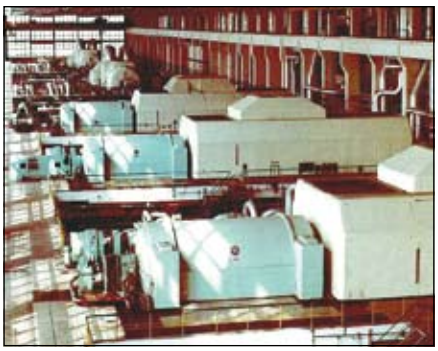
HYDROGEN COOLED, 2 POLE

TURBOGENERATORS

PRODUCT SPECIFICATION

The machine hall of Melnik II Power Station in the Czech Republic.



The machine hall of Nováky Power Station in the Slovak Republic.

Installing the generator stator at Mejillones Power Station in Chile.

Inserting the rotor of a turbogenerator at Sevo Power Station in Finland.

Introduction

Hydrogen cooled generators, designed to be driven by both gas turbines and steam turbines, are used extensively in thermal and nuclear power plants. The characteristics of these machines are the result of an in-depth knowledge, gained from BRUSH's extensive experience, and the latest design techniques, backed by modern manufacturing methods and plant. To date, a total of 106 hydrogen cooled generators have been installed, providing a total of 11,250MW and establishing an enviable reputation for reliability and availability.

Features

Hydrogen cooled generators provide the following features:

- Reduced weight of active components.
- More economical operation, particularly under part load conditions.
- Improved efficiency as a result of significantly reduced ventilation losses.
- Extended insulation life.

Specifications

Voltage range:	up to 18kV
Speed:	3000 rev/min for 50Hz operation
	3600 rev/min for 60Hz operation
Excitation:	Brushless or static
Output range:	200 – 375MVA

Hydrogen cooled generators comply fully with the provisions of the relevant international standards.

The most common standards are:

- CSN EN 60034-1+A1+A2
- IEEE C50.13 at 60Hz
- IEC 60034-1 at 50Hz
- IEC 60034-3 at 50Hz

Gas supply system

The gas supply system, which can be "tailored" to suit the individual requirements of a power station layout, incorporates the equipment for scavenging air from the generator with carbon dioxide and for the first fill and subsequent continuous maintenance of the hydrogen coolant. A "freezing out" process achieves hydrogen drying.

The machine hall at Vojany Power Station in the Slovak Republic.

The machine hall at Sevo Power Station in Finland.

Shen Tou Power Station, Peoples' Republic of China.

The machine hall of Soma Power Station in Turkey.

Certificate No 21024

Certificate No 21025

Certificate No 936683

Certificate No 00282

Certificate No 00066

BRUSH ELECTRICAL MACHINES Ltd
Falcon Works, Nottingham Road,
Loughborough, Leics. LE11 1EX England
Tel: +44 (0)1509 611511
Fax: +44 (0)1509 610440
E-mail: salesuk@brush.eu
Web: www.brush.eu

BRUSH HMA b.v.
PO Box 3007, 2980 DA Ridderkerk
The Netherlands
Tel: +31 180 445500
Fax: +31 180 445566
Email: salesnl@brush.eu
Web: www.brush.eu

BRUSH SEM s.r.o.
Edvarda Benese 39, 301 00 Plzeň
Czech Republic
Tel: +420 37 8210111
Fax: +420 37 8210214
Email: salescz@brush.eu
Web: www.brush.eu

BRUSH TURBOGENERATORS Inc.
15110 Northwest Freeway, Suite 150,
Houston, Texas 77040, USA
Tel: +1 (281) 580 1314
Fax: +1 (281) 580 5801
Email: salesus@brush.eu
Web: www.brush.eu