



SERI
MACHINERY
TIANJIN SERI MACHINERY EQUIPMENT CO.,LTD



Seri international market exclusive
agent GJY machinery

✉ E-mail: jiaao@njggy.net

☎ Tel: 86 25 86229422

☎ Fax: 86 25 86229343

🏠 www.njggy.net

S H O K A

Seri Iran market exclusive agent
Shoka Machine Tools

✉ E-mail: sales@shoka-group.com

☎ Tel: +98 41 33270148-9

☎ Fax: +98 41 33270150

🏠 www.shoka-group.com



International partner



Russian TMK qualified supplier

Since 2012

Since 2009

Austrian Andritz qualified supplier

Finnish Metso qualified supplier

Since 2009

Since 2008

German Voith qualified supplier

German Siemens qualified supplier

Since 2007

Since 2006

German SMS qualified supplier

Italian Danieli qualified supplier

Since 2005



Company profile

TPCO (biggest seamless pipe producer in the world) was founded in 1989, Seri was founded at the same year as TPCO subsidiary engineering company first. CERI (Capital Engineering & Research Incorporation Ltd, founded in 1951, biggest metallurgic engineering company in China) became another share holder of Seri in 2004.

After 27 years development, Seri has over 2,500 employees now, plant area over 520,000 sqm.

Seri can produce all kinds of equipments/machines, tools (mandrel and roller) for metallurgic business, hydro power and wind power field. Seri became major Chinese supplier of many European companies since 2004.

Seri has all kinds of certificate such as ISO 9001, ISO14001, API, IACS, GB/T28001, IIW.



CONTENT

01	International partner
03	Company profilee
04	Content
05	Seamless pipe productionl line
07	ERW line
08	Spiral welding pipe line
09	Slitting line
11	Color Coating Line and Galvanizing line
13	Bar production line
15	Wire rod production line
17	CCM
19	H beam production line
21	Electroslag furnace
23	Arc furnace
24	VOD furnace
25	Quench
27	Hydrotester
29	Forging machine
31	Polishing machine
32	Straightening machine
33	Leveling equipment
34	Electroplate
35	Sizing mill
36	Piercing machine
37	Laddle turret
38	Piercing machine
39	Gear box
40	Wind power and hydro power
41	Roller
42	mandrel
43	Stand
44	Inspection capacity
45	Equipment/machine
49	Metallurgical Equipment R&D Dept
50	Training
51	Reference

Seamless pipe production line

(PQF, FQM, MPM)

无缝管生产线



SERI is China's largest general contractor of steel engineering construction, providing engineering consulting, design, construction and engineering, and complete sets of equipment and technical services for clients.

Four products have been designed and manufactured by SERI with independent intellectual property rights, namely, ASSEL hot rolling seamless pipe production equipment, Accu-Roll hot rolling seamless pipe production equipment, 3-roll continuous rolling production equipment and heavy caliber seamless pipe production equipment.



These products cover a variety of options for different users. They can produce seamless pipes in a variety of steel grades with diameters of Φ 48.3-1200mm and wall thicknesses of 4.83 to 100mm. These products can be used as oil well pipes, line pipes, energy pipes, high pressure boiler tubes and nuclear power tubes. A lot of seamless steel pipe production equipments have been produced for domestic enterprises, and SERI has also exported such products to Korea, India, Indonesia and other countries.



ERW line

直缝焊管

We design and manufacture different equipment for spiral welded pipe, UOE pipes, and ERW pipes. We are able to meet the requirements of API standards with X100 grade steel, a plate thickness of 6 to 25.4mm and a diameter range of Φ 377-3000mm.

Spiral welded pipe equipment consists of interrupted and continuous production lines and can be designed and manufactured in the forms of one-step or two-step forming. In the finishing line, we offer pipe-end beveling and facing machines, end expanding machines, end expanding machines, hydraulic testers and NDT can be done in accordance with API standards in different processing arrangements.

ERW carbon steel tube mill is the special equipment producing welded steel pipe and profile pipe for industries such as metallurgy, construction, transportation, machinery, vehicles and so on. Taking cold or hot-rolled steel as raw materials, through cold-formed and high-frequency welding method to produce the round pipe, square pipe and rectangle pipe.



Spiral welding pipe line

螺旋焊管



Slitting line

纵横剪生产线

Slitting line & Cut-to-length Line take the cold & hot strip steel as raw material, feeding, uncoiler, leveling, shear and butt welder, then the pinching machine feed to the trimmer, slit the coil to required size, through the tension device to recoil. The machine adopts PLC electrical control system and human-computer interface control system, automation, easy operation.



Color Coating Line and Galvanizing line

彩涂板

Strip and Product Dimension

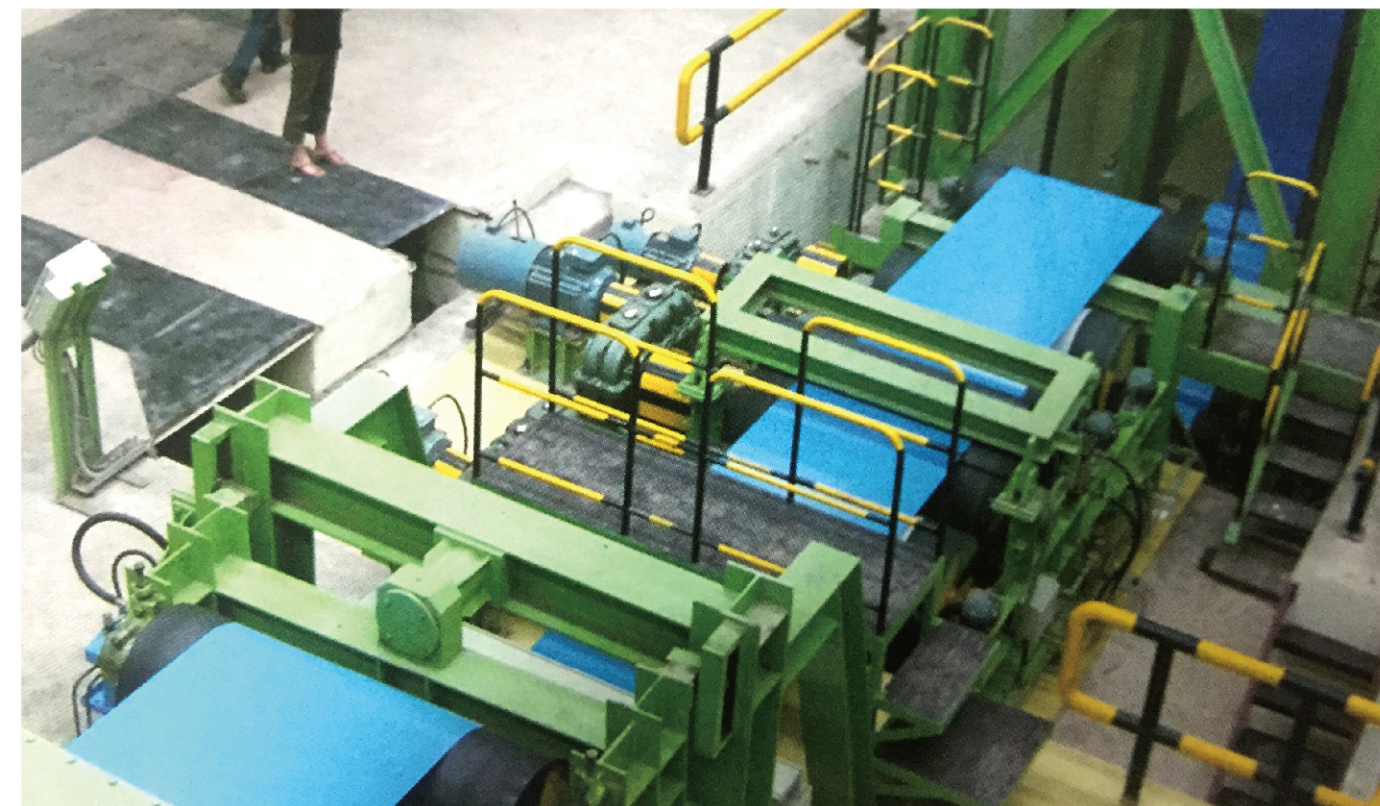
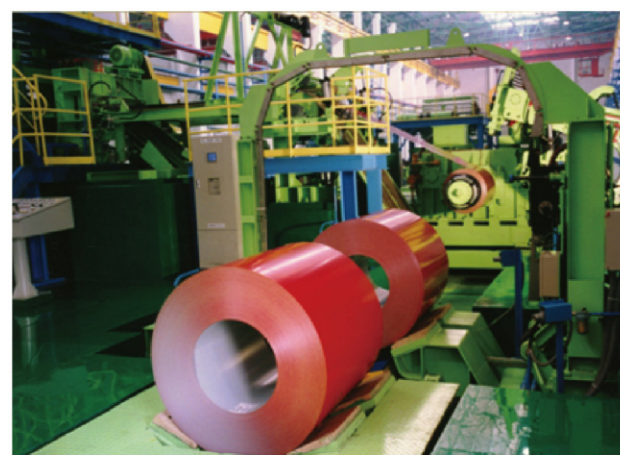
Strip thickness: Max.1.0mm Min.0.14mm
Strip width: Max.1.250mm Min.600mm

