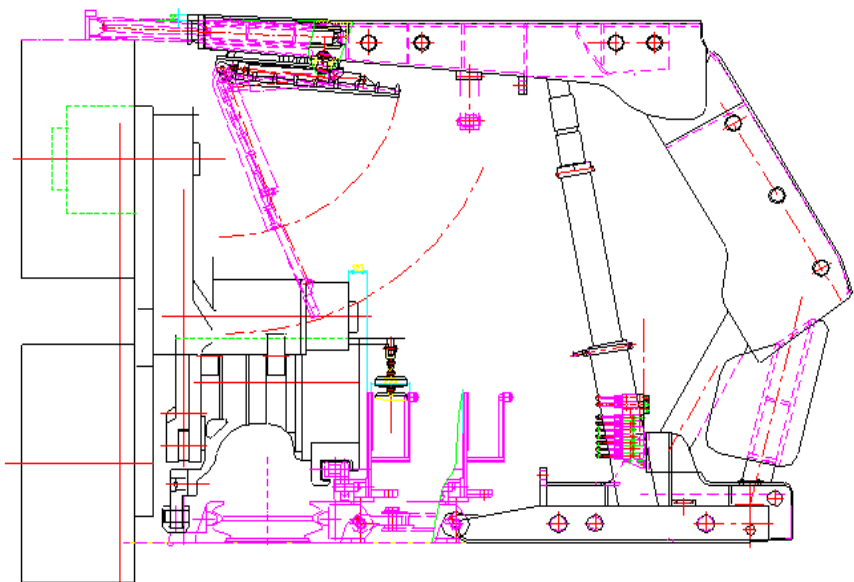
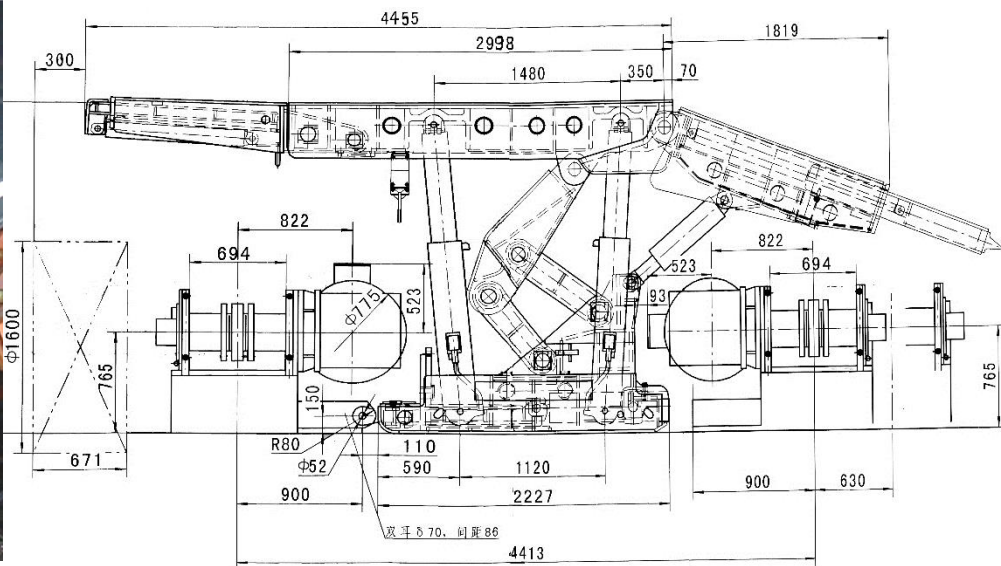
ZHANGJIAKOU COAL MINING MACHINERY



BEIJING COAL MINING MACHINERY

- Since in 1959, **Largest exporter** of roof supports in China
- **0.55** meter to **8.5 m** height,
- **100,000** units of roof support, more than **900** types
- Yield load **1800 KN** to **21000 KN**
- Hydraulic and electrical roof support
- **MA certificate**, ISO9001
- **2 and 4 leg support**
- **5** start service.

