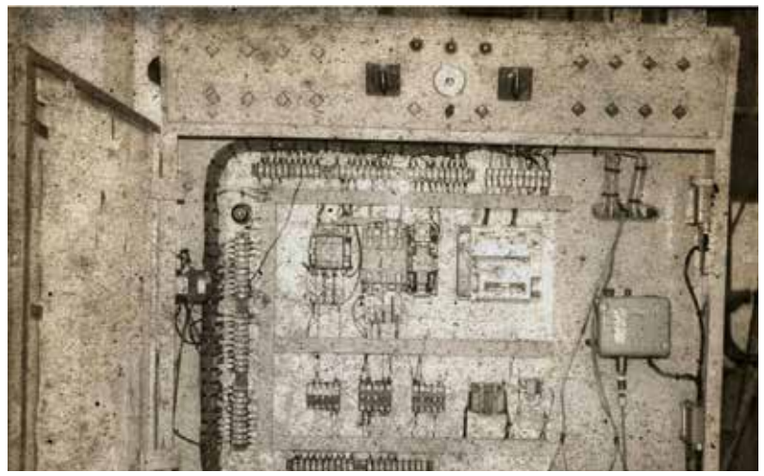
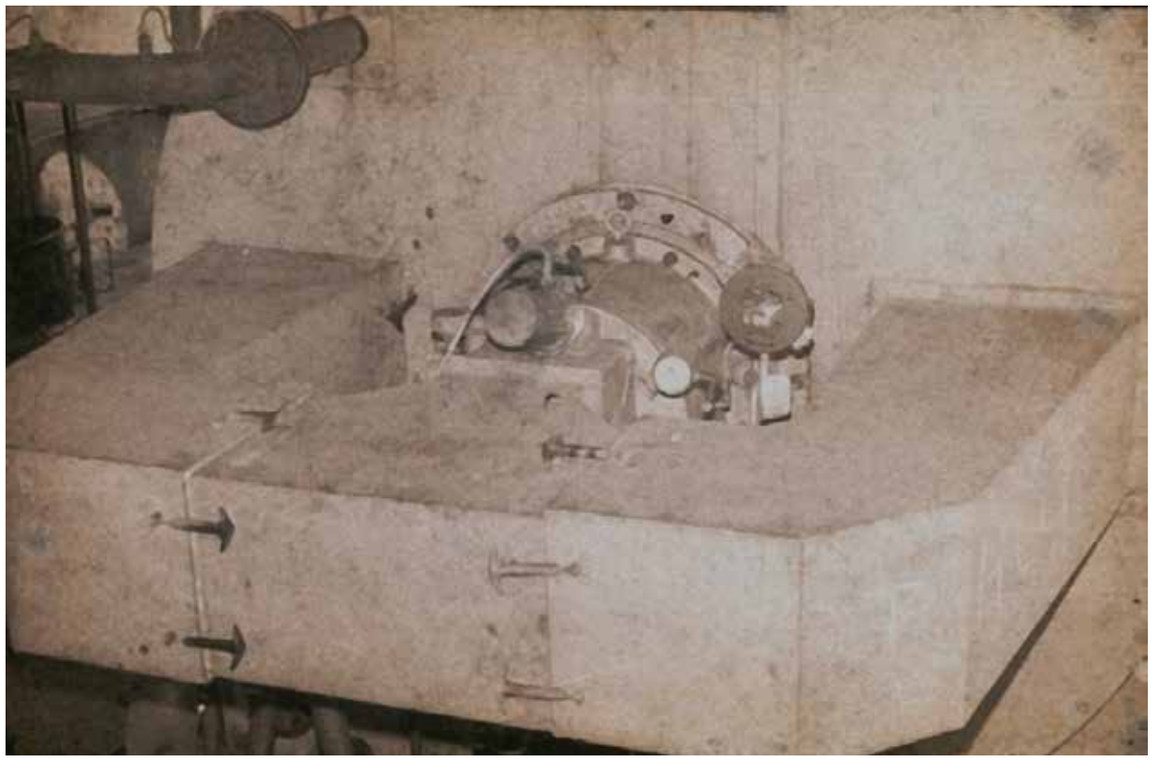
Boiler for Export

