

Slide No. 1



Damaged fire-tube

Amount of Loss	Swiss Francs 40,000
Damaged Equipment	Fire-tube boiler installed in a brewery - Output: 370 kW - Max. pressure: 150 lb/in ² (= 10.3 bar) - Oil fired
Cause	Lack of feed water
Short Description	Deformation and cracking of fire-tube as a result of overheating
Comments	There are two identical steam boilers at the plant, one being on permanent stand-by. A common feedwater-pump is regulated by the water level controller of the operating boiler. On changing the operational mode from one boiler to the other, the operator forgot to switch the feed pump to the appropriate control system. Consequently, the pump was not activated when the water level fell. Under normal circumstances, the low-level water safety device would automatically shut down the plant. In this case, regrettably, it failed.