



Emile Huchet Power Station



Clayton Steam Generator

Model : SEG-1004-1

Quantity: Two

Year : 2009

Project Information

Power Station Name	:	Emile Huchet Power Station
Power Company	:	Endesa
Contractor	:	Siemens Power Generation
Location	:	Saint Avold, France
Year	:	2009
Station Size	:	400 MW x 2
Generator Model	:	SEG-1004-1
Number of Generators	:	2
Number of Pumps	:	Two
Use	:	Turbine Gland Sealing
Net Heat Output	:	9,810 kW
Steam Flow	:	13,718 kg/h
Modulation	:	Yes
Operating Pressure	:	7 barg
Steam Temperature	:	Saturated
Fuel	:	Natural Gas
Dimensions	:	4646 x 2600 x 6153 mm

The two new Endesa Power Plants at Emile Huchet Power Station form France's largest combined cycle power plant. The Clayton Auxiliary Steam Generators feed electrically powered superheaters and the steam is for steam turbine start-up.



Bandirma Power Station



Clayton Steam Generator

Model : EG-1004-4SH

Quantity: One

Year : 2009

Project Information

Power Station Name	:	Bandirma Power Station
Power Company	:	Enerjisa
Contractor	:	A-TEC PPS / Mitsubishi Heavy Industries
Location	:	Bandirma, Turkey
Year	:	2009
Station Size	:	919 MW
Generator Model	:	EG-1004-4SH
Number of Generators	:	One
Number of Pumps	:	Two
Use	:	Turbine Gland Sealing
Net Heat Output	:	10,100 kW
Steam Flow	:	13,314 kg/h
Modulation	:	Yes
Operating Pressure	:	15 barg
Steam Temperature	:	320 °C superheated
Fuel	:	Natural Gas
Dimensions	:	4646 x 2600 x 5229 mm

The new Enerjisa Power Station is a next-generation CCGT power plant on the coast of the Marmara Sea. The Clayton Auxiliary Steam Generator is for turbine start.





Clayton Steam Generator

Model : EOG-304 SH

Quantity: Two

Year : 1993

Project Information

Power Station Name	: Drogenbos 2 Power Station
Power Company	: Electrabel Suez
Contractor	: Suez Tractebel SA
Location	: Brussels
Year	: 1993
Station Size	: 460 MW
Generator Model	: EOG-304-SH
Number of Generators	: 2
Number of Pumps	: 1
Use	: Steam Turbine Gland Sealing
Net Heat Output Per Unit	: 2943 KW
Steam Flow Per Unit	: 3400 kg/h
Modulation	: Yes
Operating Pressure	: 14 barg
Steam Temperature	: 311°C (Superheated)
Fuel	: Natural Gas / Oil
Dimensions	: 2745 x 1950 x 3490 mm

The two Clayton Steam Generators at Drogenbos Power Station are capable of providing superheated steam for steam turbine gland sealing and are also able to supply saturated steam at other times.



Sterlington Power Station



Clayton Steam Generator

Model : EG-604

Quantity: One

Year : 2002

Project Information

Power Station Name : Sterlington Power Plant
Power Company : Cogentrix Energy Inc
Contractor : SNC - Lavalin
Location : Louisiana
Year : 2002
Station Size : 825 MW
Generator Model : EG-604 Low Nox
Number of Generators : One
Number of Pumps : Two
Use : Steam Turbine Gland Sealing
Net Heat Output : 5881 kW
Steam Flow : 9409 kg/h
Modulation : Yes
Operating Pressure : 17 barg
Steam Temperature : 99.5% Dry Saturated
Fuel : Natural Gas
Dimensions : 3251 x 3225 x 5251 mm

The Clayton Steam Generator is used as an auxiliary boiler for gland sealing on the steam turbines to advance start up time for the power plant. This is a Combined Cycle Cogeneration Power Plant with three GE Condensing Steam Turbine Generators.