BEIJING COAL MINING MACHINERY



LONGWALL - AFC

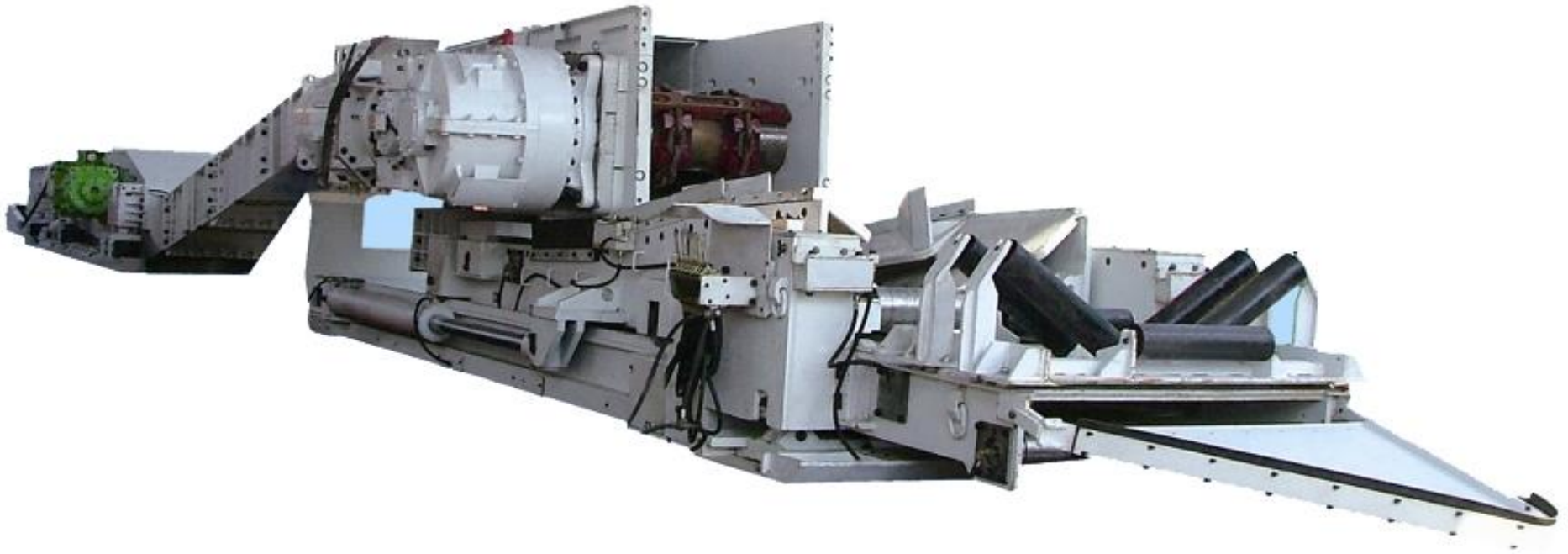
500 Types, 26 Series AFC,



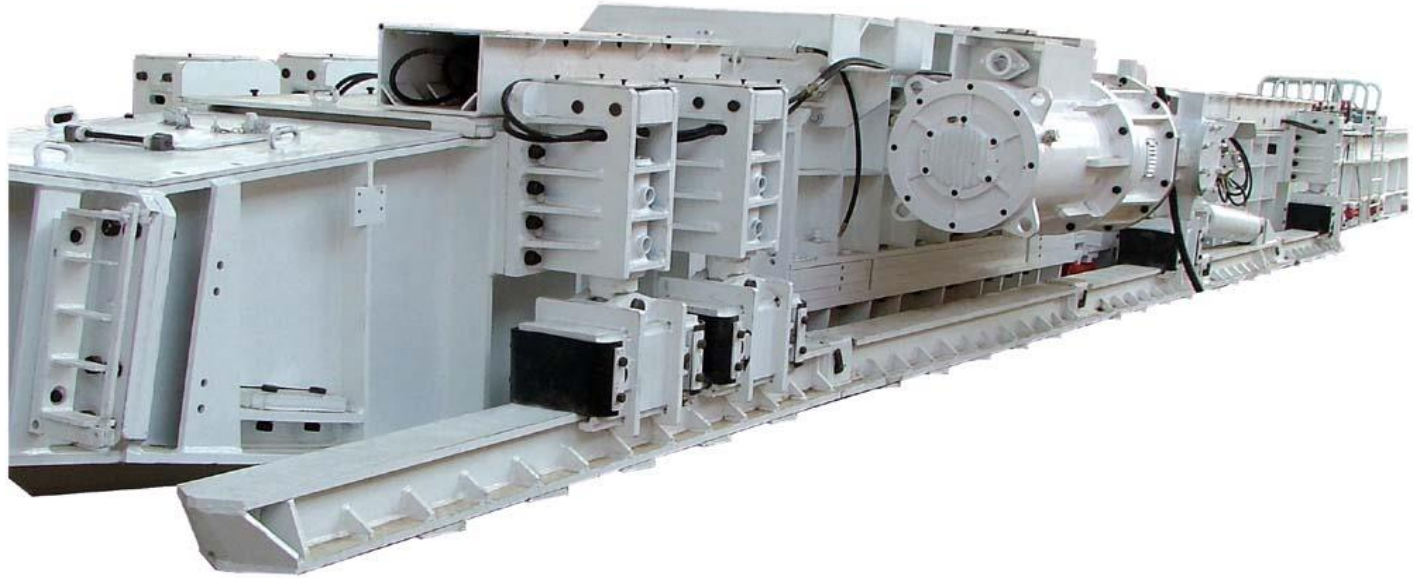
Capacity	450~4500t/h
Power	30~3 × 1600kW
Length	150~400m
Chain size	Φ18~φ 56mm

LONGWALL - BSL

Capacity	450~5000t/h
Power	75~700kW
Length	30~60m
Chain size	Φ18~φ 48mm



LONGWALL - CRUSHER



Capacity	450~5500t/h
Power	75~525kW
Type	Hammer & Jaw
Transmission	Belt, gear

LONGWALL - PLOUGH

Fully Automatic Plough



→ Applied to 0.8-1.5m coal seam, 20 percent low seam reservation indicates potential market for the plough.

→ Only one manufacturer for Fully Automatic Plough in China.

LONGWALL - SHREAR



1	Type	Eickhoff SL 750
2	Voltage	3300V
3	Total installed power	1474KW
4	Total Weight	70 tons
5	Manufacturer	Eickhoff



LONGWALL – WALL, TUNNEL



Ventilation Fire prevention & extinguish system



Power supply, Water supply & drainage system



LIKE



INTERNATIONAL TEAM – 2014



THANK YOU “CODCO”