Coil Dimension

inner diameter(I.D):508mm
Out diameter(O.D):1500mm

Speed

Entry section: Max.120m/min
Process section: Max.80m/min
Exit section: Max.120m/min



Strip Thickness:

0.3mm-2.3mm
(not including zinc layer thickness)

Strip Width: 780mm-1700mm

Max Coil Weight:

25t (not including zinc layer weight)

Coil Inner Radius: 508mm/610mm

Coil External Radius:

700mm-2100mm
(not including zinc layer thickness)

Unit Speed:

Inlet section : max280m/min
Process section : GA max150m/min
G max180m/min
Outlet section : max280m/min

Bar production line

棒材生产线



We can produce bar production
line from 300,000t-600,000t



Wire rod production line

线材生产线

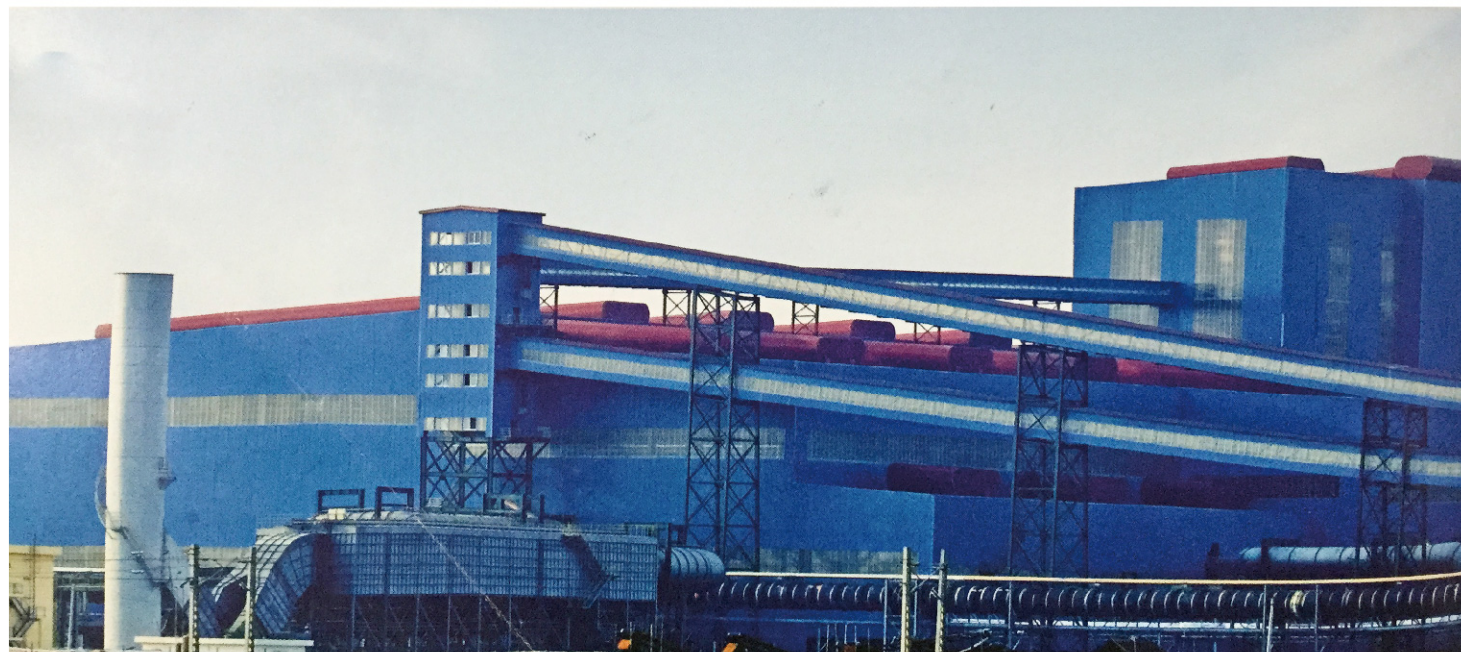


We can produce wire rod
production line from 700,000t-1,000,000t



CCM

连铸线



STEEL MAKING& CONTINUOUS CASTING TECHNOLOGY

Business Scope

Hot metal pre-treatment, converter,EAF,billet,bloom,slab and round continuous casting,secondary refining system and auxiliary facilities,such as dedusting,oxygen plant,water treatment system,line plant and so on.

CCM

- Billet Caster
- Bloom Caster
- Round Caster
- Slab Caster

Hot Metal Pretreatment:

- Stirring Method(KR Method)
(Desulphurizing,Dephosphorizing and Desiliconizing)
- Injection Method(Desulphurizing)



H beam production line

H型钢生产线



We can produce beam production
line from 350,000t-700,000t



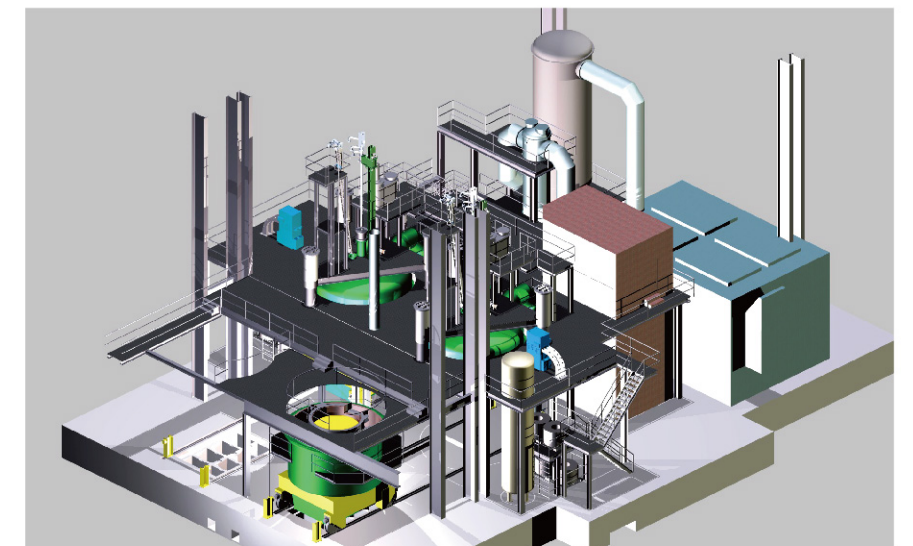
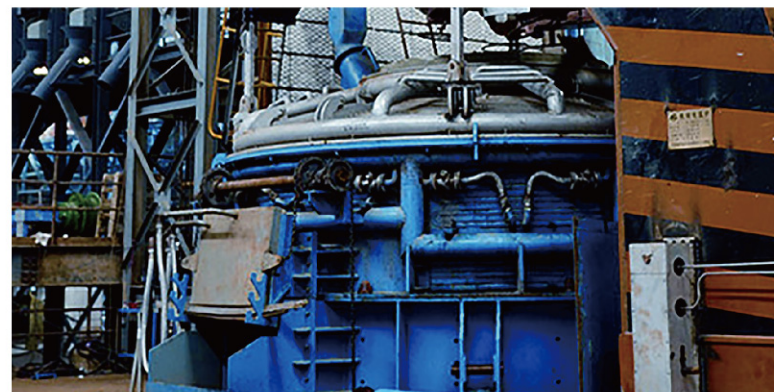
Electroslag furnace

