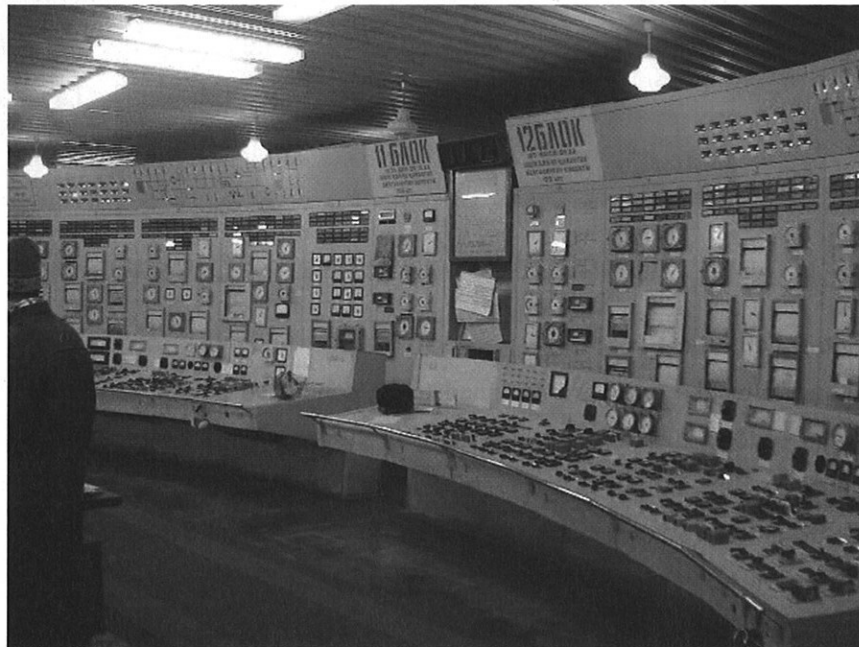


demand. However, this also shows that the operators have enough technical skill to keep old equipment running stably without depending on automatic controls, which is a testament to the high level of skill of the power plant's staff.

Picture 5.1-7 shows the central operating room. Various adjustment valves and most dampers are controlled manually from the central operating room. When the unit load is stable, it is enough for the operator to monitor the gauges, but on occasions such as an emergency shutdown, the work of the operator increases, making accurate operation impossible, and increasing the possibility of destabilizing unit operation. The load on the equipment is thus unduly increased, which increases the danger of shortening the equipment's service life. Therefore, the units should be thoroughly automated, not only to improve responsiveness but also to increase reliability.

Because the equipment has been in use for more nearly 40 years, and there are many parts that cannot be replaced, in the next few years operators will likely be required to perform a greater range of tasks manually and the amount of manual work required on site is also likely to increase.



