

NUSOURCE PARTNER HIGHLIGHT



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In 2016 NuSource entered into a teaming agreement with Watlow to provide the full line of safety-related (10CFR50 Appendix B), ASME Section III and Commercial Grade Watlow replacement parts for nuclear power plants in the United States. The agreement enables NuSource to provide “Like for Like” components, which is the most cost effective method for replacing components in safety-related applications.

Through the NuSource (N) Stamp and acting as the “Design Authority”, the NuSource/Watlow team can also replace other competitor brand obsolete heaters.

Since the introduction of its nuclear pressurizer heater in 1966, Watlow has been an OEM source for designers and contractors who specialize in serving the nuclear power industry.

FEATURED PRODUCTS

CRITICAL APPLICATIONS

- PRESSURIZER HEATERS
- EDG IMMERSION HEATERS
 - JACKET WATER HEATER
 - LUBE OIL HEATER
- BORIC ACID TANK HEATING

BALANCE OF PLANT

- DEGASSER CONDENSER HEATERS
- HYDROGEN RECOMBINER HEATERS
- FINBAR HEATERS

For critical application heaters and Watlow trusted design, your new source is NuSource.





CRITICAL APPLICATIONS

Replacing Obsolete Heaters

The NuSource / Watlow team is capable of offering replacement heaters with supporting Design Calculations and act as a “Design Authority” to replace ANY brand Immersion Heater.

EMERGENCY DIESEL GENERATOR

LUBE OIL HEATER

The Lube Oil heater maintains the lubricating oil at or near the generator’s normal operating temperature.

JACKET WATER HEATER

The Jacket Water heater is energized when the engine is in standby mode. The heated coolant warms the cylinders and other engine components to minimize stress during initial operation.



PRESSURIZER HEATER

NuSource can provide a “Turnkey” solution for replacement Pressurizer Heaters without the support of an NSSS provider . To date Watlow as provided more than 4,000 Pressurizer Heaters that are installed in Nuclear Power Plants worldwide.

REPLACEMENT HEATER PACKAGE INCLUDES:

- Certified ASME Code Design Specification
- ASME, NB Class 1, Certified Components
- ASME Code Design Report
- Fatigue Analysis
- ASME NPT Code Stamped Hardware

BORIC ACID TANK HEATING

The heaters keep the boric acid solution from freezing. Boric acid is used to reduce the probability of thermal fission by absorbing some thermal neutrons.



BALANCE OF PLANT

Like-for-Like Replacements

Most original suppliers of Immersion Heaters are no longer Nuclear Qualified. Solve the problem of obsolete heaters with Watlow replacement parts, now provided by NuSource, LLC.

FINBAR HEATERS

Control Building Air Handling (CBA) System Emergency Cleanup Filters: Heaters keep the relative humidity of the CBA System's air stream at 70% or less at all times.

HYDROGEN RECOMBINER HEATERS

Air passes over the heaters by natural convection. As the warm air passes over, the elements is heated to 1100-1300 ° F - causing the hydrogen and oxygen to recombine.

DEMINERALIZED WATER TREATMENT

The electric heater is used to heat water in the demineralization purification system in preparation of extra pure demineralized water. The extra pure water is used to fill and/or drain the reactor vessel(s).

OTHER APPLICATIONS

- Balance of Plant Thermal Systems
- Test Systems
- Main Turbine Lube Oil Conditioning
- Nuclear Waste Treatment
- Steam Turbine Temperature Sensors
- Superheated Steam for Packing Glands



ENGINEERING EXPERTISE

NuSource offers our clients more than 50 years of Appendix B design, manufacturing and project experience.

- Custom Engineering
- Reverse Engineering
- NSSS Components
- Safety-Related I&C and Mechanical Hardware
- Custom Hardware
- Precision Machining
- Large or Small Fabrication Projects
- "First of a Kind" projects



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The NuSource Quality Assurance Program meets the highest standards in the field, including 10CFR50 Appendix B and the ASME Boiler and Pressure Vessel Code "N" Stamp. These accreditations allow NuSource to design and fabricate almost any item needed to support the safe operation of a nuclear power plant.

ASME Section III (NCA 3800/4000)

10CFR50 Appendix B

ASME NQA-1

ANSI N45.2

10CFR 21

NUPIC Audited

NIAC Audited



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