电渣炉



Arc furnace

电弧炉



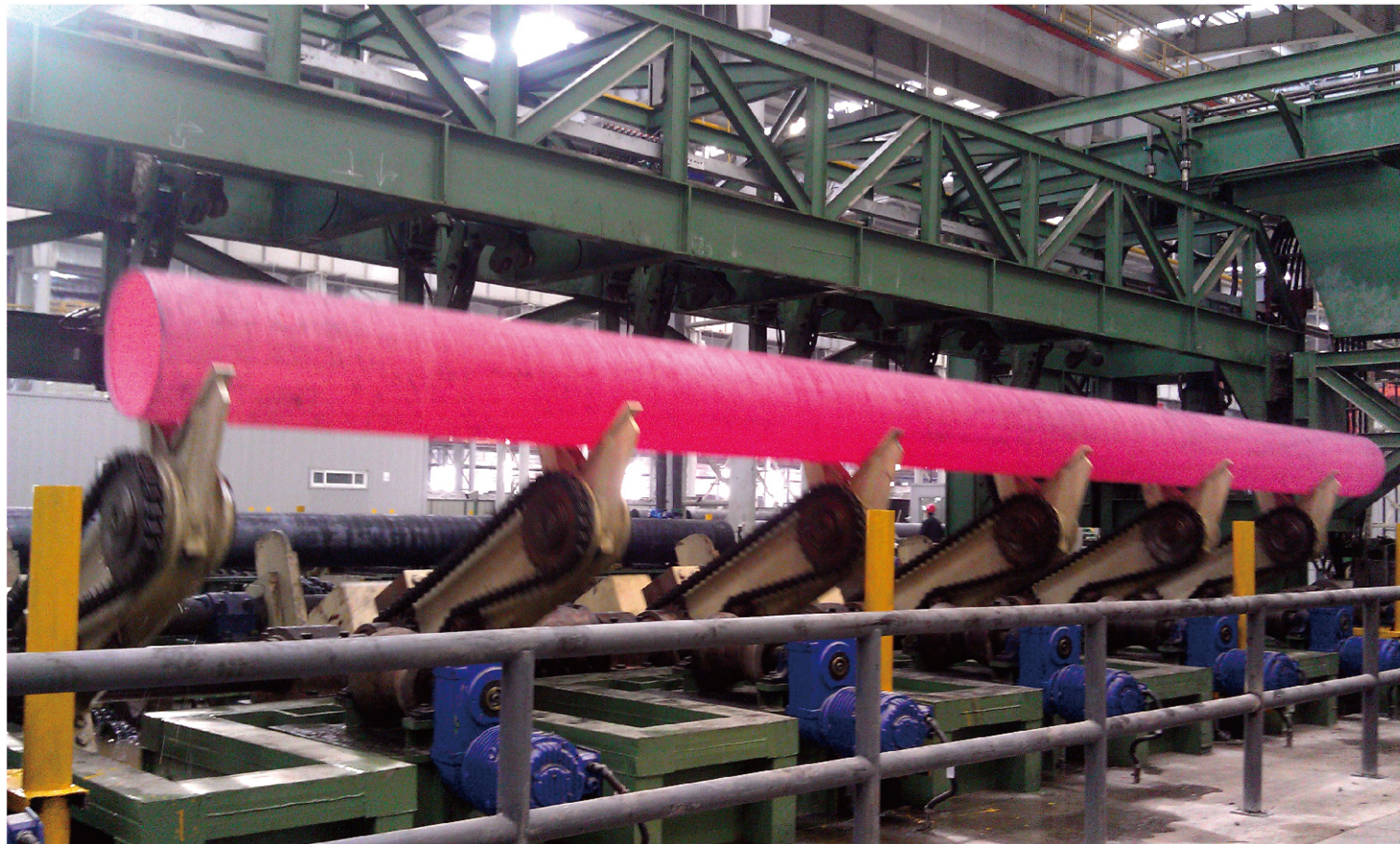
VOD furnace

精炼炉

Quench

淬火

159 water quenching equipments of special pipe finishing plant in ChengdouSteel Co,Ltd., Pan Gang Group.



- **Facility type:** inner spray and outer pour, slot-type
- **Contain the steel pipes for below specs:**
Outer diameter (OD): $\Phi 48$ - $\Phi 720$ mm
- **Wall thickness:** 3.38-70mm
- **Length:** 6.0-15m
- **Straightness:** 2/1000mm
- **Pipes after quenching:**
 - **Crystal structure:** martensite > 90%
 - **Temperature:** < 100℃
 - **Hardness:** meet API stand
 - **Hardness evenness:** ± 2 HRC
 - **Straightness of pipe end:** $\leq 2\text{‰}$
 - **Straightness of pipe:** $\leq 1.5\text{‰}$

273 water quenching facility in Yuan Tong tubular heat-treatment workshop, TPCO.

Hydrotester

水压机



Hydro-tester of radial sealing



Hydro-tester of end face sealing



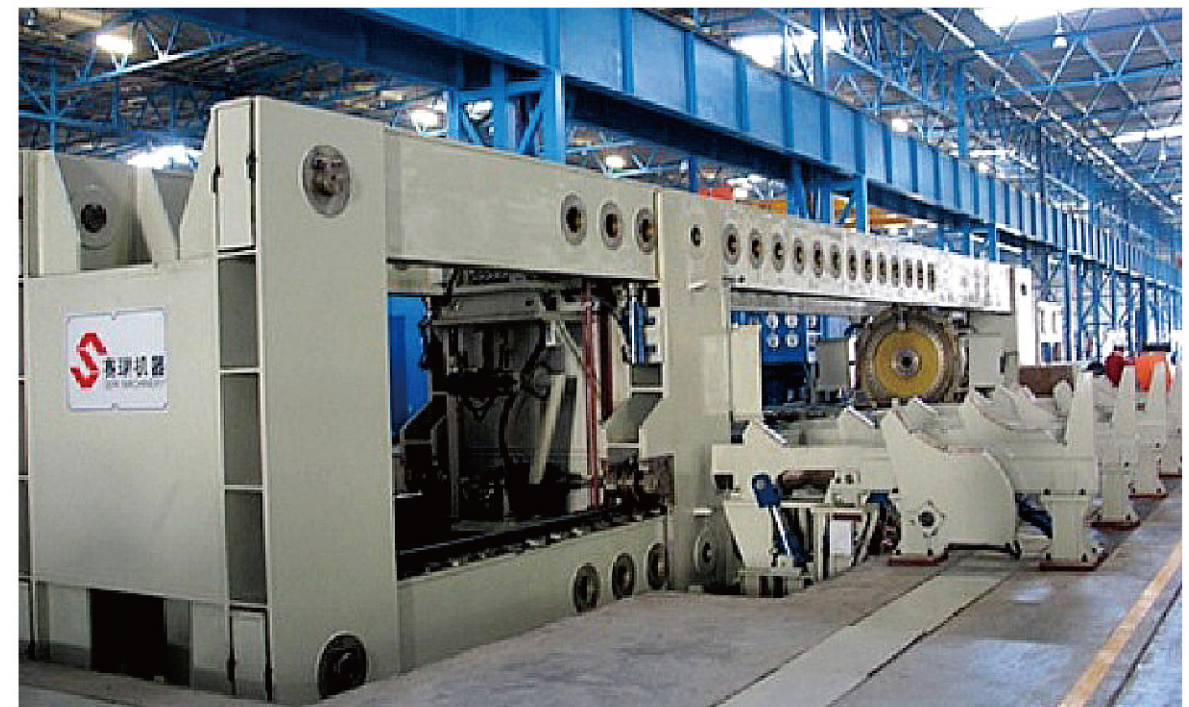
SERI was successful in developing HTE1200mm hydro-tester for oversize hot rolled seamless steel tube.

- **Pipe range:**
- **Outer diameter:** $\Phi 390\text{mm} - \Phi 1200\text{mm}$.
- **Wall thickness:** 20mm—250mm.
- **Length:** 3.0m—11.0m.
- **Weight max:** 15t.

The unit has the specialty of high automation and stable capability. This technique was assessed an international advanced scientific & technological Achievements and yearly blue ribbon of science and technology advancement by MCC.



hydrotester for Vallourec



Forging machine

锻压机

Our main forging equipment products are; extrusion presses, forging hydraulic presses, punching hydraulic presses, and other hydraulic presses.

The extrusion presses include aluminum, copper, carbon and ferrous metals extrusion presses; among them, we have developed a series of products with specifications of 20MN to 360MN for aluminum alloy extrusion presses. We produce vertical steel pipe extrusion presses, with specifications of 360MN and 660MN.



Forging hydraulic presses include open die forging water hydraulic presses, high speed open die forging hydraulic presses, die forging presses, and train wheel presses, with specifications of 31.5MN to 350MN.

Punching hydraulic presses include automobile frame presses, punching & drawing presses, flattening presses, dome cover presses, single arm oil presses, SMC hydraulic presses, and single action and double action plate punching hydraulic presses. Other hydraulic presses include diamond presses, electrode presses, spongy titanium crushing presses, grinding wheel hydraulic presses, trimming hydraulic presses, and steel pipe and bar straightening hydraulic presses.

Polishing machine

抛光机



Straightening machine

矫直机



- ▶ Product size:
2MN
10MN
25MN
40MN
- ▶ Product specification model:
Φ140 heat treatment and car thread,
Φ168 pipe rolling and pipe processing,
Φ258 rolling line,
Φ273 rolling line,
Φ340 car silk,
Φ355 heat treatment and car thread,
Φ720 heat treatment and light pipe

Reasonable technological design and equipment design and manufacture according to the user requirements, supply can cover the mechanical, electrical, hydraulic engineering, in steel tube blank lines, refined the whole line, heat treatment line, thread aspects have a lot of delivery performance.

The pressure straightening machine is used for the point pressing and straightening of the round (square) bar and the pipe, and the product structure can be vertical or horizontal, and the straightening process can realize the automatic conveying, the rotation, the lifting and the straightening.

