

WATER TREATMENT EXPERTS FOR THE NUCLEAR POWER SECTOR

Long term partnerships with customers,
supported by proven established supply chain.

Up to date knowledge and experience of
Nuclear standards and practices around
the world.

Ovivo equipment operating in more
than 50 Nuclear Plants worldwide.



**Adding value through
quality and reliability**

NUCLEAR POWER



CREATING VALUE IN WATER

THROUGH INNOVATION, CREATIVITY AND EXPERTISE

Ovivo is a company with technically and commercially excellent people who embody its core values. Our engineers innovate and lead our customers to a solution that offers best value. This value may be in the recovery of waste; the reuse of water; a holistic approach to water and wastewater or improved efficiency and operational costs; not just a low capital cost.

We place our engineers in easy reach of unrivalled heritage and experience and empower them to access this specialist knowledge wherever it exists globally within the company, providing a level of service that is fast, proven and accurate.

Ovivo defines its raison d'être in its vision: to create value in water. This is reflected in every aspect of our business; as we drive new efficiencies and value into the design of water and wastewater solutions. Core to this is our people; our brand humanizes and differentiates our global business; taking the emphasis away from equipment and focusing upon the "how" rather than the "what".

IT IS ALL PART OF OUR HERITAGE

Many of our customers, suppliers and agents have been working continually with Ovivo and its heritage brands

Brackett Green®

Kennicott®

Christ Water Technology®

for many years and this is key to our successes. The in depth knowledge of the issues that our customers face with water and wastewater treatment and our extensive product range enables us to offer complete flowsheet solutions either using our own in house developed technologies or those from our partners.

The fluidity of Ovivo's innovative culture, allows us to change shape to meet the needs of the sectors and to bring new efficiencies and lower lifetime costs.

CUSTOMER SERVICE

Ovivo supports its customers across the globe by providing OEM parts, technical advice and service.

With our extensive installed plant base our customers can rely upon our certified Suitably Qualified and Experienced Personnel For trouble shooting, shut down work and refurbishments. If required we can also offer site audits and regular service contracts to get assets into shape and ensure they are in optimum condition, running safely reliably and efficiently.



**"OUR
COMPETITIVE
ADVANTAGE AS
A CHALLENGER
BRAND."**

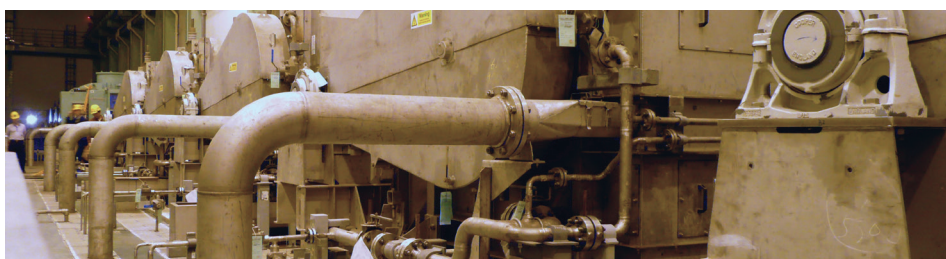
OUR ROLE IN THE NUCLEAR SECTOR

AS WE RESPOND TO AN IMPERATIVE, OUR THIRST FOR ENERGY, NUCLEAR POWER GENERATION IS GAINING EVER GREATER FOCUS ON EVERY CONTINENT.

Between now and 2050, the world's population is estimated to swell towards 9 billion, consuming more energy than the combined total used in all previous history. Under prevailing patterns of energy use, the results will prove calamitous.

As we recognize nuclear power is an indispensable asset to meet these needs, it would not be possible without vast amounts of water in its generation. Water heats, it cools, it lubricates, and conditions; and during phase change drive turbines; it washes away impurities. Ovivo is able to manage water use at every stage of nuclear energy production.

By offering the complete flow sheet of equipment and expertise in all areas we are able to reduce overall plant water consumption and running costs.



ENGINEERING EXCELLENCE

Ovivo has experienced engineers who are fully conversant with the use of Computerized Fluid Dynamics (CFD), Finite Element Analysis (FEA) and Three Dimensional Computer Aided Design (3D-CAD). These tools and our engineer's ability to help ensure robust and reliable equipment which is seismically qualified to meet the requirements of the nominated nuclear design code. Ovivo companies have been key suppliers to the nuclear industry since its inception in the 50's (see over).

SAFETY & ENVIRONMENT FOCUSED

Ovivo are fully conversant with the imperatives of Safety within the Nuclear Industry. Most Ovivo entities have robust business processes that are in line with the requirements of ISO18001 for Health and Safety Management and ISO 14001 for Environmental Management. Ovivo implement robust business processes to ensure this, including the use of Design Risk Assessments, HAZOP analysis and analyze Full Method Statements, to arrive at safe procedures for safe installation and commissioning at site.

QUALITY FOCUSED

Ovivo entities pride themselves on a robust quality culture with most operating quality management processes in line with the requirements of ISO 9001 to ensure timely delivery of equipment compliant with the relevant standards and requirements. Local quality control is implemented wherever we manufacture in line with thoroughly documented Quality Plans. Material traceability and document control systems support a right first time, every time ethos of operational excellence and constant improvement.

