

## **Failure Investigation Data Sheet**

Clients are requested to furnish information (Wherever available) as outlined in the below prior to the start of the **failure analysis** assignment.

1. Name of the component with identification number.
2. Description of the failure with photograph of failed component & system, photograph of the system where failure has occurred. Close up view of the failure.
3. Materials of component with specification
4. Original dimension of the component
5. Schematic representation of the process & position of the failed component
6. Mechanical drawing of the component
7. Detailed process description with importance on critical parameters
8. History of failure in chronological order in case of repetitive failure
9. For boilers / furnace / reformers / fad / waste incinerators / heat exchanger failures:  
Details of furnace atmosphere with process parameters fuel used with air to fuels ratio or other parameter  
stack gas analysis of fluid with pressure and temperature and flow rate  
  
For boiler failures, analysis of bfw, blow down, sequence of dozing chemicals and it's quantity, furnace soot  
analysis, dissolved oxygen in the system.
10. Service life of the component before failure and designed life.
11. Process parameters, like flow rate, heat exchanged, pressure, temperature with operational and designed
12. Scale analysis report or scale samples, fluid samples and it's analysis
13. Inspection report of the component taken during shutdowns of all previous years, like visual observation,  
thickness hardness data or any other NDT data
14. In case of mechanical failures provide all loading parameters with operational details like RPM and expected  
variation of loads
15. Test certificate of the component
16. Whether the component is imported / indigenous