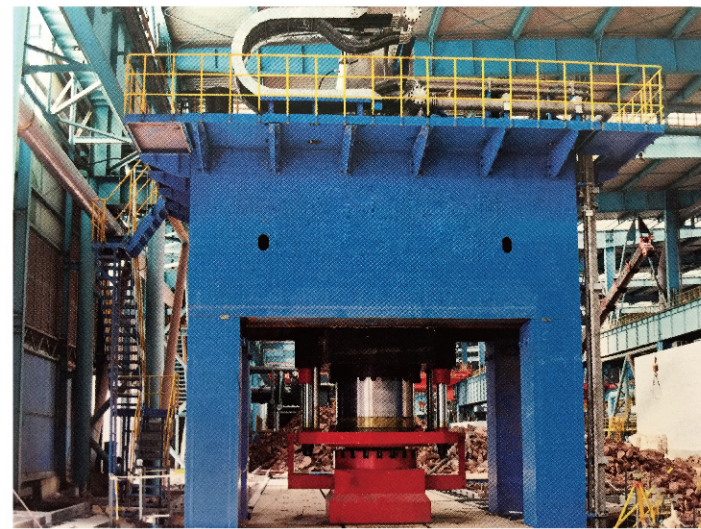


Leveling equipment

矫正机

The leveling thickness ranges from 0.5 to 100mm. At present, SERI's 9-roll and 11-roll thermal state moderate thickness plate leveling machines are among the most advanced in the industry. Leveling thickness can be 100mm and the width can be 5000mm.

60MN Flatting Mill

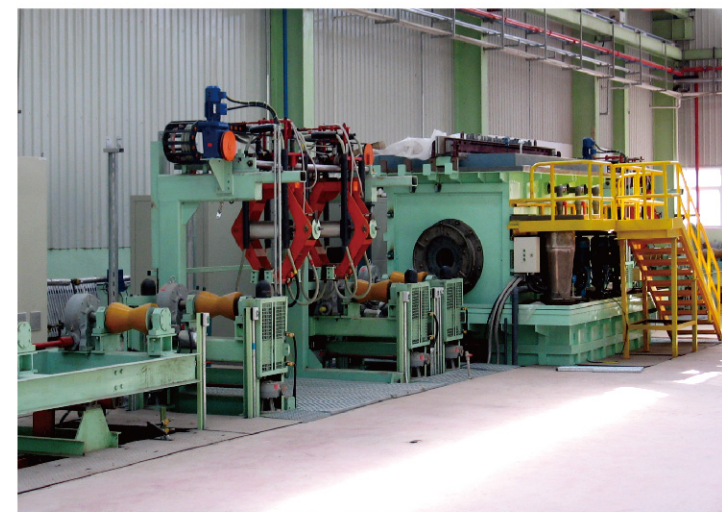
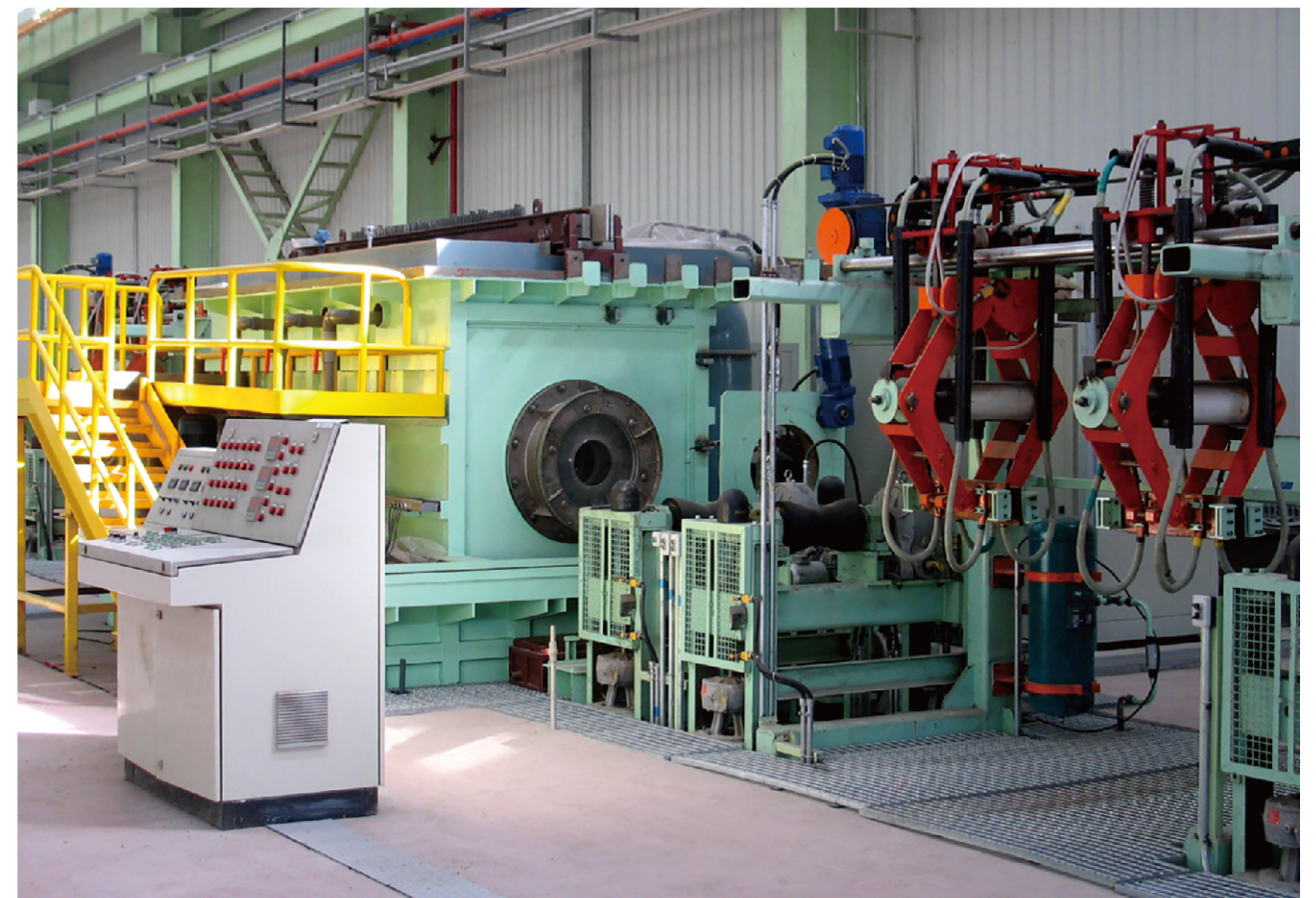


