

Olkiluoto Unit 3

Nuclear Power Plant



Eurajoki, Finland

The Olkiluoto nuclear power plant has been expanded by a third unit. The reactor is an EPR with a net electric output of approx. 1600 MW and represents the most advanced level of light water reactor technology in terms of safety and economy.

Operator:

Teollisuuden Voima Oy,
Olkiluoto, Finland

Customer:

Siemens Energy, Erlangen, Germany

Application:

1600 MW single unit, EPR
(European Pressurized Water Reactor)

Safety and reliability with pumps and valves from a single source

The state-of-the-art KSB pumps and valves to be installed will make a considerable contribution to the safety and economic efficiency of the plant. In particular the feed water pump set RHD/YNK is characterized by features such as low vibration levels, increased availability and extended lifetime.

A total of more than 20 KSB pumps will be employed in the new unit. In addition to the pumps, the new unit will be equipped with more than 1000 low, medium and high-pressure valves (LP, MP, HP). What tipped the balance in favour of KSB during the order award phase were the high quality and reliable performance of the KSB products installed in units 1 and 2, as well as the excellent support given by our Finnish branch.

Our technically detailed and competitively priced offer assured the customer that he had selected the right supplier for the new unit.





Olkiluoto Unit 3 – Scope of supply and project details

Pumps:			Q [m ³ /h]	H [m]	T [°C]	p [bar]
RHD/YNK	4 x	Feed water pump set	3490	1007	213	135
CHTC	1 x	Start-up feed water pumps	422	1087	213	135
SEZ	2 x	Auxiliary cooling water pump	4903	18	30	5
PNZ	3 x	Cooling water recirculation pump	5402	5	27	2
KWPK	3 x	Closed cooling water pump	2535	36	60	10
HGM	2 x	Clean drain pump	113	170	152	34
RPH	2 x	Moisture separator condensate pump	687	65	208	38
	1 x	Heater drain pump	801	173	159	34
	1 x	Emergency demineralized water pump	397	140	60	25
CPK	2 x	Demineralized water pump	114	51	60	10
	2 x	Seal water transfer pump	11	115	50	16

Valves:		DN	T [°C]	p [bar]
NORI	Shut-off valve	10 – 50	311	135
ZTS	Gate valve	80 – 550	311	135
STAAL 40	Gate valve	150	249	38
STAAL 40	Swing-type check valve	80 – 700	249	38
ZJSVM/RJSVM	Preheater bypass valves	700 – 800	268	135
ZTN	Gate valve	50 - 700	400	300

A total of 105 gate valves, 50 swing check valves, 820 shut-off valves, 20 non-return valves, 5 angle-type non-return valves, 10 preheater bypass valves. These numbers include all valves, irrespective of the applicable pressure range (LP, MP and HP)

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