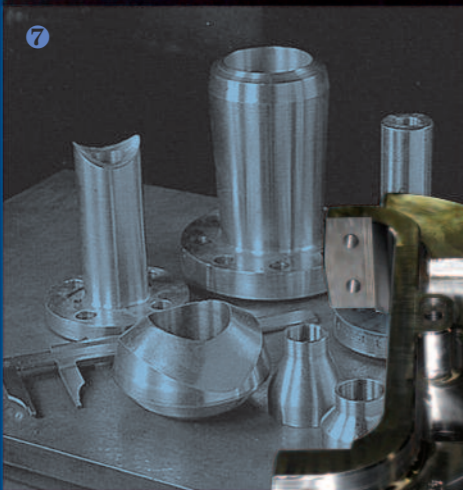
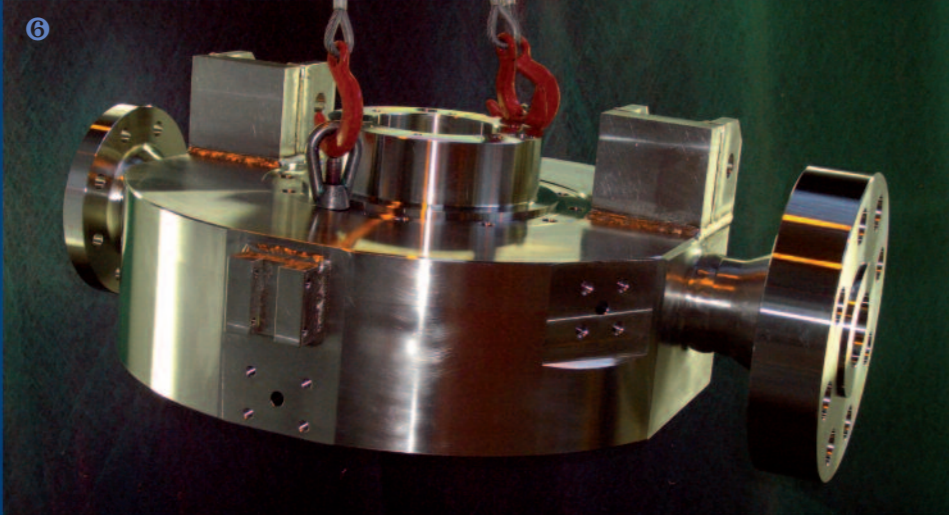
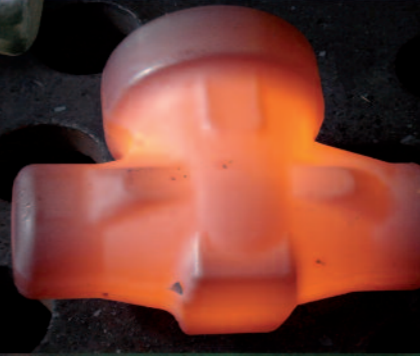


## Secondary system

Many parts for the secondary systems produced at our foundries and forging units.



- 1 Pump casing 7 tons - Grade 316L
- 2 Cast body valve Z3 CN 20-09 M - 575 kg
- 3 Valve body 120 kg
- 4 Valve components from 1 to 20 kg - Grade 316L
- 5 Pump casing 2365 kg Z3CND19-10M
- 6 Pump to 500 kg Grade 316L
- 7 Flanges - Grade 316L
- 8 Closing system 120 kg Grade A48AP
- 9 Closing system 120 kg Grade A48AP

A network all over the world



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**MANOIR INDUSTRIES**  
www.manoir-industries.com

A major supplier of castings & forgings for the nuclear market



  
**MANOIR INDUSTRIES**

## Manoir Industries and the Nuclear Market

For over 40 years, Manoir Industries has offered high quality solutions using the widest range of technical expertise housed under one roof and with a consistent QA/QC standard.

In the nuclear sector, where safety, reliability and long operating life are absolutely essential, our foundries and forgings have been key partners to all the contractors involved both in the primary and secondary systems.

### Manoir Industries is one of the leader suppliers of the primary system

More specifically we have delivered over 500 elbows and 300 tubes, around 3500 t. This corresponds to 60 nuclear reactors abroad: in Korea, South Africa, Belgium, UK and with partners as Framatome / Areva, Westinghouse, Babcock....