Castleford Power Station



Clayton Steam Generator

Model : EG-354

Quantity: One

Year : 2006

Project Information

Power Station Name	:	Castleford Cogeneration
Power Company	:	E.ON UK
Contractor	:	E.ON UK
Location	:	Yorkshire
Year	:	2006
Station Size	:	56 MW
Generator Model	:	EG-354
Number of Generators	:	One
Number of Pumps	:	One
Use	:	Turbine Gland Sealing
Net Heat Output	:	3433 kW
Steam Flow	:	5480 kg/h
Modulation	:	Yes
Operating Pressure	:	25 barg
Steam Temperature	:	99.5% Dry Saturated
Fuel	:	Natural Gas
Dimensions	:	2745 x 1950 x 3490 mm

The E.ON Power Station at Castleford is a Cogeneration system at the chemical plant of C6 Solutions and can supply the sites entire electrical and steam requirements. The Clayton Steam Generator is used for start-up.



Medway Power Station



Clayton Steam Generator

Model : SEG-504 SH

Quantity: One

Year : 1999

Project Information

Power Station Name	: Medway Power Station
Power Company	: Scottish & Southern Energy plc
Contractor	: Mitsui Babcock Energy Services Ltd
Location	: Kent
Year	: 1999
Station Size	: 688 MW
Generator Model	: SEG-504 SH Low Nox
Number of Generators	: One
Number of Pumps	: Two
Use	: Turbine Gland Sealing and Pre-Warming
Net Heat Output	: 5052 kW
Steam Flow	: 9390 kg/h
Modulation	: Yes
Operating Pressure	: 17 barg
Steam Temperature	: 269°C (Superheated)
Fuel	: Natural Gas
Dimensions	: 3200 x 2200 x 6500 mm

The Clayton Steam Generator is used as an auxiliary boiler to reduce starting time of the power plant. The time saved per start is approximately 1.5 hours. Based on electricity generation alone this produce a saving equivalent to £25,000 on every start (based on 1999 electricity prices).





The Endicott Plant



Clayton Steam Generator

Model : EO-300

Quantity: One

Year : 1982

Project Information

Power Station Name : The Endicott Plant
Power Company : Michigan South Central Power Agency
Contractor : MSCPA
Location : Michigan
Year : 1982
Station Size : 60 MW
Generator Model : EO-300
Number of Generators : One
Number of Pumps : One
Use : Start-Up of Coal Boiler
Net Heat Output : 4564 kW
Steam Flow : 2940 kg/h
Modulation : Yes
Operating Pressure : 10 barg
Steam Temperature : 99.5% Dry Saturated
Fuel : Medium Fuel Oil
Dimensions : 2500 x 2060 x 4570 mm

The Clayton Steam Generator has been in operation for 25 years and is use frequently to start-up the 24 tonne B&W coal fired boiler. The plant personnel consider the main advantages of the Clayton design is reliability and rapid start-up from cold.





STAG Power Station



Clayton Steam Generator

Model : EOG-304 SH

Quantity: Two

Year : 1994

Project Information

Power Station Name	:	STAG (Steam and Gas)
Power Company	:	SPE
Contractor	:	Suez Tractebel SA
Location	:	Seraing
Year	:	1994
Station Size	:	460 MW
Generator Model	:	EOG-304 SH
Number of Generators	:	Two
Number of Pumps	:	Two
Use	:	Steam Turbine Gland Sealing
Net Heat Output	:	2943 kW
Steam Flow	:	3400 kg/h
Modulation	:	Yes
Operating Pressure	:	14 barg
Steam Temperature	:	311°C (Superheated)
Fuel	:	Natural Gas / Oil
Dimensions	:	2745 x 1950 x 3490

The Clayton Steam Generators at the Société de Production d'Electricité Seraing Power Station are for turbine gland sealing on start-up.



Campeche Power Station



Clayton Steam Generator

Model : SEG-404 SH

Quantity: One

Year : 2002

Project Information

Power Station Name : Campeche Power Plant
Power Company : Transalta Campeche SA de CV
Contractor : ICA Fluor Daniel
Location : Campeche, Mexico
Year : 2002
Station Size : 252 MW
Generator Model : SEG-404 SH
Number of Generators : One
Number of Pumps : Two
Use : Steam Turbine Gland Sealing
Net Heat Output : 3434 kW
Steam Flow : 4389 kg/h
Modulation : Yes
Operating Pressure : 15 barg
Steam Temperature : 322°C (Superheated)
Fuel : Natural Gas
Dimensions : 2921 x 1930 x 4622 mm

The Clayton Steam Generator is used as an auxiliary boiler for gland sealing during start-up. Campeche Power Plant is TransAlta's first plant in Mexico and the Clayton Steam Generator design was selected by ICA Fluor Daniel.





