SATAREM
Fuel power plant

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General features

Scope

- Satarem proposes turnkey fuel power plant including:
  - Engineering
  - Equipment Procurement
  - Delivery
  - Construction
  - Installation
  - Commissioning
  - Maintenance

Plant composition

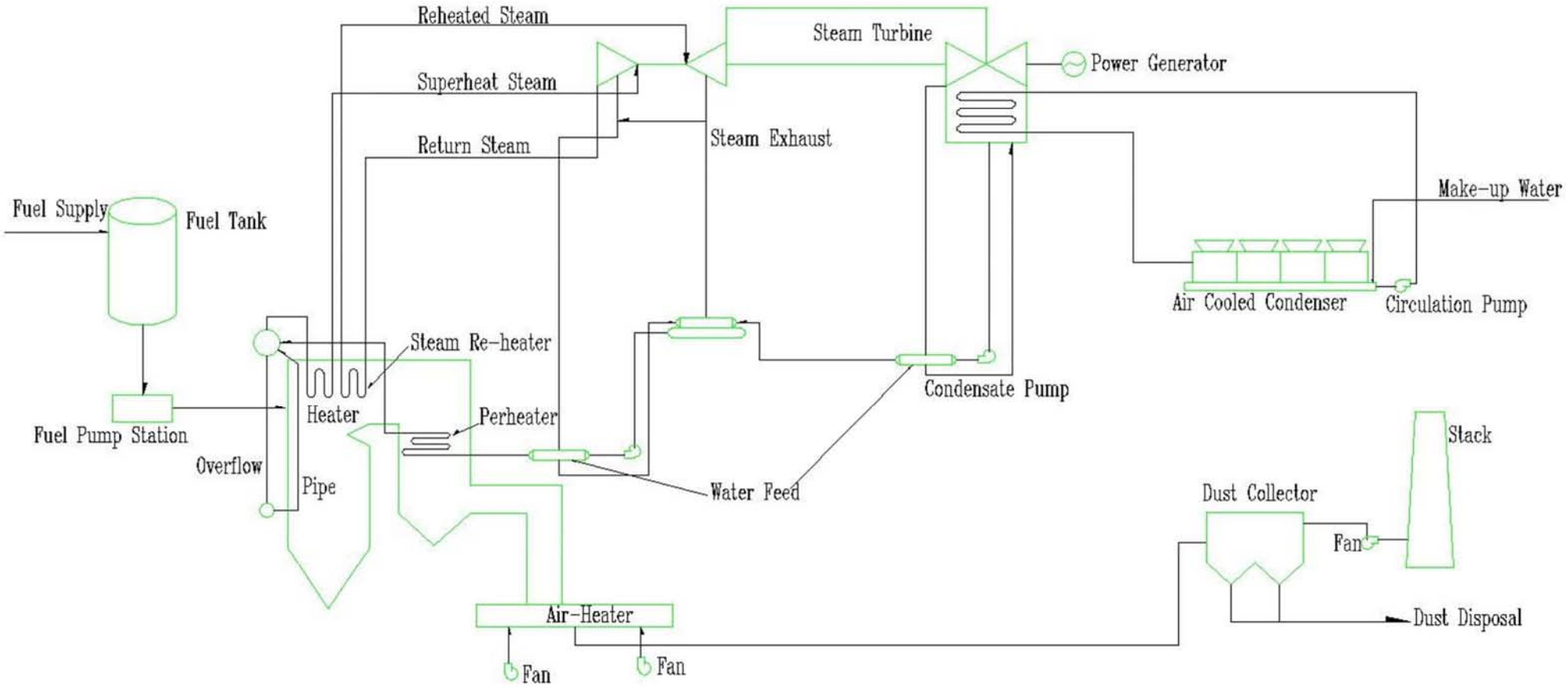
- The plant is composed with the following :
  - Fuel oil storage tanks
  - Fuel oil treatment plant (FOTP)
  - Desalination by water-washing:
  - Filtration & heating
  - Power generation system
  - Electrical rooms
  - Compressed Air Station

