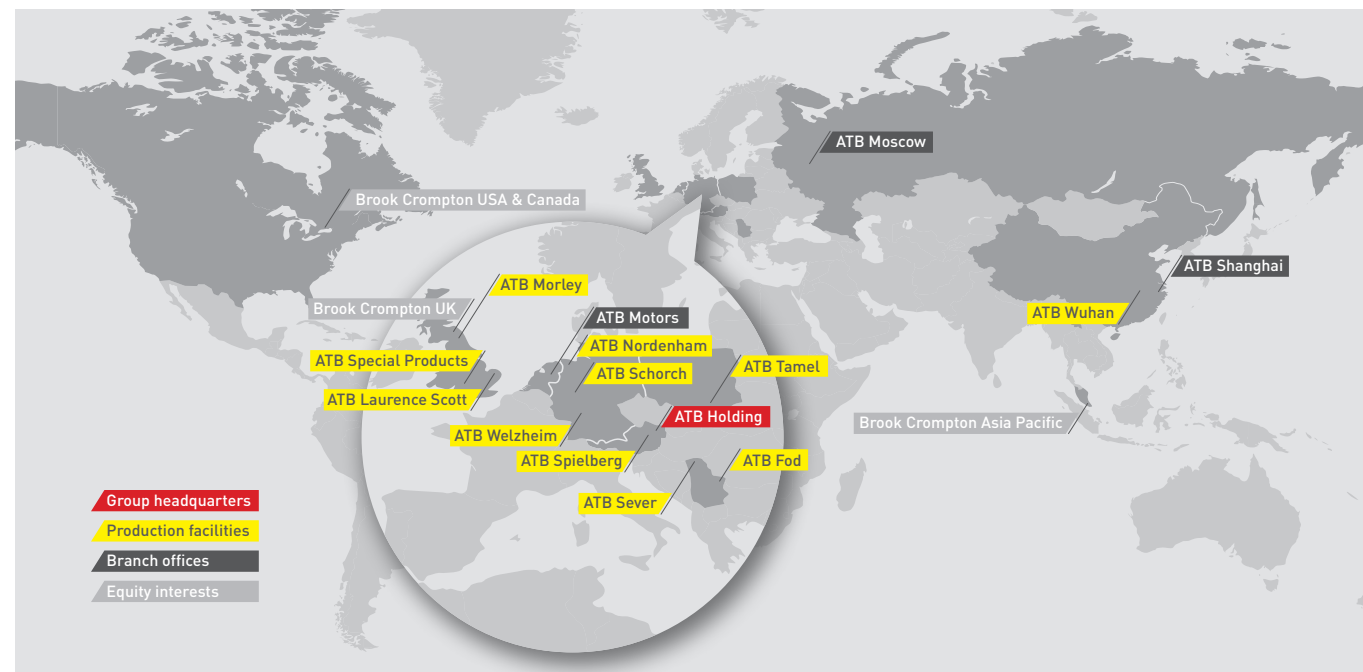


GLOBAL PRESENCE



RECOGNISED BRANDS:

ATB MORLEY
Technology in Motion

ATB NORDENHAM
Technology in Motion

ATB FOD
Technology in Motion

ATB LAURENCE SCOTT

ATB WELZHEIM
Technology in Motion

ATB SPECIAL PRODUCTS
Technology in Motion

ATB SPIELBERG
Technology in Motion

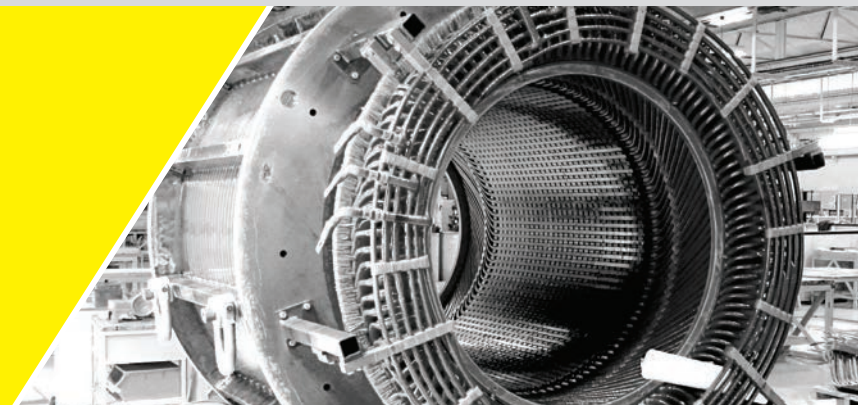
ATB SEVER
Technology in Motion

SCHORCH

Tamel
ELECTRIC MOTORS

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MOTORS FOR NUCLEAR POWER APPLICATIONS



