Choosing a Career in the Nuclear Industry

Supporting the Future of Nuclear Power

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Part 4 My Involvement with Nuclear Energy

1. Self-Introduction

Learning about Nuclear Energy and Dedicating Myself to Facility Maintenance in Tsuruga



Naohiro Shimomura

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- **2017** Completed the graduate program in Nuclear Safety Engineering, University of Fukui
- **2017** Joined the Japan Atomic Power Company (JAPC)
- **2023** Deputy Senior Staff, Mechanical Maintenance Group, Plant Maintenance Office, Tsuruga Power Station
- **2026** Senior Staff, Mechanical Maintenance Group, Plant Maintenance Office, Tsuruga Power Station

Responsible for planning and implementing all stages of mechanical equipment maintenance and improvement projects

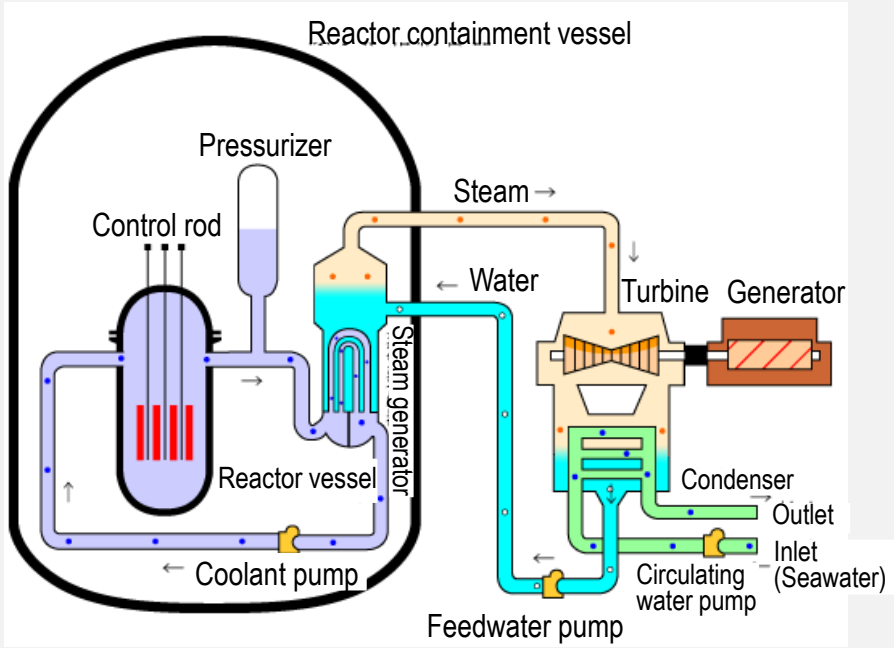
2. Work Details

Operations at the Plant Maintenance Office

A power plant is composed of tens of thousands of pieces of equipment, ranging from large-scale systems such as reactors and turbine generators to smaller items such as building lighting.

The Plant Maintenance Office carries out “maintenance” operations to ensure that the plant remains in optimal condition at all times. To maintain equipment performance, these operations involve securing the necessary budgets for scheduled disassembly inspections, functional checks, and equipment modifications or replacements; preparing construction work plans and equipment inspection plans; and designing equipment and supervising work associated with modifications and replacements.

Unit 2 (Pressurized Water Reactor)



PDCA Cycle for Maintenance Operations

Plan
Planning maintenance
Work plans, budgets, contracts

→

Do
Implementing maintenance
Preparation, site management, safety assurance

→

Check
Checking results
Verification of work records and reports

→

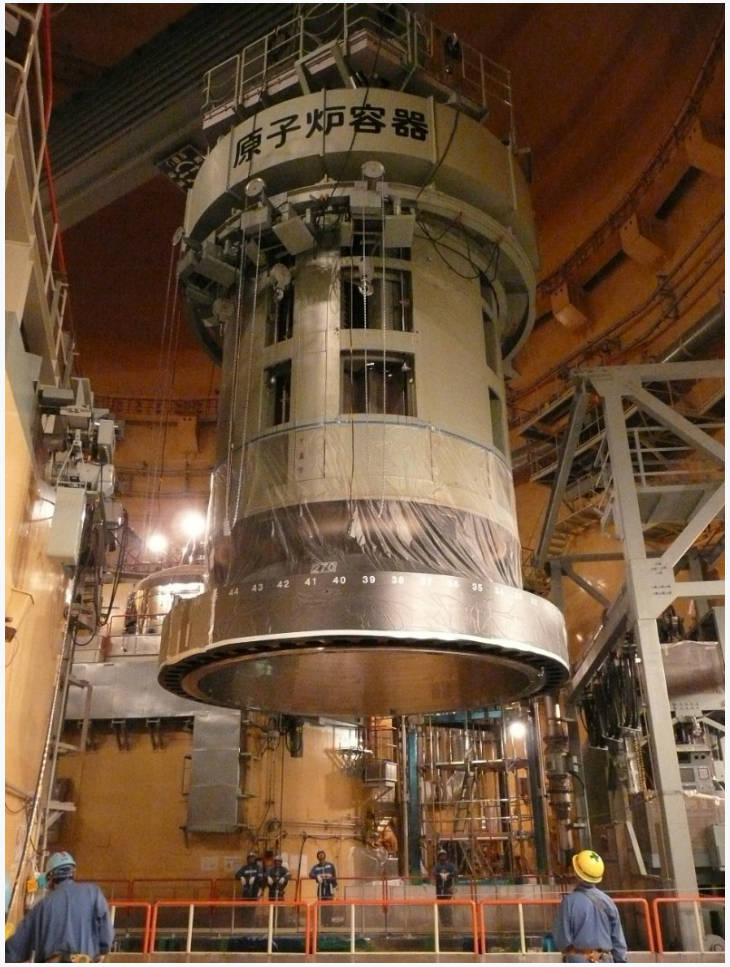
Action
Incorporating results into future maintenance
Evaluation of results and review of plans