5m Hot Plate Leveler



Electroplate

镀铬设备



Sizing mill

定径机

sizing mill for German SMS



Piercing machine

穿孔机



Ladle turret

打包回转台

Ladle turret for German Siemens



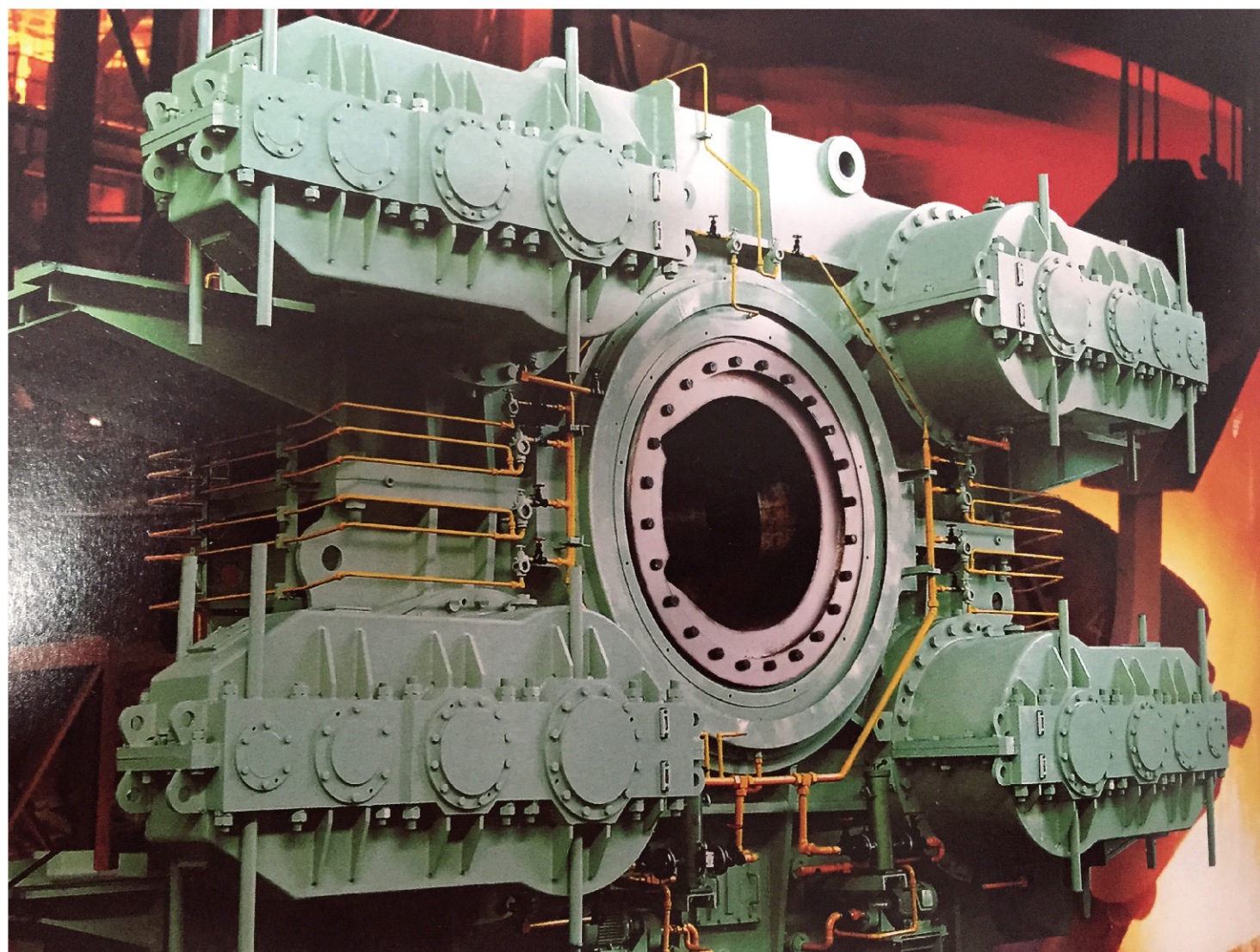
Ladle turret for German SMS



Gear box

变速箱

Main products; Gearboxes used in rolling mills, cranes, excavators, coal chemical equipments, large steel making converter tilting devices, motor trains and subways.



350t Converter Tilting Unit

Wind power
and hydro power

风电水电

We are one of the superior enterprises in the development of wind power generating equipment

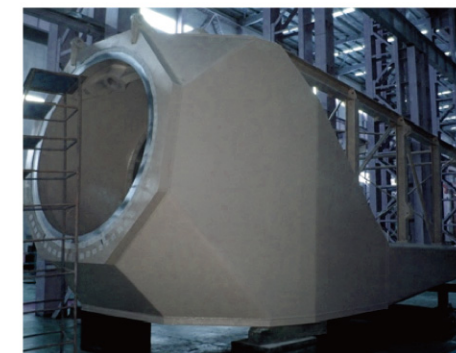
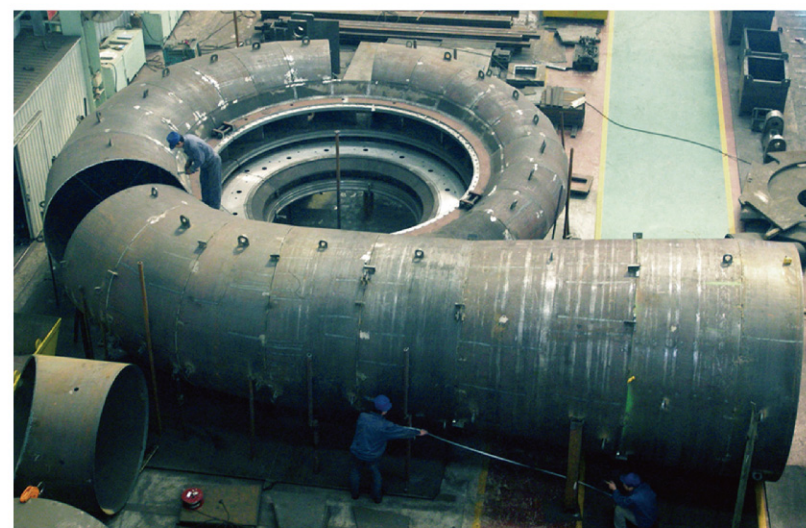
SERI has made a significant breakthrough in the development of wind turbines in a short time. SERI's speed increasers and main shafts for wind turbines have been continuously developed through the design, manufacture, installation, and debugging stages until the first variable-speed doubly-fed constant frequency 1.5MW wind power generator was produced and successfully connected into the grid.

SERI has produced clients with 1.5MW, 2.0MW, 3.0MW, 5.0MW wind power generators. Generators are currently under development.

According to the clients demands and wind farm specifications, SERI has the ability to optimize wind turbine design and to take on both general contracts and turnkey projects for farms.

Wind Power Gearbox

There are six types and ten sizes of SERI wind power gearboxes ranging from 1.5-7.0MW. We provide long-term accessory products for domestic customers such as the China Guodian Corporation, the China Datang Corporation, and the China Huadian Corporation. 3.6MW wind power gearboxes have been exported in bulk to the USA.



Roller

轧辊



- Long shaft class (1)**
Material:
H13/42CrMo/35CrMo
- Block class (2)**
Material:
H13/5CrMnMo/5CrNiMo/P20/718
- Fan shaft class (3-4)**
Material:
42CrMo/35CrMo/34CrNiMo6



- Roller class (5-6)**
Material:
60CrMnMo/9Cr2MoV/9Cr2Mo/Mc3/Mc5
- Block class (7)**
Material:
H13/5CrMnMo/5CrNiMo/P20/718
- Fan shaft class (8)**
Material:
42CrMo/35CrMo/34CrNiMo6



mandrel

芯棒



- Chemical composition**

	C	S	P	M	Si	Cr	Mo	V
H13	0.30 0.38	≤0.005	≤0.015	≤0.60	0.70 1.20	4.50 5.50	1.00 1.50	0.80 1.20
- Mechanical property**

Rp0.2(Mpa)	Rm(Mpa)	A(%)	Z(%)	KV2(J)
≥0.005	1050~1300	10	30	≥20
- Other properties**

basalhardness / grainsize / Chromeplatinghardness / Chromeplatingthickness
- Technical Feature**

ESR:improve the pureness of steel,remove non-metallic inclusion

High temperature diffusion:improve the uniformity of thr organization,eliminate thr eutectic structure

Spheroidizing anneal:improve as-forged organization,improving the follow-up performance

High temperature solution:improve organization,improve performance

Using water quenching liquid:increase mechanical properties, reduce pollution

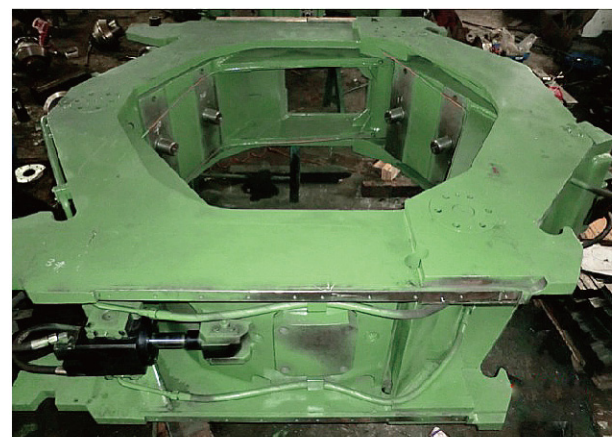
Mabdrel special numerical control lathe:ensure the straightness and surface quality

Stand

机架



PQF stand for German SMS



Inspection capacity

检测能力

Physical & Chemical Lab



Laser tracker



Three Coordinate Measuring Apparatus



Equipment/machine

加工设备

320mm CNC boring and milling machine



Heating furnaces



Equipment/machine

加工设备



4500T Forging press



Equipment/machine

加工设备

Ring Rolling Machining



CNC Six axis gear hobbing machine



Equipment/machine

加工设备

28m CNC Vertical Lathe



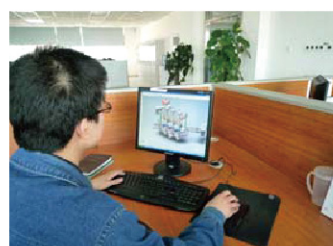
60M CNC double-gantry boring and milling machine



Metallurgical Equipment R&D Dept

冶金设备研发部

The Metallurgical Equipment R&D Dept. develop the products which include water quenching unit, hydro-tester, Cross roll straightener, pressure straightener, sizing mill, drying oven, coupling screw-up, grinder and steel pipe product line. Also has the ability in designing other equipments of chrome plating unit, phosphorizing unit, bending rolls, crane, span flat-car, liquid steel jug and Liquid iron vehicle etc.. The Dept. is comprised of 4 offices and probably 50 people, who are undergraduate degree or above. There are 8 senior engineers and 5 masters. Up to now R&D Dept. has got 64 national patents including 3 patent for invention. The papers often were appeared on multitudinous magazines by the staff. Hydro-tester, hydro-tester and water quenching unit have successively got award of science and technology advancement in MCC, TPCO and Tianjin science committee.