Process description

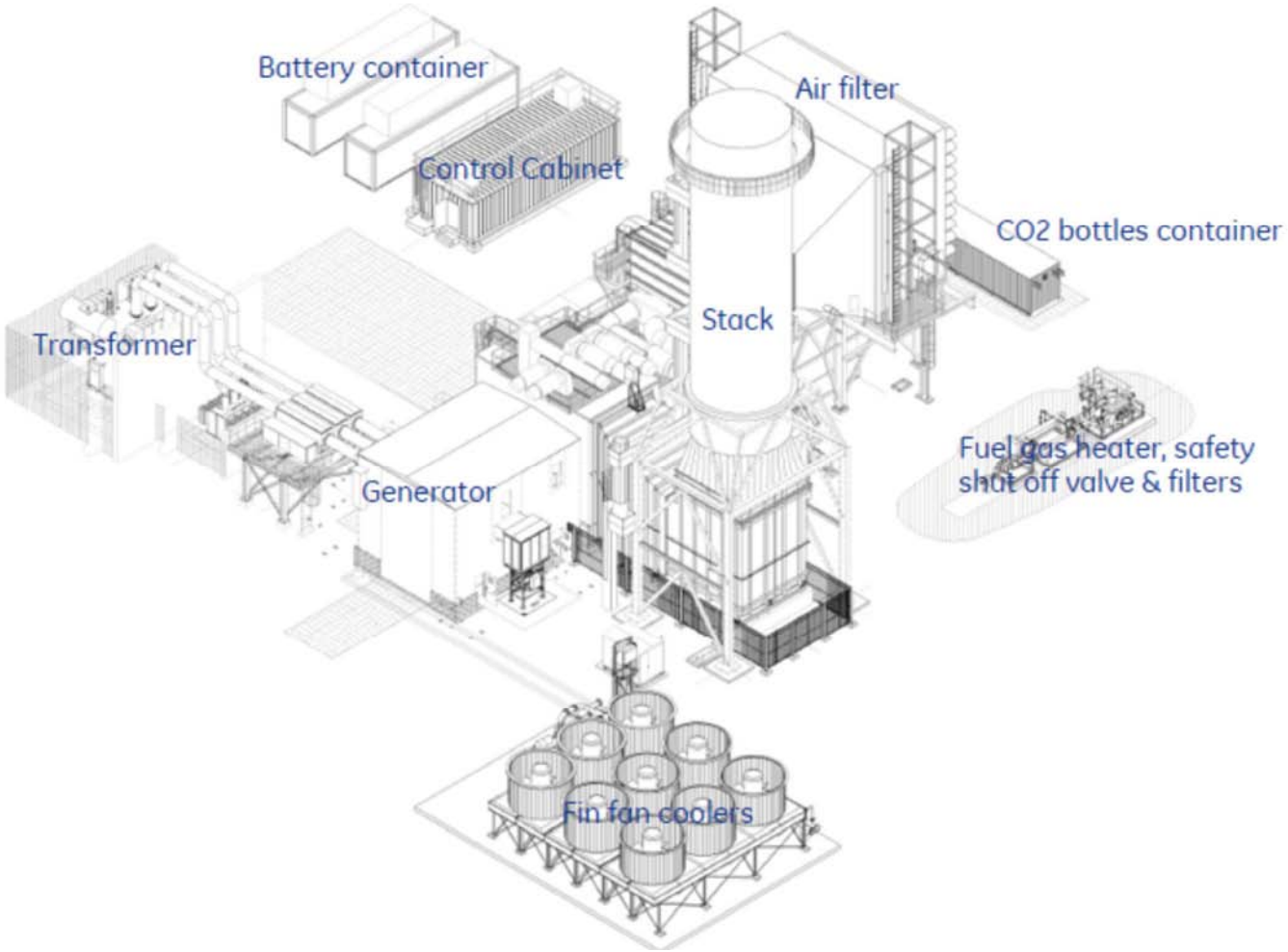
- Power generation unit main consists mainly of
  - Boiler
  - Condenser
  - Turbine
  - Generator

- Also includes brushless exciter, inlet system, MV motor start, compressor washing skid-off line, exhaust diffuser, gas fuel system, exhaust plenum, lubricating oil&hydaulic oil systems…