2. Work Details

Examples of Major Projects Conducted by the Plant Maintenance Office (Mechanical Group)

Example 1: Replacement of the reactor vessel head

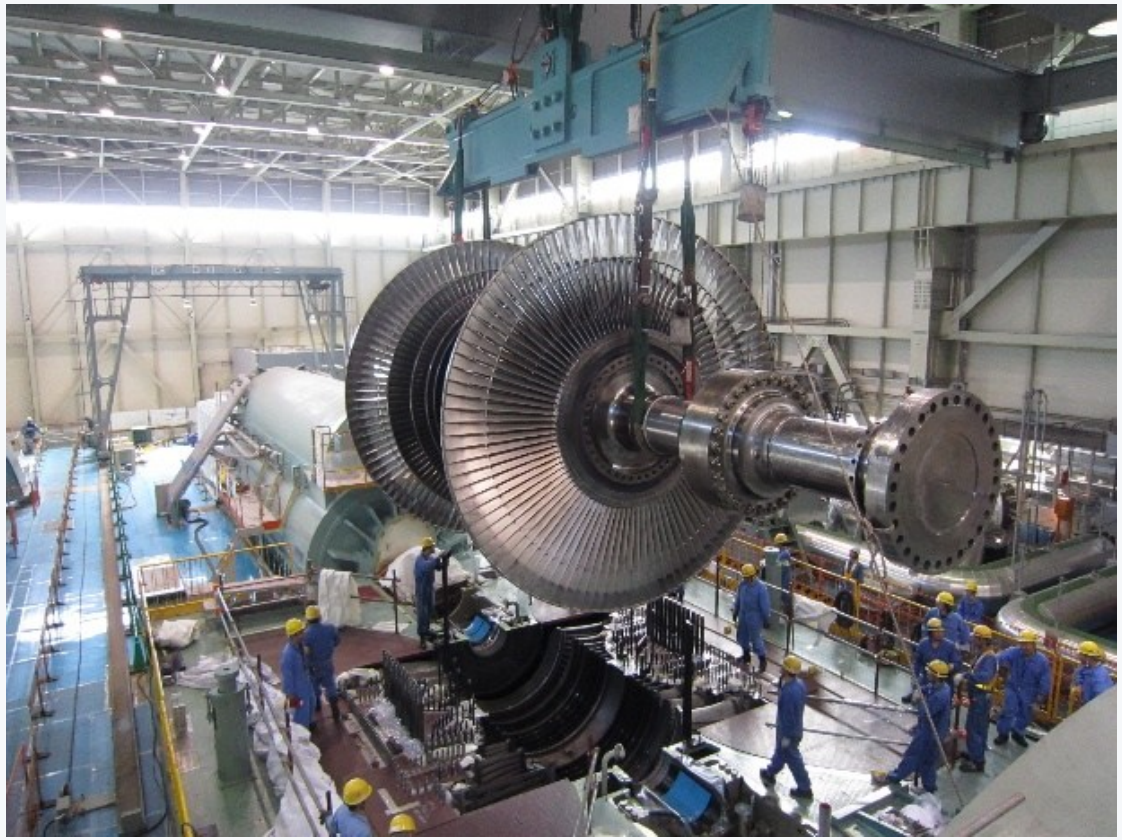




2. Work Details

Examples of Major Projects Conducted by the Plant Maintenance Office (Mechanical Group)

Example 2: Overhaul of main turbine





2. Work Details

Examples of Major Projects Conducted by the Plant Maintenance Office (Mechanical Group)

Example 3: Disassembly inspection of the component cooling seawater pump





Why I Chose Nuclear Energy

1

Contributing to Social Infrastructure

Stable supply of energy supporting daily life

2

Taking on the Challenge of Nuclear Safety

A job that demands the highest levels of safety

3

Professional Growth as an Engineer

An environment that provides a broad range of knowledge and experience

I wished to pursue a career that would allow me to contribute to society while developing my professional skills.

4. Connecting Nuclear Energy to the Next Generation

When considering the future of energy,
there is a role that only nuclear power can play.

Rather than just discussing general principles, what can I contribute through my equipment maintenance work?

Future energy challenges

- Ever-increasing electricity demand
- Response to decarbonization
- Supply vulnerable to global events

Roles expected of nuclear energy

Stable supply	Ensuring a stable supply of electricity
Decarboni-zation	Reducing CO_2 emissions from power generation
Technology & people	Passing on accumulated knowledge to the next generation

Perceived Value

What we can achieve on-site

What should we do?

- **Stable supply**
  - Ensuring reliable maintenance of facilities
  - Monitoring on-site conditions, identifying early warning signs, and improving maintenance quality
- **Technology & people**
  - Passing on decision-making insights and on-site know-how
  - Recording and sharing not only conclusions but also the rationale behind decisions

As a member of the nuclear industry, I am committed to passing on the value of nuclear energy to future generations.

Thank you for your attention.