Training

培训

Seri is not only selling the equipment or production line to the customers but also do the full after sale service work, such as installation, testing, training. Seri can even send professional engineer team to the end users' plant to operate the whole production line to guide end users' engineers.



For Seri production range, since one of the parent company CERI is the biggest engineering company in China, basically, Seri can produce all kinds of metallurgic machines, even some customized machines.

Reference list for Metallurgical products
of Tianjin SERI Machinery Equipment Co., Ltd.

Steel making & Continous casting Equipment							
1	Production line						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
1.1	Production line	2004	TPCO	No. 2 steelmaking factory	Whole set equipment for Steelmaking & Continuous casting line-The 2nd steelmaking factory	Output 1,200,000Tons per year	1Set
		2009	TPCO	No. 3 steelmaking factory	Whole set equipment for Steelmaking & Continuous casting line-The 3rd steelmaking factory	Output 1,500,000 Tons per year	1Set
		2004	Baotou Iron&Steel Co., Ltd.	unknown	Plate billet continous casting production line	Output per year 100,000Tons	1Set
		2007	SMS-Concast	Concast (Thailand)	Steelmaking & Continuous casting line	Weight: 640Tons	1Set
		2011	SMS-Concast	Mexico	casting equipment	Weight:400Tons	1Set
		2011	SMS-Concast	Brazil	casting equipment	Weight:550Tons	1Set
		2011	SMS-Concast	Bahrain	casting equipment	Weight:1300Tons	1Set
		2011	SMS-Concast	India	casting equipment	Weight:280Tons	1Set
		2011	Siemens – VAI	unknown	casting equipment	Weight:300Tons	1Set
		2005-2006	Danieli	unknown	Steelmaking & Continuous casting line	Weight: 2200Tons	3Sets

Steel making & Continous casting key single equipment							
2	Production line						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
2.1	Electric Arc Furnace(Gantry, Oxygen lance,Tilting platform,Elect rode column etc.)	2001	TPCO	unknown	90 Ton EAF		1Set
		2004	JiuGang steel Group	unknown	EAF, LF device		1Set
		2008	SMS Demag LLC	AK Butler (USA)	AK Butler EAF	Weight: 135T	1Set
		2008	SMS Demag	Finkl (USA)	Finkl EAF	Weight: 100T	1Set
		2008	SMS Demag	Essar (India)	Essar 200 Ton EAF	Weight: 870T	1Set
		2008	SMS Demag	Essar (India)	Essar Oxygen lance	Weight: 260T	1Set
		2008	SMS Demag	Tagan (Russia)	Tagan 90 Ton EAF	Weight: 268T	1Set
		2009	SMS Demag	Essar (India)	Essar SMP2 Oxygen lance	Weight: 193T	1Set
		2009	SMS Demag	Essar (India)	Essar SMP2 EAF	Weight: 777T	1Set
		2008	SMS Demag	Dragon Steel	Dragon Steel Oxygen lance	Weight: 225T	1Set
		2007	SMS Demag	Sever (Russia)	SEVER 90Ton EAF	Weight: 220T	1Set
		2008	Danieli	unknown	Lifting system	Weight: 220T	1Set
		2006	Danieli	Burma	90Ton EAF		1Set
		2006	Japan IHI	unknown	80TUnder the furnace shell of EAF		1Set
2.2	Ladle turret	2003	ZhuJiang Steel company	unknown	Ladle turret		1Set
		2007	TPCO - The 2nd steelmaking factory	unknown	90t Ladle turret		1Set
		2009	TPCO - The 3rd steelmaking factory	unknown	120t Ladle turret		1Set
		2009	SMS-Concast	Ozkan (Turkey)	Turkey OZKAN Ladle turret	Weight: 120T	1Set
		2006-2011	Baotou Iron&Steel Co., Ltd.	unknown	Ladle turret	Weight: 750T	6Sets
		2011	SMS-Concast	SOLB (Saudi Arabia)	SOLB LADLE TURRET	Weight: 230T	1Set

Steel making & Continous casting key single equipment							
2	Production line						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
2.2	Ladle turret	2011	SMS-Concast	Vietnam	Vietnam LADLE TURRET	Weight: 130T	1Set
		2015	Siemens VAI	unknown	ladle turret	Weight: 800T	2sets
2.3	Withdrawl and straightening unit	from 2004 till 2015	TPCO SMS, Danieli	unknown	Withdrawl and straightening unit	Round Billet 300- 350- 400- 450- 503	50Sets
		2009	SMS-Concast	Ozkan (Turkey)	Turkey OZKAN Withdrawl and straightening unit	Squre Billet	4Sets
		2009	SMS-Concast	VSΒ (Brazil)	Brazil VSΒ Withdrawl and straightening unit	Squre Billet	5Sets
		2011	SMS-Concast	SOLB (Saudi Arabia)	SOLB Withdrawl and straightening unit	Squre Billet	4Sets
		2011	SMS-Concast	Vietnam	VietnamWithdrawl and straightening unit	Squre Billet	5Sets
2.4	Segment	from 2004 till 2015	TPCO SMS, Danieli	unknown	Segment	Round Billet 300- 350- 400- 450- 500	20Sets
2.5	Segment	from 2004 till 2015	TPCO SMS, Danieli	unknown	crystallizer	Round Billet 300- 350- 400- 450- 500	120Sets
2.6	Tundish	from 2004 till 2015	TPCO SMS, Danieli, Siemens VAI	unknown	Tundish	total weight: 880T	27Sets
2.7	Intermediate tank	from 2004 till 2015	TPCO SMS, Danieli, Siemens VAI	unknown	Intermediate tank	total weight: 430T	10Sets
2.8	converter furnace	from 2010 till 2015	Siemens VAI	unknown	converter furnac	total weight: 1926T	7Sets

Seamless pipe production equipment							
1	Production line						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
1.1	Hot milling production line	2003	TPCO		168 milling production line	Rolling mill type:PQF. Dia.:φ60.3-φ177.8mm. SERI manufactured all equipments of billet preperation area, hot-rolling area and finishing area. Including RHF, CTP inlet side & outlet side, Extracting mill, Manipulator for hollow bloom, sizing machine, cooling bed, roller table and rest non-standard equipments for whole line.	1
		2004	TPCO		219 milling production lin	Rolling mill type:ASSEL. Dia. Scope:φ114 .3-φ244.5mm. SERI manufactured all equipments of billet preperation area, hot-rolling area and finishing area. Including RHF, CTP inlet side & outlet side, Extracting mill, Manipulator for hollow bloom, sizing machine, cooling bed, roller table and rest nonstandard equipments for whole line.	1
		2005	TPCO		460 milling production line	Rolling mill type:PQF. Dia.:φ219.1-φ508mm. SERI manufactured all equipments of billet preperation area, milling area and finishing area. Including RHF, CTP inlet side & outlet side, Extracting mill, Manipulator for hollow bloom, sizing machine, cooling bed, roller table and rest nonstandard equipments for whole line.	1

Seamless pipe production equipment							
1	Production line				Till 2008, SERI produced total 26 seamless pipe production lines, among which there are 6 hot rolling production lines,6 pipe processing production lines, 5 heat treatment lines and 2 QA lines.		
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
	Hot milling production line	2006	BMZ 168 seamless pipe factory for the Republic of Belarus	The Republic of Belarus	BMZ168 milling production line	rolling mill type:PQF. Dia.:φ48.3-φ177.8mm. SERI manufactured all equipments of billet preperation area, milling area and finishing area. Including CTP inlet side & outlet side, Extracting mill, Manipulator for hollow bloom, sizing machine, cooling bed, roller table and rest nonstandard equipments for whole line.	1
		2007	TPCO		258milling production line	rolling mill type:PQF. Dia.:φ114.3-φ258mm. SERI manufactured all equipments of billet preperation area, milling area and finishing area. Including RHF, CTP inlet side & outlet side, Extracting mill, Manipulator for hollow bloom, sizing machine, cooling bed, roller table and rest nonstandard equipments for whole line.	1
		2005	TPCO		250 milling production line	rolling mill type: MPM. SERI undertaken project of capacity expansion and reconstruction of rolling mill, to make its dia. from original 250mm to 300mm	1
		2011	TPCO		508 milling production line	rolling mill type:PQF. Dia.:φ209-φ508mm. SERI manufactured all equipments of billet preperation area, milling area and finishing area. Including billet weighting tabble, CTP inlet side & outlet side, Manipulator for hollow bloom, walking beam cooling bed, roller table and rest nonstandard equipments for whole line. Total weight 2300 tons.	1
		2014	TPCO (U.S.)		273 milling production line	rolling mill type:PQF. Dia.:φ114.3-273mm. SERI manufactured all equipments of billet preperation area, milling area and finishing area. Including billet weighting table, CTP inlet side & outlet side, Manipulator for hollow bloom, walking beam cooling bed, roller table and rest nonstandard equipments for whole line.	1
1.2	Heat treatment production line	2006	TPCO	Tianjin port bonded area	No.1 Heat treatment line of Tianjin port bonded area	The lagrest dia.of heat treatment is φ273mm. SERI manufactured all non-standard equipments for the whole line. Including quenching device, straighter, transportation equipment, roller table ect.	1
		2006	TPCO	Tianjin port bonded area	No.2 Heat treatment line of Tianjin port bonded area	The lagrest dia.of heat treatment is φ177.8mm. SERI manufactured all non-standard equipments for the whole line. Including quenching device, straighter, transportation equipment, roller table ect.	1
		2007	TPCO		No.4 Heat treatment line	The lagrest dia.of heat treatment is φ508mm. SERI manufactured all non-standard equipments for the whole line. Including quenching device, straighter, transportation equipment, roller table ect.	1
		2008	TPCO		No.5 Heat treatment line	The lagrest dia.of heat treatment is φ273mm. SERI manufactured all non-standard equipment for the whole line. Including quenching device, straighter, transportation equipment, roller table ect.	1
		2011	TPCO		No.6 Heat treatment line	The lagrest dia.of heat treatment is φ720mm. SERI manufactured all non-standard equipments for the whole line. Including quenching device, straighter, transportation equipment, roller table ect.	1