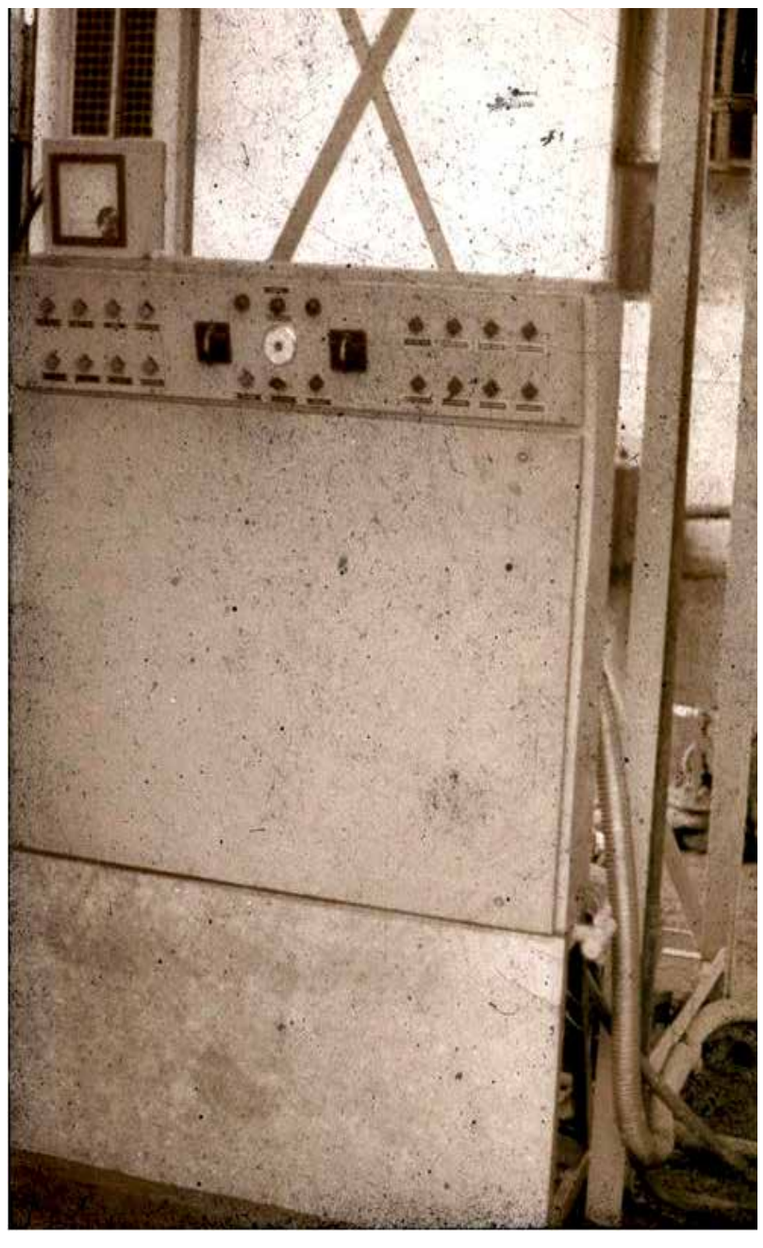
design: a g rao

Wanson (India) became Thermax around 1977. Thermomatic boiler was 3rd in the series of 3 boilers designed by IDC. The 10feet dia. boiler was for export to Canada. The management was keen on contemporary look for the Boiler. The boiler was fabricated. With functional products of this kind it seemed industrial design contribution would not be significant. Off course, there was control box and the panel which can transform the product. Boiler had unwieldy connections. It lacked a visual flow and functional definition as a product. Each element like, body and base were seen as independent units to perform its engineering task. Body was cylindrical optimized for volume and ease of fabrication. Base was a series of flanges., with little visual weight to support a massive cylindrical body.