Clayton Steam Generator

Model : EG-604

Quantity: One

Year : 2001

Project Information

Power Station Name : Jenks Power Plant
Power Company : Cogentrix Energy Inc
Contractor : SNC - Lavalin
Location : Oklahoma
Year : 2001
Station Size : 825 MW
Generator Model : EG-604 Low Nox
Number of Generators : One
Number of Pumps : Two
Use : Steam Turbine Gland Sealing
Net Heat Output : 5881 kW
Steam Flow : 9409 kg/h
Modulation : Yes
Operating Pressure : 17 barg
Steam Temperature : 99.5% Dry Saturated
Fuel : Natural Gas
Dimensions : 3251 x 3225 x 5251 mm

The Clayton Steam Generator is used as an auxiliary boiler for gland sealing on the steam turbines to advance start up time for the power plant. This is a Combined Cycle Cogeneration Power Plant with three GE Condensing Steam Turbine Generators said to be one of the cleanest sources of electricity in the world.



Clayton Steam Generator

Model : SEG-304

Quantity: Two

Year : 1991

Project Information

Power Station Name : Bressoux Power Plant
Power Company : Electrabel Suez
Contractor : Electrabel Suez
Location : Liege
Year : 1991
Station Size :
Generator Model : SEG-304
Number of Generators : Two
Number of Pumps : One
Use : Peak Shaving
Net Heat Output : 2943 kW
Steam Flow : 4697 kg/h
Modulation : Yes
Operating Pressure : 16 barg
Steam Temperature : 99.5% Dry Saturated
Fuel : Natural Gas
Dimensions : 2745 x 1950 x 3490

The Clayton Steam Generators at the Electrabel Power Plant at Bressoux are used as peak shavers since they can respond rapidly to alterations in steam demand.

Peterborough Power Station



Clayton Steam Generator

Model : EO-150

Quantity: One

Year : 1991

Project Information

Power Station Name	: Peterborough Power Station
Power Company	: Centrica PG Ltd
Contractor	: Hawker Siddeley Power Engineering
Location	: Peterborough
Year	: 1991
Station Size	: 360 MW
Generator Model	: EO-150
Number of Generators	: One
Number of Pumps	: One
Use	: Standby Steam
Net Heat Output	: 1471 kW
Steam Flow	: 2349 kg/h
Modulation	: Yes
Operating Pressure	: 10 barg
Steam Temperature	: 99.5% Dry Saturated
Fuel	: Oil
Dimensions	: 2550 x 1950 x 3165 mm

Peterborough Power Station has two gas turbines and one steam turbine. The facility is used to help meet peak demand and typically starts up and shuts down on a daily basis.





Clayton Steam Generator

Model : EO-150

Quantity: Three

Year : 1981

Project Information

Power Station Name	: Heysham 1 Power Station
Power Company	: British Energy
Contractor	: CEGB
Location	: Heysham
Year	: 1981
Station Size	: 1150 MW
Generator Model	: EO-150
Number of Generators	: Three
Number of Pumps	: One
Use	: Standby Steam
Net Heat Output	: 1471 kW
Steam Flow	: 2349 kg/h
Modulation	: Yes
Operating Pressure	: 7 barg
Steam Temperature	: 99.5% Dry Saturated
Fuel	: Oil
Dimensions	: 2550 x 1950 x 3165 mm

Heysham 1 Power Station is an AGR station with two reactors.



Clayton Steam Generator

Model : EO-150

Quantity: Two

Year : 1981

Project Information

Power Station Name	: Hartlepool Power Station
Power Company	: British Energy
Contractor	: CEGB
Location	: Hartlepool
Year	: 1981
Station Size	: 1210 MW
Generator Model	: EO-150
Number of Generators	: Two
Number of Pumps	: One
Use	: Standby Steam
Net Heat Output	: 1471 kW
Steam Flow	: 2349 kg/h
Modulation	: Yes
Operating Pressure	: 7 barg
Steam Temperature	: 99.5% Dry Saturated
Fuel	: Oil
Dimensions	: 2550 x 1950 x 3165 mm

Hartlepool Power Station is an AGR reactor plant. The two Clayton Steam Generators at the station have been in operation since 1981. They are a vital part of the operation since they are used as standby units to provide steam for vaporising carbon dioxide that is used as primary cooling for the reactors.

