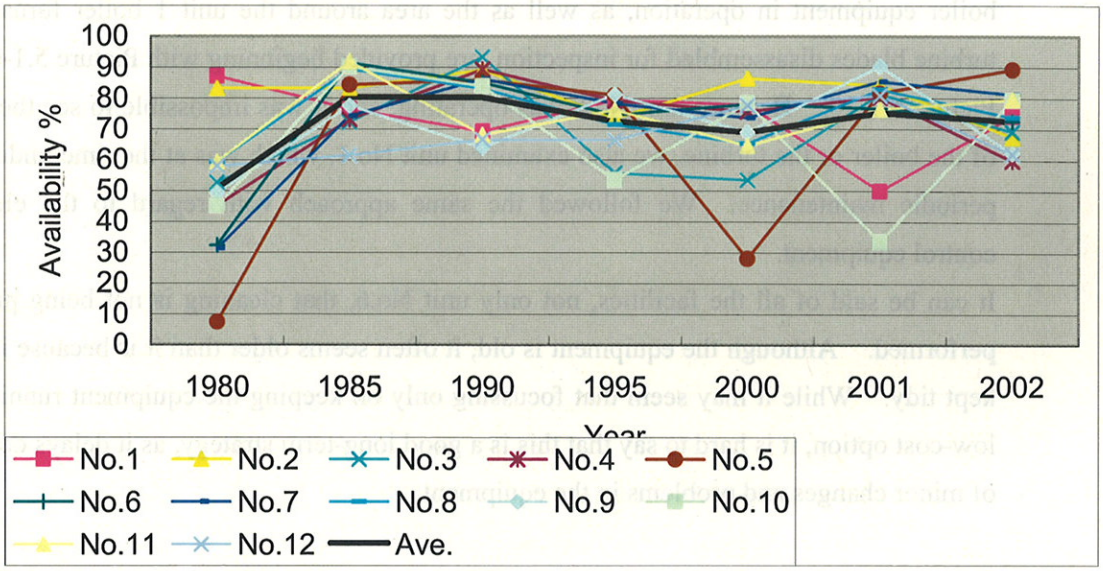


Figure 5.1-5 Equipment Availability Based on Operating Hours

a. Important Inspection Unit

In discussions with DC "TASHTPP" representatives, it was decided that we would emphasize unit No.6 in our study. From 2000 to 2002, there were seven emergency shutdowns (none in 2000), which are broken down as follows.

(a) 2001

(i) Overheated No. 4 bearing, turbine generator

(ii) Wear, No. 3 bearing, turbine generator

(iii) Hydrogen leak from shaft seal part due to mechanical wear of No. 5 bearing packing, turbine generator

(iv) Hydrogen leak from shaft seal part of overused No. 6 bearing packing, turbine generator

(b) 2002

(i) Hole in angle joint for piping connecting to the casing of the primary superheater spray desuperheater, due to overuse.

(ii) Defective shaft for B-FDF

(iii) Hole in air heater lubricant pump outlet

Examination of these causes of emergency shutdowns reveals that most were caused by consumable parts having been used past their life time, and the deterioration of parts due to continuous operation.

The results of a visual inspection of unit No.6 are outlined below, and photos of the unit 6

boiler equipment in operation, as well as the area around the unit 1 boiler furnace and turbine blades disassembled for inspection, are provided beginning with Picture 5.1-6 up to Picture 5.1-10. Because unit No.6 was operating, and it was impossible to see the inside of the boiler or the turbine, we also examined unit No.1, which was at the time undergoing periodic maintenance. We followed the same approach with regard to the electrical control equipment.