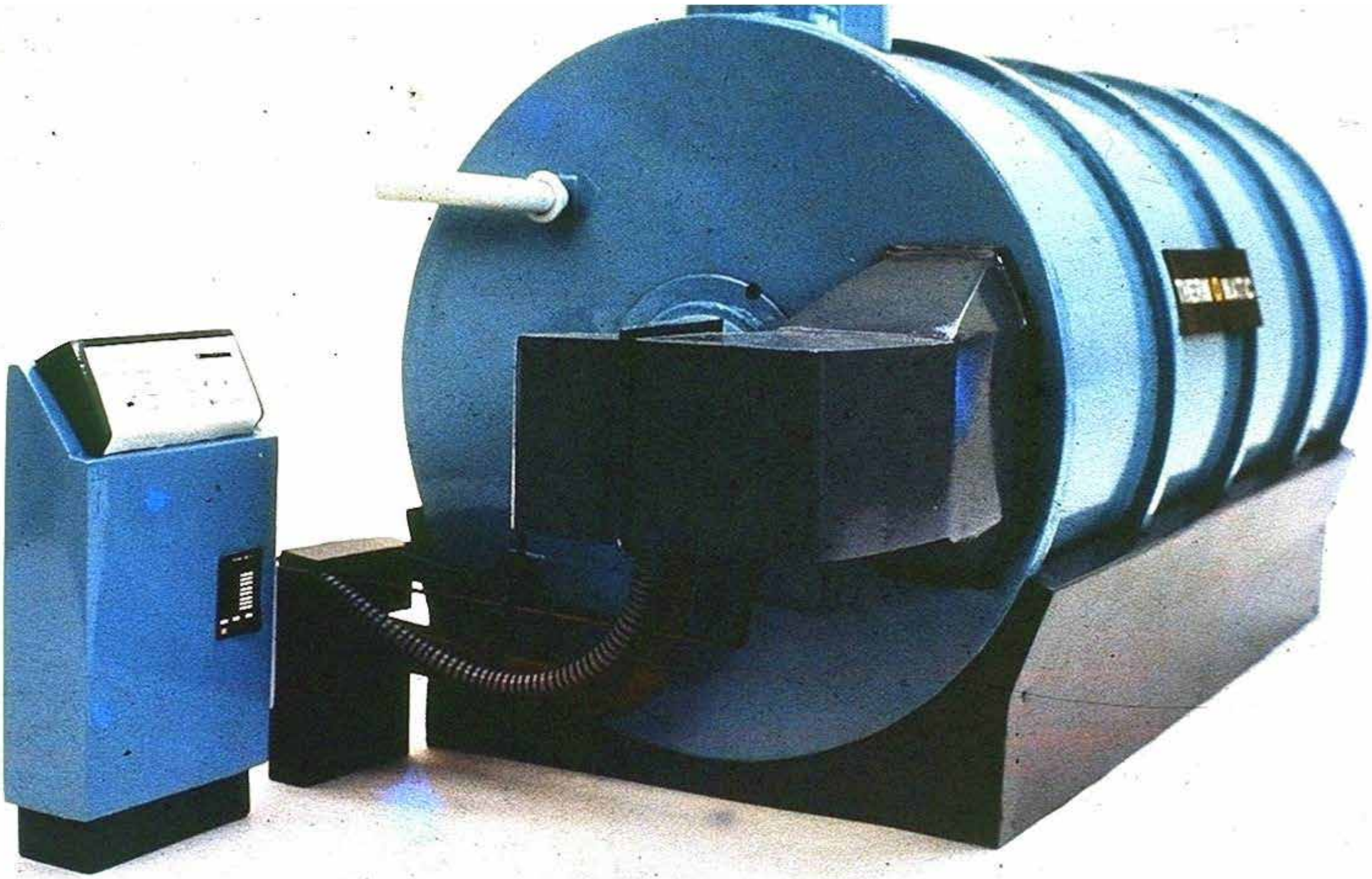
The control panel was thin in depth, lacked the visual weight as related to the Boiler! controls were not grouped functionally. They were distributed on either side of central line to make it symmetrical. The panel was sloping inwards, making it difficult see and operate. the chin down panel was not speaking out!

