
PROBLEM 1-1N QUESTION

Worldwide Utilization Of Power Reactor Technology

Thermal Reactor Moderator-Coolant Matrix (attached page 2)

For each position, identify either:

1. The principal Technical reason that this moderator-coolant combination cannot be exploited, or
2. The name of one (or more) reactor plants that have been built using this combination.

References For Thermal Reactor Types

"List of operational Nuclear Power Plants, " *Nuclear News*, August 1992.

Dietrich and Zinn, *Solid Fuel Reactors*, Addison-Wesley Pub. Co., Reading MA, 1958.

Directory of Nuclear Reactors, International Atomic Energy Commission, Vienna, published annually.

Kuljian, *Nuclear Power Plant Design*, A.S. Barnes & Co., Cranbury NJ, 1968.

Safety Issues at Defense Production Reactors, National Academy Press, 1987.

Zinn, Pittman, Hogerton, *Nuclear Power, USA*, McGraw-Hill.

This is only a partial list of the resources available for this assignment. If there are any sources that you found to be particularly helpful, please give the name of the reference to the TA for future use.

WORLDWIDE UTILIZATION OF POWER REACTOR TECHNOLOGY THERMAL REACTOR TYPES

Coolant Moderators ↓	Light Water		Heavy Water		Organic HB-40 Santowax-OM	Gas Hydrogen, Nitrogen, CO ₂ , Helium	Liquid Metal NaK Na
	Pressurized	Boiling	Pressurized	Boiling			
Light Water							
Heavy Water	V E S S E L						
	T U B E						
Graphite							
Beryllium							
Organic							