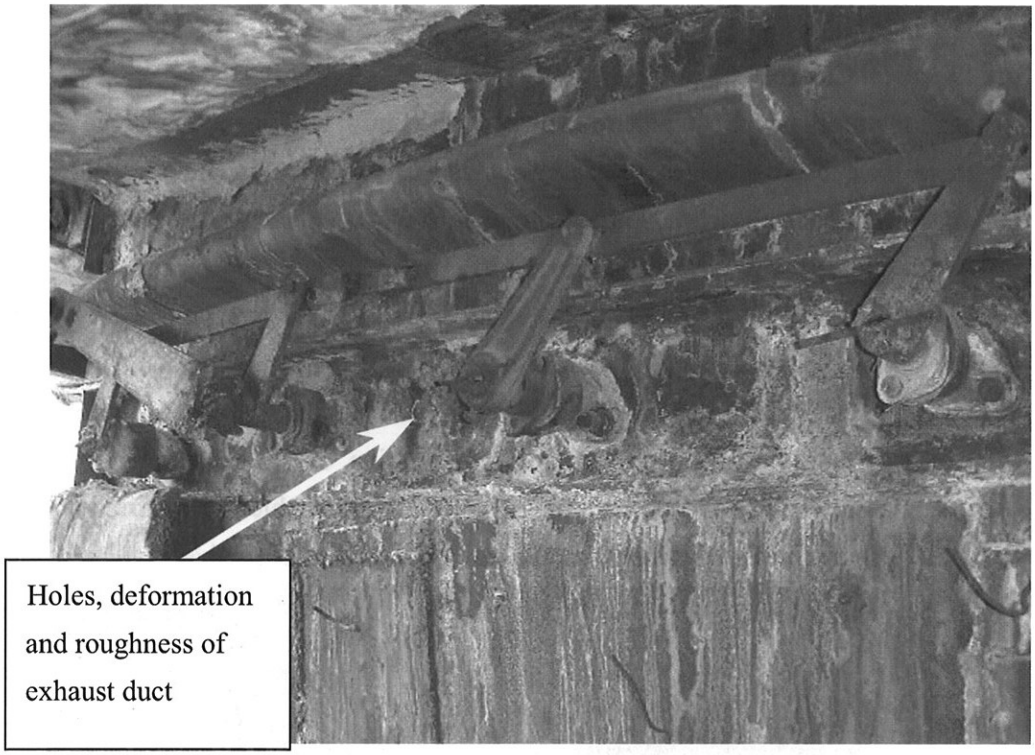
It can be said of all the facilities, not only unit No.6, that cleaning is not being properly performed. Although the equipment is old, it often seems older than it is because it is not kept tidy. While it may seem that focussing only on keeping the equipment running is a low-cost option, it is hard to say that this is a good long-term strategy, as it delays detection of minor changes and problems in the equipment.

b. Mechanical Equipment

It can be said generally of the mechanical equipment that it is aging and looks it. Functionally, deterioration is noticeable, in the form of air and gas leaks from various parts of the boiler equipment, and serious decreases in condenser vacuum levels and steam leaks in the turbine equipment. The measures described above are needed to resolve these problems.

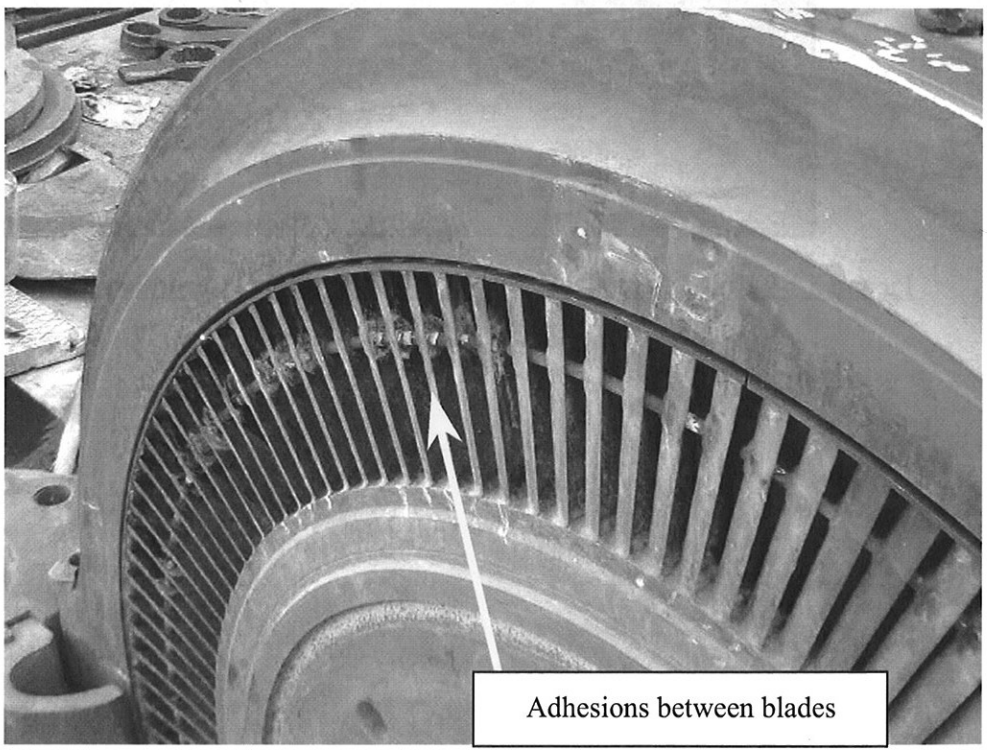
Picture 5.1-6 Cracks in Unit No.6 Boiler Ceiling

(The red heat of the furnace is visible.)



Picture 5.1-7 Unit No.1 Exhaust Duct

(With the insulation is removed, there is significant deterioration and many holes due to corrosion.)



Picture 5.1-8 Unit No.1 Medium Pressure Turbine, Final Group of Moving Blades