Process description



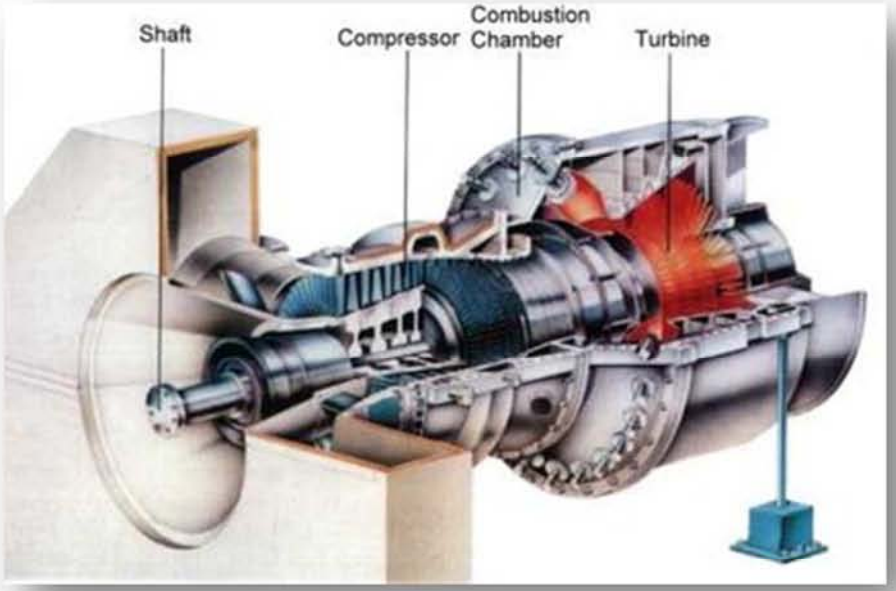
3D general overview

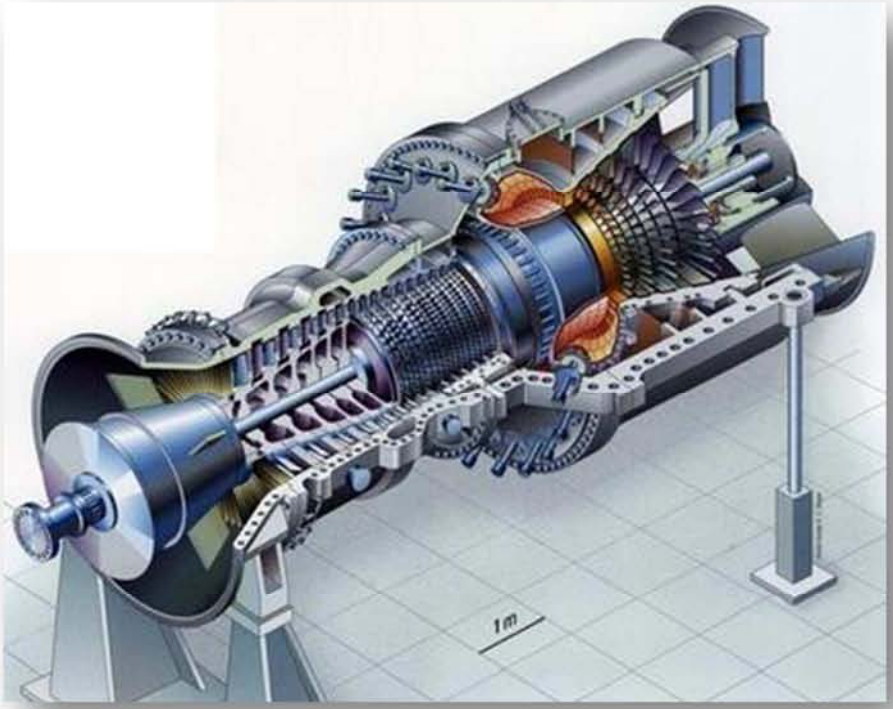


Technical performances

No.	Description	Unit	50MW	75MW	100MW	100MW	125MW
1	Code		53#	126#	43#	43A#	
2	Model		N50-8.83/535	N75-1.42/274	N100-8.83/535	N100-8.83/535	N125-13.2/535/535
3	Type		Impulse tandem-comp.1-cylinder. 1-exhaust	Impulse tandem-comp.2-cylinder. 2-exhaust	Impulse tandem-comp.2-cylinder. 2-exhaust	Impulse tandem-comp.2-cylinder. 2-exhaust	Impulse tandem-comp.2-cylinder. 1-exhaust
4	Rated output	MW	50	75	100	100	125
5	Max.output	MW	55	78.5	112	112	135
6	Speed	r/min	3600	3000	3000	3000	3000
7	Steam pres.before stop valve	Mpa	8.83	1.42	8.83	8.83	13.2
8	Steam temp.before stop valve	℃	535	274	535	535	535
9	Rated steam flow	t/h	193	386	370	360	379
10	Max steam flow	t/h	213	405	417	420	420
11	Reheat steam temp.	℃					535
12	Exhaust steam temp.	Mpa	0.0049	0.0054	0.0049	0.0047	0.0064
13	Cooling water temp.	℃	20	20	20	20	25
14	No. of stages		1+17	6	1+14+5x2	1+16+5x2	1+11+14
15	No. Of heaters		2(HP heater)	1(LP heater)	2(HP heater)	2(HP heater)	3(HP heater)
			+1(deaerator)	.	+1(deaerator)	+1(deaerator)	+1(deaerator)
			+3(LP heater)		+4(LP heater)	+4(LP heater)	+3(LP heater)
16	Feed water temp.	℃	220	60	227	231	248
17	Heat rate	KJ/kW. H	9400	13860	9254	8835	8223
18	Steam rate	Kg/kW.h	3.85	5.15	3.69	3.60	3.03
19	Last vane's height	mm	610	1000	665	668	855
20	Overall size (L x W x H)	m	8.1x6.9x3.4	8.0x7.7x3.4	14x6.9x4.7	14x6.9x4.7	13.5x7.8x5.5
21	Turing wt.	t	113	95	256	260	300
22	Max.lifting wt During erection.	t	40	50	65	66	70
23	Cooling surface of condenser	m2	3500	10000	6815	7000	5600

Some pictures


Shaft
Compressor
Combustion Chamber
Turbine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