## Primary system

A large range of products cast out of our plant in Pitres and forged products from Custines.

## Facilities



Nuclear power plant Third generation

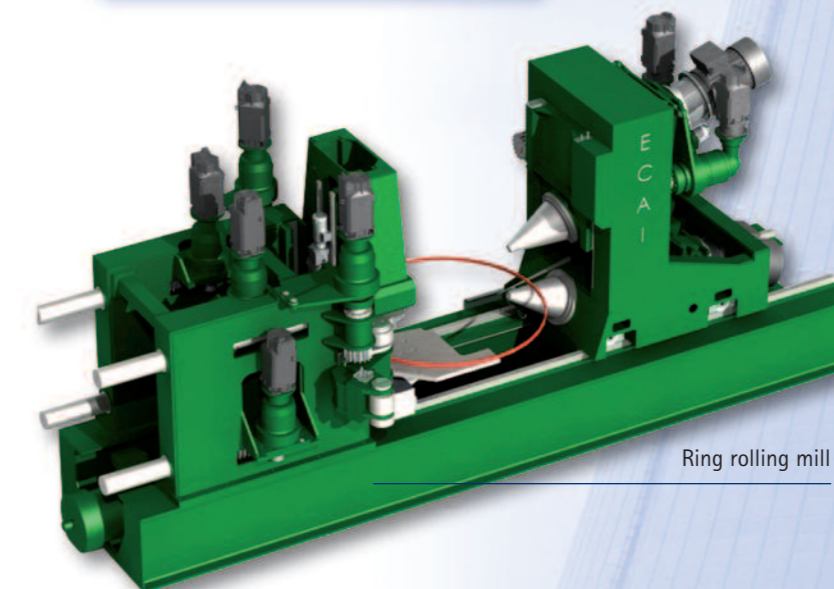
- Steam generator
- Reactor coolant pump
- Primary cooling loop
- Reactor

## Services

Castings and forgings can be delivered either machined or not.

To meet these needs, Manoir Industries has, in its plants, integrated machine shops as well as numerically controlled lathes, milling machines, machining centres and a linear accelerator.

When customer requirements exceed the in-house capacity, Manoir Industries subcontracts the work and supervise its accomplishment as part of the Quality Assurance System.



Ring rolling mill



- 1 Elbow 6 t  
Grade Z3 CN 20-09 M
- 2 Pump casing 750 kg  
Grade Z3 CND 20-09 M
- 3 Pipe & elbow assembled  
Primary circuit 5 t  
Grade Z3 CN 20-09 M
- 4 Tube with 0-let 12 t  
Grade Z3 CN 20-09 M
- 5 Reactor coolant pump impeller 750 kg  
Grade Z3 CN 20-09 M
- 6 Steam generator manway 1,8 t  
Grade 18MND5
- 7 Steam generator feed water nozzle 2,2 t  
Grade 18MND5

	FRANCE		CHINA
	PITRES	BAR / AUBE	YANTAI
	Foundry	Forging	Foundry
	2 Electric arc furnaces: up to 15 T	N/A	2 Electric arc furnaces: 1 - 5T nominal 1 - 15T nominal
	N/A	60 kg max. before forging	N/A
	High alloys, Duplex, Superduplex, Inconels, .../...	All grades	Carbon steel, Stainless steel, Martensite steel, High alloys, Duplex, Superduplex, Inconels, .../...
	1 AOD Converter: up to 25 T	N/A	1 AOD Converter: up to 30T (25T nominal)
	Radiography (Xrays, gamma rays, 8 MeV linear accelerator)	Ultrasonic control, penetrant test, magnetic particul, dimensional	Radiography (Xrays, gamma rays)
	Centrifugal Tubes, Elbows, Body Valves, Pump Casings .../...	Valve body, body pump, tubes connectors, arcades	Centrifugal Tubes, Body Valves, Pump Casings .../...
	Primary cooling loop	Components for steam generator	Primary cooling loop
	Secondary cooling loop	Components for secondary cooling loop: valve body, tubes connectors, body pump, etc...	Valve and pump bodies, tap, tube connectors, etc.
			Secondary cooling loop