Corby Power Station



Clayton Steam Generator

Model : EO-154

Quantity: One

Year : 1991

Project Information

Power Station Name	: Corby Power Station
Power Company	: E.ON / ESB
Contractor	: Hawker Siddeley Power Engineering
Location	: Corby
Year	: 1991
Station Size	: 350 MW
Generator Model	: EO-154
Number of Generators	: One
Number of Pumps	: One
Use	: Standby Steam
Net Heat Output	: 1471 kW
Steam Flow	: 2349 kg/h
Modulation	: Yes
Operating Pressure	: 10 barg
Steam Temperature	: 99.5% Dry Saturated
Fuel	: Oil
Dimensions	: 2550 x 1950 x 3165 mm

Corby Power Station is a combined cycle station designed for maximum operating flexibility. Shutdown of one turbine heat recovery is unit possible while the other remains at full power. The plant has two Frame 9F gas turbines and an additional turbine driven by steam from two HRSGs.



Cognis CHP Plant



Clayton Steam Generator

Model : EG-604

Quantity : Three

Year : 2002

Project Information

Power Station Name	:	Cognis CHP Plant
Power Company	:	Veolia
Contractor	:	Dalkia
Location	:	Boussens
Year	:	2002
Station Size	:	20 MW
Generator Model	:	EG-604
Number of Generators	:	Three
Number of Pumps	:	Two
Use	:	Peak Shaving
Net Heat Output Per Unit	:	6000 kW
Steam Flow Per Unit	:	11000 kg/h
Modulation	:	Yes
Operating Pressure	:	90 barg
Steam Temperature	:	275°C
Fuel	:	Natural Gas
Dimensions	:	3060 X 2130 X 4590

At the Cognis CHP Plant the High Pressure Clayton Steam Generators operate in a semi-closed system that recycles the energy in the hot condensate return to dramatically reduce running costs. Two further units were purchased by Cognis in 2008.



Sellafield Nuclear Site



Clayton Steam Generator

Model : EO-125

Quantity: One

Year : 2003

Project Information

Power Station Name	: Sellafield Nuclear Site
Power Company	: British Nuclear Fuels plc
Contractor	: BNFL
Location	: Sellafield
Year	: 2003
Station Size	: Fuel Re-Processing Facility
Generator Model	: EO-125
Number of Generators	: One
Number of Pumps	: One
Use	: Emergency Standby
Net Heat Output	: 1226 kW
Steam Flow	: 1957 kg/h
Modulation	: Yes
Operating Pressure	: 7 barg
Steam Temperature	: 99.5% Dry Saturated
Fuel	: Oil
Dimensions	: 1755 x 1300 x 2405 mm

The Clayton Steam Generator at the Sellafield site is used as an emergency back-up steam supply and is designed to withstand a seismic event. Steam is used in emergency for eductors to transfer liquid.





Pulrose Power Station



Clayton Steam Generators

Model : EOG-40-1

Quantity: Two

Year : 2006 & 2009

Project Information

Power Station Name	: Pulrose Power Station
Power Company	: Manx Electricity
Contractor	: Manx Electricity
Location	: Isle of Man
Year	: 2006 and 2009
Station Size	: 84 MW
Generator Model	: EOG-40-1
Number of Generators	: Two
Number of Pumps	: Two
Use	: Turbine Gland Sealing
Net Heat Output	: 392 kW
Steam Flow	: 626 kg/h
Modulation	: No
Operating Pressure	: 7 barg
Steam Temperature	: 99.5% Dry Saturated
Fuel	: Oil and Gas
Dimensions	: 1520 x 945 x 2465 mm

The Clayton Steam Generators at the Pulrose CCGT Power Station are auxiliary boilers which supply steam for superheaters. The steam is used for condenser seals to permit rapid start of the GE LM 2500 High Speed Power Turbines.