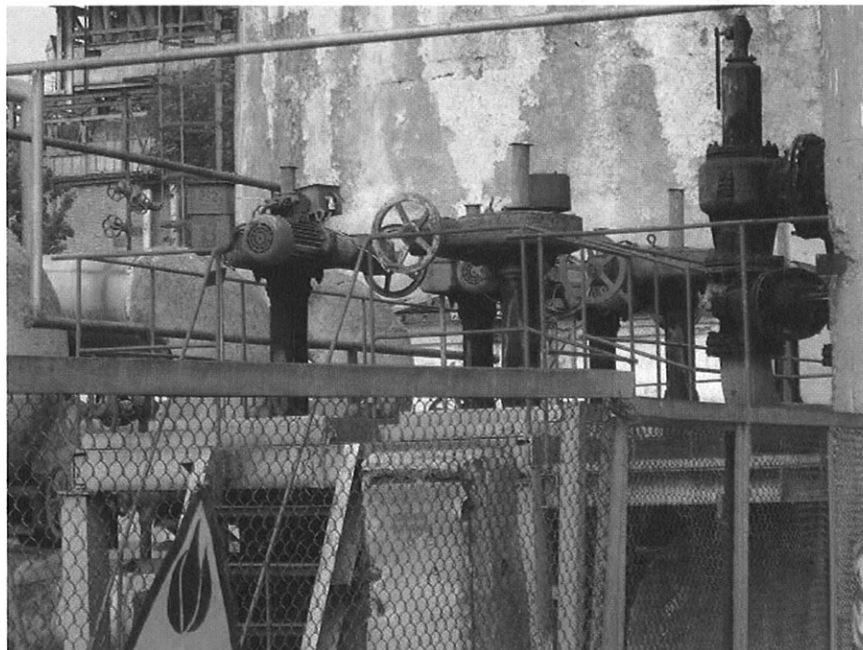
Picture 5.1-7 Operating Room

5.1.6 Other Equipment

a. Fuel Gas Equipment

Most of the fuel used in the power plant is natural gas that is transported via pipeline. The natural gas is from Uzbekistan, which has vast reserves, indicating a stable supply for many years to come. Until it reaches the power plant, the pipeline is a welded structure, so the

risk of gas leaks is low. However, once the pipeline enters the power plant, there are many valves and pipe connections, from which gas leaks are possible. Even so, burners of the boiler are joined with a frame of boiler, which is grounded within the plant area, there are no measures in place to prevent explosions, nor are there grounding devices for eliminating the static electricity when people approach the boiler burners and the various fuel gas valves, or sparkless jigs for use when manually opening and closing valves. These circumstances leave open the possibility of causing a fire by igniting the fuel gas from static electricity sparks if there should be a gas leak, so remedial measures are necessary. Picture 5.1-8 shows the receiving equipment for the fuel gas.



Picture 5.1-8 Fuel Gas Receiving Equipment

b. Insulating Sheets

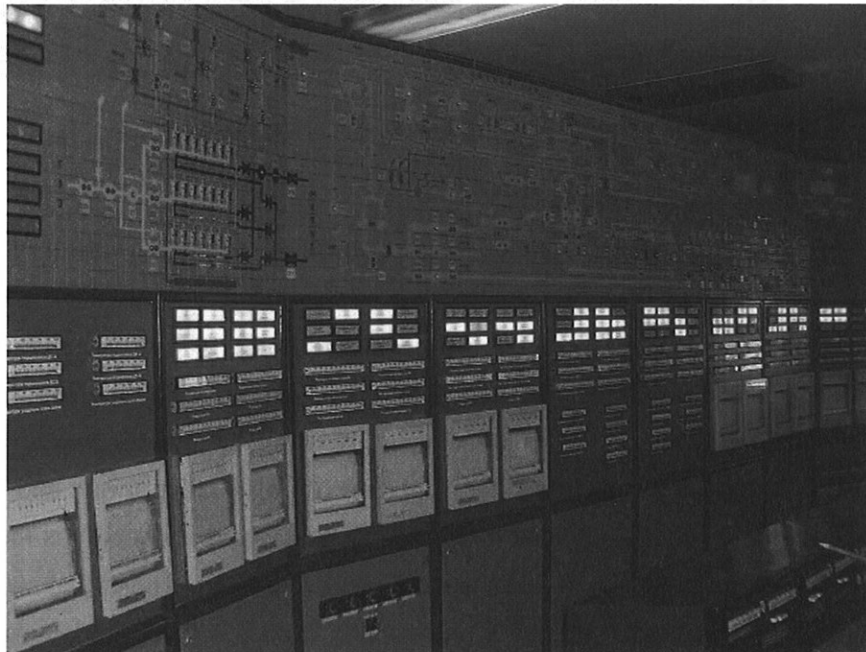
In order to prevent the hot water and steam in the pipes from losing heat, the pipes are normally insulated with various materials of sufficient thickness to prevent direct contact with the atmosphere, and the outside of the pipes is further covered in sheet metal. However, within the grounds of the DC "TASHTPP", there are many places where the covers have been removed from the pipes, exposing the insulating material. Among these, there are some places where the insulation has also fallen away, and the hot pipes are directly in contact with the atmosphere. This means that not only is the heat held by the fluid in the pipes lost to the atmosphere; there is also the danger that staff members could be burned. Remedial measures are urgently needed. Picture 5.1-9 shows a pipe where the insulation has been lost.



Picture 5.1-9 Pipe Missing Insulation

c. Simulation Equipment

Picture 5.1-10 shows the simulation operating equipment that the employees of the power plant are building themselves in the power plant office building. Part of the equipment is working, but it will take some time before it is complete. This equipment will improve the operating skills of operators, so the early completion of the equipment is desirable.



Picture 5.1-10 Simulation Equipment