Seamless pipe production equipment							
1	Production line					Till 2008, SERI produced total 26 seamless pipe production lines, among which there are 6 hot rolling production lines,6 pipe processing production lines, 5 heat treatment lines and 2 QA lines.	
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty
	Heat treatment production line	2008	Danieli	Jesco (Saudi Arabia)	Jesco Heat treatment line In Saudi Arabia	The scope of dia.for heat treatment is from φ139.7mm-355.6mm. SERI designed and manufactured all non-standard equipments for the whole line.	1
1.2		2013	TPCO (U.S.)		Heat treatment line For TPCO G project	The scope of dia.for heat treatment is from φ194mm-273mm. SERI manufactured all non-standard equipments for the whole line.	1
1.3	Pipe Finishing line (Thread cutting line)	2003	TPCO		168 Pipe finishing line	SERI manufactured all non-standard equipments for the whole line. Including length checking and weighting device, Hydraulic test equipment, sizing device, straighter, printing device and transportation table etc.	1
		2005	TPCO		460 Pipe finishing line	SERI manufactured all non-standard equipments for the whole line. Including length checking and weighting device, Hydraulic test equipment, sizing device, straighter and transportation table etc.	1
		2006	BMZ 168 seamless pipe factory in Byelorussia	The Republic of Belarus	BMZ168 Pipe finishing line	SERI manufactured all non-standard equipments for the whole line. Including length checking and weighting device, Hydraulic test equipment, sizing device, straighter and transportation table etc.	1
		2007	TPCO		258 Pipe finishing line	SERI manufactured all non-standard equipments for the whole line. Including length checking and weighting device, Hydraulic test equipment, sizing device, straighter and transportation table etc.	1
		2008	Danieli	Jesco (Saudi Arabia)	Jesco Pipe finishing line in Saudi Arabia	The scope of dia.for heat treatment is from φ139.7mm-355.6mm. SERI manufactured all non-standard equipments for the whole line.	2
		2013	TPCO (U.S.)		Pipe finishing line For TPCO G project	The scope of dia.for Pipe finishing line is from φ194mm-273mm. SERI manufactured all non-standard equipments for the whole line.	4
1.4	QA line	2008	Danieli	Jesco (Saudi Arabia)	Jesco QA line in Saudi Arabia	The scope of dia.for heat treatment is from φ139.7mm-355.6mm. SERI manufactured all non-standard equipments for the whole line.	2

Seamless pipe production equipment							
2	Seamless pipe key single equipment				Till 2008, SERI manufactured almost 20 kinds of single equipment for seamless pipe production. Including RHF (4 sets), CTP inlet and outlet table, extracting mill, sizing machine, straighter (23 sets), quenching device (7 sets) and ect. SERI also supply key spare parts such as PQF mill stand and sizing stand to TPCO for a long period.		
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
2.1	CTP inlet side & outlet sid	2003-2007	TPCO	Sever (Russia)	168/460/258/219 CTP inlet side & outlet side	Pipe dia.scope:φ168、 460、 258、 330mm	4Sets
		2007	SMS-Meer	Volzhsky (Russia)	Volzhsky CTP inlet side & outlet side in Russia	Pipe dia.scope:: φ460mm	1set
		2010	CERI-HuBei XinYe 460 seamless pipe factory	HUBEI XINYE	460 CTP Inlet side & outlet side for HuBei XinYe	Pipe dia.scope:φ460mm	1set
		2006	BMZ 168 seamless pipe factory	The Republic of Belarus	CTP inlet side & outlet side	Pipe dia.scope:φ168mm	1set

Seamless pipe production equipment							
2	Seamless pipe key single equipment				Till 2008, SERI manufactured almost 20 kinds of single equipment for seamless pipe production. Including RHF (4 sets), CTP inlet and outlet table, extracting mill, sizing machine, straighter (23 sets), quenching device (7 sets) and ect. SERI also supply key spare parts such as PQF mill stand and sizing stand to TPCO for a long period.		
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
2.2	Manipulator for hollow bloom	2003-2007	TPCO		168\219\258\460 Manipulator for hollow bloom	Pipe dia.scope:φ168、 460、 258、 330mm	4Sets
		2006	BMZ 168 seamless pipe factory	The Republic of Belarus	Manipulator for hollow bloom	Pipe dia.scope: φ168mm	1Set
		2007	SMS Meer	TMK Tagmet (Russia)	Manipulator for hollow bloom	Pipe dia.scope: φ273mm	1Set
2.3	Extracting mill	2003-2011	TPCO		168\219\258\460 Extracting mill	Pipe dia.scope: φ168、 460、 258、 330mm	240Pcs
2.4	Mandrel bar retaining system	2003-2007	TPCO		168\219\258\460 Mandrel bar retaining system	MB dia.scope: φ168、 460、 258、 330mm	4Sets
		2006	BMZ 168 seamless pipe factory	The Republic of Belarus	Mandrel bar retaining system	MB dia.scope: φ168mm	1Set
2.5	PQF mill stand	2003-2011	TPCO		168\258\460、 508 PQF mill stand	Pipe dia.scope: φ168、 460、 258、 508mm	95Pcs
		2011	Jiangsu, Hunan Valin Steel Tin		258 PQF mill stand	Pipe dia.scope: φ258mm	12Pcs
		2013	Baotou Iron&Steel Co., Ltd.		159 PQF mill stand	Pipe dia.scope: φ159mm	24Pcs
		2008-2015	Bao Steel-LuBao project		460 PQF mill stand	Pipe dia.scope: φ460mm	35Pcs
2.6	Sizing mill	2003-2015	TPCO		168\460\258\219\508 sizing mill stand	Pipe dia.scope: φ168、 460、 258、 219、 508mm	750Pcs
2.7	Rotary Hearth Furnace(RHF)	2003	TPCO		168 factory RHF	Dia. Is 35 meters.	1Set
		2004	TPCO		219 factory RHF	Dia. Is 21 meters.	1Set
		2007	TPCO		258 factory RHF	Dia. Is 42 meters.	1Set
2.8	Quenching Device	2006	ChengDu Iron&Steel Co.,Ltd. 159 pipe factory		Quenching Device	Pipe dia.scope: φ168mm	2sets
		2008	TPCO 168、 460、 720 seamless pipe factories		Quenching Device	Pipe dia.scope: φ168、 460、 720mm	3sets
		2009	TPCO 1# and 2# heat treatment line inTianjin Port Free duty zone		Quenching Device	Pipe dia.scope: φ168、 273mm	4sets
		2010	BMZ 168 seamless pipe factory	The Republic of Belarus	Quenching Device	Pipe dia.scope: φ168mm	1set
		2011	SERI		Quenching Device	Pipe dia.scope: φ140mm	1set
		2013	TPCO		Quenching Device	Pipe dia.scope: φ273mm	2sets
		2014	TPCO		Quenching Device	Pipe dia.scope: φ273mm	1set
2.9	Straighter(For hot milling)	2003-2011	TPCO 460、 219、 258 、 720factory		6 rollers pipe Straighter	Pipe dia.scope: φ460、 258、 330、 720mm	7sets
		2007	ChengDu Iron&Steel Co.,Ltd.		180mm 6 Rollers servo straighter for pipe	Pipe dia.scope: φ60-195mm	2sets
		2007	AnShan Iron&Steel Co., Ltd.		180mm 10 Rollers servo straighter for pipe	Pipe dia.scope: φ60-195mm	2sets
		2006	BMZ 168 seamless pipe factory	The Republic of Belarus	168mm 6 Rollers high speed pipe straighter	Pipe dia.scope: φ48-168mm	1set
2.10	Straighter(For heat treatment)	2008	TPCO No.1 heat treatment line	Tianjin Port bonded area	300mm 6 Rollers pipe straighter	Pipe dia.scope: φ114-300mm	2sets
		2008	TPCO No.2 heat treatment line	Tianjin Port bonded area	180mm 6 Rollers pipe straighter	Pipe dia.scope: φ48-180mm	2sets
		2007	TPCO No.4 heat treatment line		508mm 6 Rollers pipe straighter	Pipe dia.scope: φ245-508mm	1set
		2009	TPCO No.5 heat treatment line		273mm 6 Rollers pipe straighter	Pipe dia.scope: φ108-273mm	1set
		2011	SERI		140mm 6 Rollers pipe straighter	Pipe dia.scope: φ48-140mm	1set
		2013	Capital Institute of Aeronautics and Astronautics			Pipe dia.scope: φ60-180mm	1set
		2013	TPCO			Pipe dia.scope: φ406-720mm	1set