COMPANY OVERVIEW

ATB Laurence Scott, an ATB Group UK company, is a centre of Excellence for manufacturing Medium and High Voltage Motors and Generators. We take pride in our unique ability to provide customers with over 130 years of technical expertise in fields as diverse as Processing, Oil and Gas, Petrochemicals, Water, Sewage, Nuclear and Defence Environments. Our factory in Norwich, England is dedicated to manufacturing bespoke motors and generators to provide our customers with the highest level of performance for each individual application.



Established in 1883, by William H. Scott, and joined by businessmen Reginald Laurence in 1887, ATB Laurence Scott has developed many products for various markets over our history, but always at the centre has been high level electrical engineering.



William H. Scott
1862 - 1938

The early years were dominated by manufacturing Scott designed Motors and Dynamos. Mr Scott was always pushing his designs to ensure the product was at the forefront of technical capabilities, a trait still key to the ATB Laurence Scott design team.

Laurence Scott has been involved in developing some of the key technologies we benefit from today. From (developing) the UK's first traffic controlled traffic light system in 1934, building pumps, fans and winches for cruise ships in the 1930's, supplying all the cutter motors for the tunnelling equipment for the Channel Tunnel, right through to the development of low starting current HV motors for offshore applications.

ATB Laurence Scott are now the centre of excellence for the manufacture of HV electric motors and generators for the Upstream Oil & Gas and Nuclear markets for the ATB Group. We offer an excellent product distinguished by performance characteristics tailor made to suit the precise requirements of each individual application with the goal of maximising system service life.



Reginald Laurence
1859 - 1923

To be able to design and manufacture our tailor made motors to meet our customers ever growing needs, we are always looking at ways in which to improve our product. Whether this is through continued product development, innovation or factory investment.

Based on a projects circumstance a standard 6-7 times starting current motor is not always practical. ATB Laurence Scott are a world leading manufacturer of low starting current motors, designing and manufacturing some of the largest motors of this type in the world. Typically providing solutions below 350% FLC, reducing end users local power generation needs or the need for additional equipment for starting.

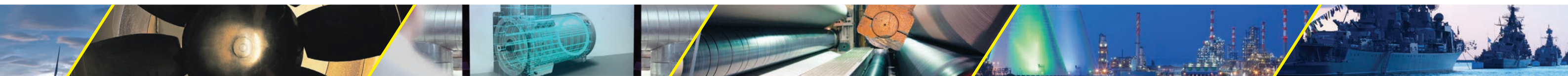
As part of our ongoing investment strategy, we have in the last few years had the latest CNC Lathe and Grinder installed in our machine shop. This has increased our ability to machine rotor shafts up to 6 meters in length to the smallest tolerances possible.



Coil forming is recognised as the as the most complex part of HV motor manufacture process, and with our bespoke design, it is key to achieving our high level performance characteristics. This latest machine, along with our specifically written design programmes, allows us to produce coils of the highest quality.



In late 2011, we completed our new test bed, which provides us with full load testing up to 15MW over a variety of supply conditions. Using our own designed generator set up as a load and regeneration centre, and a VFD, we can test from 3.3kV up to 15kV and between 50-60Hz.



EXPERIENCE IN THE UK

UK NUCLEAR POWER STATIONS

- 1st UK Motor Manufacturer to supply machines to UK Nuclear Power Stations.
- Have been involved in supplying motors to all Nuclear Power Stations in the UK with over 600 installed to date.
- We continue to support our operational motors with continuous maintenance programmes to assist with life extension.

UK ADVANCED GAS COOLED REACTORS

- With no published standards at the time, Laurence Scott devised the qualification method for the UK AGR 5 MW gas circulator motors.
- There are 80 AGR 5 MW gas circular motors built and still in successful operation, maintained by Laurence Scott.

UK PRESSURISED WATER REACTOR

- Working to a Westinghouse design, Laurence Scott produced 5 Main Reactor Coolant Pump Motors for Sizewell B.
- In addition, Laurence Scott designed and manufactured a total of 240 motors for Sizewell B, over 200 of which were Class 1E.