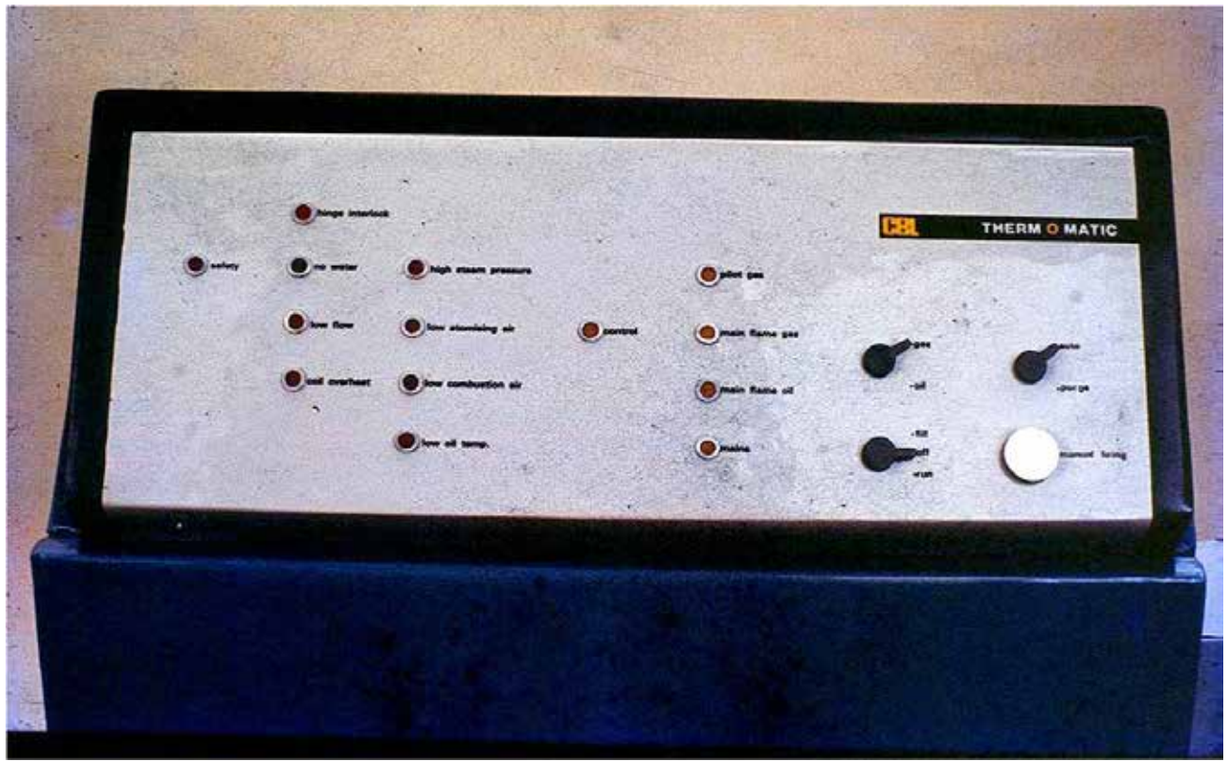




The new design

When i started designing, I met all the people concerned. The burner unit was imported. So need to be kept as it is. Production engineers were complaining ablut leakage in the duct joints. 'Is it possible to improve the joint?' Management was clear, they wanted results in 3 months with better looks! I was not happy with front ducts. They had no flow with the body! I started asking , why two ducts, which lead to 3 joints to be opened for the burner maintenance! After consulting a heat transfer expert one duct was eliminated, and the area at the starting point was doubled. The cost of one duct got reduced. it became possible to achieve better integration of 'Form'.
The base was covered with a sheet metal part. With a darker colour shade it gave a stable look to the boiler. After looking at the standards, I found there is ISI colour code for pipes carrying hot and cold gases. this was adopted. A base was created for connecting all the pipes and cables. This brought order to the working.





Control Box

The proportions of the control box was changed to make it healthy. Depth was increased .A base with dark colour was added. This brought a stable look to the box. The control panel slope was reversed to make it ergonomically easier to operate. This also became easy to produce with a standard shearing machine. The inward slope also increased scrap. A top box differentiated with a darker colour housed the controls. The darker colour also provided visual frame for the control knobs. The controls were segregated as per the function and a visual grouping was made with ergonomic principles of operation.Visual flow and balance was achievd by placing the logo with increased visual weight.

With these modifications a contemporary look was brought to the control box. This also helped to convey the sophisticated technology used in the central burner.