



IHS ENERGY

ESDU Nuclear Package

**Building safety and efficiency
into a growing power source**

As oil resources become more and more expensive, many countries are reassessing and re-evaluating the economic benefits and safety factors of nuclear power.

BENEFITS:

The ESDU Nuclear Package provides reliable engineering design methodologies for:

- The development of new builds
- Operation of nuclear facilities

Offering:

- Accurate engineering data
- Assurance of data validation
- Up-to-date methodologies that can be incorporated into the design and safety assessment processes.
- Methods developed by specialized experts under the guidance of technical committees

More than ever there is a desire, demand and value in building and operating environmentally safe nuclear power plants, and safely decommissioning them at the end of their operating life and dispose of nuclear waste. All of these efforts require reliable, accurate and efficient methods that reflect the lessons we have learned about nuclear power and engineering over the last 70 years.

The information available in the ESDU Nuclear Package complements the highly conservative design and operating standards and codes used in the nuclear industry. The ESDU validated methodologies provide a reliable source of engineering knowledge for design within the targets set by the International standards and codes. These methodologies are based on measurements, analytical and computational techniques, such as CFD and FEA, and represent the industry best practice in:

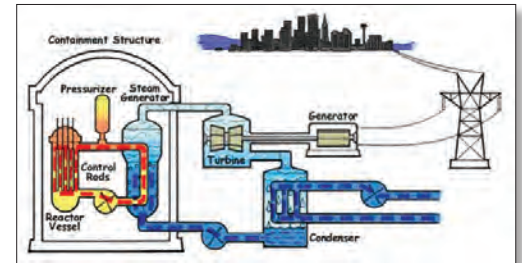
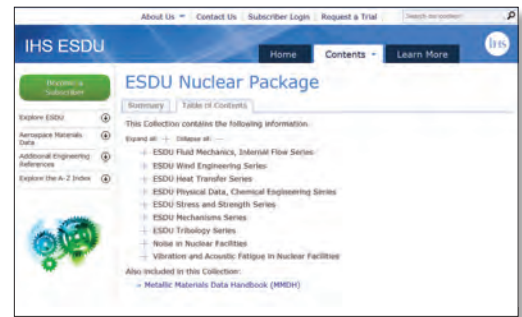
- Thermo-hydraulic and structural design of nuclear power plants and facilities
- Ventilation systems
- Suppression of noise in and around the facility
- Environmental impact

The ESDU data, methods, guides and software are easily accessible to nuclear engineers and designers, plant managers, nuclear consultants, thermo-fluids engineers and structure analysts. No matter what role or stage of the process you're in, you can rely on ESDU to support your nuclear design, safety assessment and operation.

Comprehensive Information for Nuclear Facilities' Processes

The ESDU Nuclear Package offers solutions at each stage of a nuclear facility process. Methods, data and software available include:

- Fluid Mechanics, Internal Flow - Fluid flow parameters and pressure loss in internal flow components
- Wind Engineering - Building and structure response to wind
- Heat Transfer - Evaluation of heat exchanges
- Physical Data, Chemical Engineering - Fluid physical properties
- Stress & Strength - Stress analysis of components
- Mechanisms - gears, CAMs (mechanical component that, by direct contact, transmits a desired motion to another mechanical component) and linkages
- Tribology - interaction of solid surfaces (friction, lubrication and wear)
- Noise - Predictions and reduction of noise in and around nuclear facilities
- Vibration and Acoustic Fatigue - Response and fatigue life of structures subjected to acoustic loading
- MMDH - Physical properties of metals



With plans underway to build more new nuclear plants in the Americas, EMEA and APAC regions, ESDU Nuclear can help ensure safety and efficiency is incorporated into every design, component and nuclear operation. Contact an IHS Representative to discuss how ESDU Nuclear can play a crucial role in the future development of power generation in your region

“We have used ESDU data and design methods for the past twenty five years. We have found benefits from using this information to support design and safety functions in the company. This is because the methods are continuously reviewed and updated and this gives us confidence that we are using the most up to date methods and that we are using validated data. This is particularly important when we make licence submissions to Regulatory bodies.”

- Senior Specialist in Heat Transfer and Fluid Flow, NNL

FOR MORE INFORMATION

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