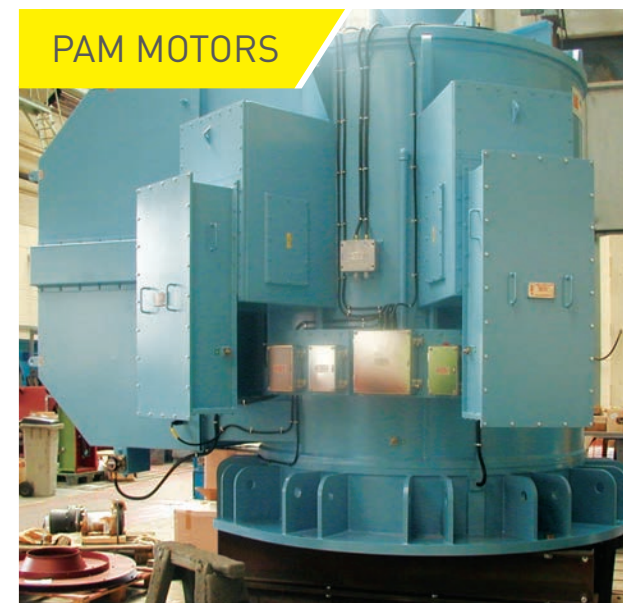
These included motors for:

- Feed Water Pumps.
- CW and CW Auxiliary Pumps.
- HHSI, RHR, ESW and Charge pumps.
- Environmental Qualification was to IEEE.
- Seismic Qualification by Analysis for Motors and by Test for Switchboards.
- Water Coolers were to ASME III.



PRODUCT OVERVIEW

PAM MOTORS



- 2 speed PAM wound - CAGE Induction Motor.
- Available in vertical and horizontal configuration, air and water cooled.
- Ideal for Cooling Water Pumps, where different flow conditions are required, without the added cost and complication of VFDs.
- Voltages 3.3k to 11kV.

TEFC MOTORS



- TEFC Motors certified as required for use in nuclear containment areas.
- Available in horizontal and vertical configurations.
- Outputs ranging from 100-800kW.
- Voltages 415V to 11kV.

STANDARDS AND CERTIFICATIONS:

QUALITY ISO 9001
QUALITY ISO 18001
WORKING TO QUALITY ISO 14001



EXPERIENCE IN CHINA

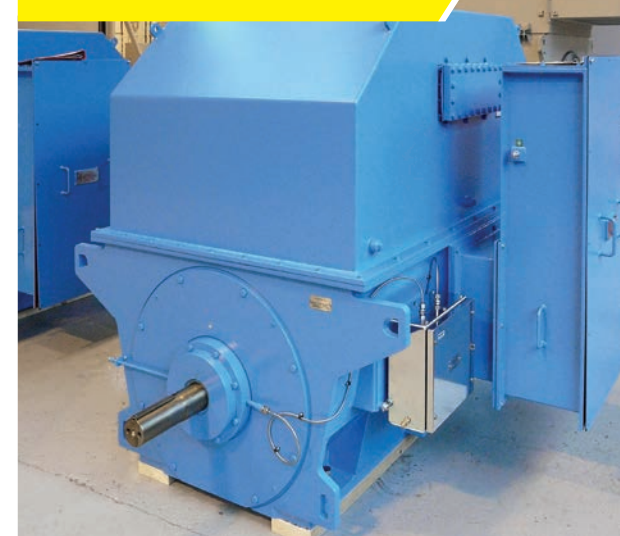
CHINA NUCLEAR POWER STATIONS

- Supplying the Chinese NPS market since 1995.
- Over 150 motors provided to different NPS's across China.
- Including over 100 motors to the three phases of Qinshan.
- Largest motor supplied for Circulation Water Pumps, these being 5 MW 2-Speed PAM motors.
- Class 1E motors supplied for various duties including Auxiliary Feed, Containment Spray and Low Head Safety Pumps.
- Also supplied Class 1E motors to Fangjiashan, Ning De, Fuqing, Ling Ao and Hong Yan He NPS.



PRODUCT OVERVIEW

CACA / CACW MOTORS



- CACA / CACW Motors available with certification for use in the nuclear containment area.
- Outputs from 250 - 1000kW.
- Voltages 415V to 11kV.

STANDARD HIGH SPECIFICATION MOTORS



- ATB LS standard product range, these motors can be used for Boiler Feed Pumps and other similar applications in the Safe Areas around a nuclear power station.
- Outputs 1-15MW.
- Voltages as others.
- Air or Water Cooled.

STANDARDS AND CERTIFICATIONS:

RCCE - RCCM - IEEE
ASME - IEC - NEMA
WINDING CERTIFICATES
CHINESE QUALIFICATION