Seamless pipe production equipment							
2	Seamless pipe key single equipment				Till 2008, SERI manufactured almost 20 kinds of single equipment for seamless pipe production. Including RHF (4 sets), CTP inlet and outlet table, extracting mill, sizing machine, straighter (23 sets), quenching device (7 sets) and ect. SERI also supply key spare parts such as PQF mill stand and sizing stand to TPCO for a long period.		
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
2.11	Straighter (Other styles)	2009	Bao Steel Group		10MN Pressure Straighter	Pipe dia.scope: φ73-325mm For cold mill stainless pipe	1set
		2011	SERI		25MN Pressure Straighter (Mandrel)	Mandre dia.scope: φ108-438mm For cold mill stainless pipe	1Set
		2011	SERI		2MN Pressure Straighter (Mandrel)	Pipe dia.scope: φ48-140mm For cold mill stainless pipe	1set
		2009	Bao Steel Group		180mm 6 Rollers servo straighter for pipe	Pipe dia.scope: φ45-180mm For cold mill stainless pipe	1Set
		2009	Bao Steel Group		325mm 6 Rollers servo straighter for pipe	Pipe dia.scope: φ114-325mm For cold mill stainless pipe	1Set
		2009	Bao Steel Group		60mm 10 Rollers servo straighter for pipe	Pipe dia.scope: φ60mm For cold mill stainless pipe	1Set
		2007	China Nonferrous Metals Processing Technology.Co., (Export to Pakistan)	PAKISTAN	80mm 11 Rollers straighter for Al.pipe	Pipe dia.scope: φ20-80mm	1Set
		2007	China Nonferrous Metals Processing Technology.Co., (Export to Pakistan)	PAKISTAN	260mm 9 Rollers straighter for Al.pipe	Pipe dia.scope: φ80-260mm	1Set
		2009	Capital Institute of Aeronautics and Astronautics		180mm 10 Rollers straighter for pipe	Pipe dia.scope: φ180mm	1Set
2.12	Plate straighter	2008	TangShan Steel company		3500 Plate straihgtter	Weight:640Tons	2sets
		2009	JiuJiang steel company		3500 Plate straihgtter	Weight:320Tons	1Set
		2010	XingCHeng steel company		4300 Plate straihgtter	Weight:380Tons	1Set
2.13	Hydro-test equipment	2003-2007	TPCO 168/460/258 seamless pipe factories		Hydro-test equipment	Pipe dia.scope: φ168、 460、 258mm	5sets
		2007	Vallourec & Mannesmann Tubes (ChangZhou Branch)		Hydro-test equipment	Pipe dia.scope: φ390-1200mm	1Set
		2008	TPCO		Hydro-test equipment	Pipe dia.scope: φ48-140mm For cold mill stainless pipe	1Set
		2010	TPCO		Hydro-test equipment	Pipe dia.scope: φ168-340mm	2sets
		2014	Shanghai Hilong Oil Drilling Tools Co., Ltd.		Hydro-test equipment	Pipe dia.scope: φ340-914mm	1set
		2015	TPCO		Hydro-test equipment	Pipe dia.scope: φ89-273mm	1set
2.14	Chamfering Device	2003-2007	TPCO 168/460/258 seamless pipe factories		Chamfering Device	Pipe dia.scope: φ168、 460、 258mm	5sets

Other Metallurgical equipment							
1	Production line						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
1.1	Production lin	2005	Danieli	Iran	Round bar production line	Weight:513T	1Set
		2005	TPCO		color coating plate production line	strip thickness: 0.2-1.2mm strip width:610-1250mm	2sets
		2007	TPCO		Stainless steel plate production line	Weight:800T	1Set
		2010	TPCO		ERW 355 welding pipe production line	Weight:1243 Tons	1Set
		2011	TPCO		ERW 660 welding pipe production line	Weight:2078 Tons	1Set
		2005	XinYi Co., Ltd in Singapore		HuaXin Special thread production line	Response and manufacture nonstandard equipment for the whole line.	1Set

Other Metallurgical equipment							
1	Production line						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
1.1	Production lin	2013	Tianjin Special drill device Co., Ltd.		Drill rod production line	Response and manufacture non-standard equipment for the whole line.	1Set
		2009	TPCO		Stainless steel cold milling&cold drawing line	Including 220/180/120/90 tons mill machine, 100/50/30 tons drawing machine. And Non-standard equipments and hydraulic station etc.	1Set
		2011	Tianjin Shuangjie Pipe Co., Ltd.		ERW 610 welding pipe production line	Response and manufacture non-standard equipment for the whole line	1Set
		2014	Beijing Central Engineering and Research Incorporation of Iron and Steel Industry		1250 Cold milling line	Including 9 roller straighter, 5 roller straighter and whole set transportation device.	1Set
		2014	Beijing Central Engineering and Research Incorporation of Iron and Steel Industry		550 thousand ton Acid cleaning line	Response and manufacture nonstandard equipment for the whole line.	1Set
		2010	Bao Steel-LuBao project		720 Rotary Expander Mill line	Including hot sizing machine, nonstandard equipments and hydraulic station etc.	1Set
		2015	PT. Indobaja Prmamurni		Indonesia bar finishing conveyor line	Including hot sizing machine, nonstandard equipments and hydraulic station etc.	1Set

Other Metallurgical equipment							
2	Key Single Equipment						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
2.1	Cooling Bed	2003	Tianjin Steel Co., Ltd.		Round bar cooling bed	Weight:800T	1Set
		2004	Bao Steel Group		Round bar cooling bed	Weight:900T	1Set
		2004	Bao Steel Group		High speed Round bar cooling bed	Weight:700T	1Set
		2008	SMS-Demag	MMK (RUSSIA)	MMK Plate cooling bed	Weight:9000T	1Set
		2011	SMS-Demag	OMK (RUSSIA)	OMK Plate cooling bed	Weight:7000T	1Set
2.2	turn-over device	2011	CMC		3500 Turn-over device for plate	Weight:1300T	5sets
2.3	Water treatment device	2008	SVAI	Siemens(India)	Water treatment device	Weight:235T	1Set
		2008	SVAI	Siemens(Japan)	Water treatment device	Weight:266T	1Set
2.4	rolling mill	2010	Shandong Kerui Steel Plate Co., Ltd.		1450 rolling mill		1Set
		2011	Jinan Iron and Steel Co.,Ltd		1450 rolling mill		1Set

Wind power Equipment							
1	Key Single Equipment						
Item no.	name of equipment	Year	Dealer	Customer	Description of equipment		Qty.
1.1	main frame	from 2007 till now	SINOVEL WIND GROUP CO.,LTD.		1.5MW main frame	Weigth:13Tons	4600 sets
1.2		2011	CS WINDPOWER (Beijing)CO.,LTD.		1.5MW main frame	Weigth:60Tons	4sets
1.3		2010	Shenyang Switzerland auspicious wind energy equipment CO.,LTD.		1.5MW main frame	Weigth:20Tons	1set
1.4	generator carrier	from 2009 till now	SINOVEL WIND GROUP CO.,LTD.		3MWgenerator carrier	Weigth:520Tons	400 sets
1.5		2011	SINOVEL WIND GROUP CO.,LTD.		5MWgenerator carrier	Weigth:14.8Tons	4sets
1.6		2011	SINOVEL WIND GROUP CO.,LTD.		6MWgenerator carrier	Weigth:7.4Tons	2sets
1.7	The framework	from 2009 till now	SINOVEL WIND GROUP CO.,LTD.		3MWThe framework	Weigth:4800Tons	400 sets
1.8		2011	SINOVEL WIND GROUP CO.,LTD.		5MWThe framework	Weigth:133.5Tons	4sets
1.9		2011	SINOVEL WIND GROUP CO.,LTD.		5MWThe framework	Weigth:53.4Tons	2sets