NUCLEAR STANDARDS

Ovivo have worked with the various required standards for Mechanical and Electrical design be they safety related or not. We have experience of supplying equipment to meet international technical requirements of ASME III, RCC-M/RCC-E and various national regulatory requirements such as the Finish STUK codes.

APPLICATIONS

Ovivo through its group of companies can help with the specification and design of most of the water treatment equipment found on a nuclear power plant. Including:

Cooling Water Intake Screening Systems

Drum or Band Type with Fish Recovery and Return.

Cooling Circuit Conditioning

Biodegradable treatment prevents biological growth.

Auxiliary Cooling Circuit Treatment

Fully Automatic, High Capacity Backwashing Strainers.

Condenser Protection

Fully Automatic Self Cleaning Debris Filters.

Condenser Tube Cleaning

Fully Automatic Ball type On-Line Tube Cleaning System.

Steam Generator Make-up systems

Purifying seawater, surface water or potable water feed sources. A multitude of robust technologies available including, pretreatment, membrane and ion exchange based processes.

Condensate Polishing

Particulate Filtration, Internal and External Regeneration based on CONESEP® technology.

Side Stream Filtration

Pressure Sand Filters to limit solids in cooling systems.

Wastewater Treatment

Bespoke systems of Ovivo equipment as required.

Storage Pond Water Treatment

Recirculation and removal of ionic impurities.

OUR REFERENCES

SUPPLYING THE NUCLEAR INDUSTRY FOR MORE THAN 60 YEARS

Reactor Cooling Water

1968 Hinkley Point B UK
1971 Heysham I UK
1980 Qin Shan Nuclear China
1980 Torness UK
1997 Ling Ao I China

Boiler Make Up

1958 Berkeley UK
1960's Hunterston B UK
1960's Kahl Germany
1961 Dungeness A UK
1963 Oldbury UK
1970's Gösigen Switzerland
1970's Gundremmingen B+C
1970's Heysham II UK
1973 Hartlepool UK
1980's Hunterston B UK
1980's Isar II Germany
1980's Leibstadt Germany
1980's MHK, Coburg Germany
1987 Sizewell B UK
2006 Leibstadt Switzerland
2007 Beznau I Switzerland
2008 Beznau II Switzerland

Condensate Polishing

1960's Hunterston B UK
1963 Oldbury UK
1970's Heysham II UK
1970's Isar I Germany
1970's Leibstadt Switzerland
1970's Loviisa II Finland
1970's Mühleberg Switzerland
1970's Philippsburg Germany
1970's Würgassen Germany
1980's Brokdorf Germany
1980's Daya Bay China
1987 Sizewell B UK
1988 Wylfa UK
1994 Würgassen Germany
1995 Leibstadt Switzerland
1997 Ling Ao I China
1998 Beznau II Switzerland

Cooling Water Intake

1957 HMS Vulcan UK
1958 Berkeley UK
1958 Hinkley Point A UK
1958 Hunterston A UK
1960's Sellafield UK
1961 Dungeness A UK
1961 Sizewell A UK
1963 Oldbury UK
1963 Wylfa UK
1966 Dungeness B UK
1967 Dounreay UK
1968 Hinkley Point B UK
1968 Hunterston B UK
1969 Hartlepool UK
1970 Doel Belgium
1971 Heysham I UK
1971 Ko-Ri Korea
1972 Hartlepool UK
1978 Koeberg South Africa
1978 Ko-Ri Korea
1979 Koeberg South Africa
1979 Winscale UK
1980 HMS Vulcan UK
1980 Torness UK
1985 Calder Bridge UK
1987 Sizewell B UK
1989 Indian Point USA
1994 Pickering OPG Canada
1994 Salem USA
1996 Maine Yankee USA
1997 Ling Ao I China
2001 Quad Cities USA
2003 Lungmen Taiwan
2004 Cooper USA
2004 Olkiluoto III Finland
2005 Ling Ao II China
2005 Olkiluoto III Finland
2006 Oyster Creek USA
2008 Diablo Canyon USA

Cooling Water Make Up and Treatment

1970's Leibstadt Switzerland
1980's Isar II Germany

1960's Hunterston B UK
1962 Dungeness A UK
1963 Oldbury UK
1968 Hinkley Point B UK
1971 Heysham I UK
1973 Hartlepool UK

Effluent Treatment

1958 Berkeley UK
1960's Hunterston B UK
1961 Dungeness A UK
1963 Oldbury UK
1968 Hinkley Point B UK
1970's Mühleberg Switzerland
1971 Heysham I UK
1973 Hartlepool UK

Pond Water Treatment

1958 Berkeley UK
1960's Hunterston B UK
1961 Dungeness A UK
1963 Oldbury UK
1968 Hinkley Point B UK
1970's Heysham II UK
1970's Hunterston B UK
1970's Mühleberg Switzerland
1971 Heysham I UK
1973 Hartlepool UK
1980 Torness UK

Reactor Water Treatment

1970's Brunsbüttel Germany
1970's Isar I Germany
1970's Krümmel Germany
1970's Leibstadt Switzerland
1970's Loviisa I Finland
1970's Mühleberg Switzerland
1970's Philippsburg Germany
1970's Würgassen Germany
1980's Gundremmingen
1980's B + C Germany
1980's Leibstadt Switzerland
2005 Olkiluoto III Finland
2008 Flamanville France



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