**INDE 6336 Case 3**

Gasket failure is an important topic in the reliability of various industries. Many researchers have studied it from metallurgical, applications and many other aspects. You are hired as a consultant to assist a manufacturing facility with its asset plan to understand how they can better increase the reliability of their equipment’s by improving the failure of gaskets. While working on the case, one of the main findings was that the culture in the company is to buy gaskets in bulk and change them every time a failure is detected. The impact was varying- from 30 to 70% production loss, depending on where the gasket failure occurs.

Deliverables

Each team is expected to put together a presentation (5-8 pages) that looks at this topic, analyzing data provided below, brining lessons learned and recommendations. Suggested topics are provided below (you are definitely welcome to adjust them).

* Data analysis as well as ASSUMPTIONS made- be clear on the techniques used in your analysis. You can use any software you want. Reliasoft is a plus.
* Reliability analysis methods ( the ‘why’ method, FTA, etc.)
* Proposed changes and actions needed.
* Best preventive and proactive maintenance techniques ( new technology, intervals, etc.)
* Your team’s solid vision, goals and initiatives and activities to realize those goals along with a reasonable timeline (refer to the Journey Chapter 7 and 10). Managerial/organizational impact is a plus.
* References

Data provided

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | 29/07/2014 | External Leakage | Wear/Fatigue |
| **B** | 15/10/2013 | External Leakage | Fouling |
| **C** | 01/12/2009 | Leakage | Contamination / Foreign Particles |
| **D** | 12/11/2021 | Leakage | Contamination / Foreign Particles |
| **E** | 11/11/2015 | Leakage | out of spec gasket |
| **F** | 11/11/2015 | Leakage | out of spec gasket |
| **G** | 03/03/2016 | Leakage | Contamination / Foreign Particles |
| **H** | 27/03/2012 | defective | corrosion |
| **I** | 05/07/2012 | leaky flange | defective gasket |
| **K** | 01/06/2012 | Leakage | External Corrosion |
| **L** | 01/02/2012 | Leakage | Contamination / Foreign Particles |
| **M** | 01/11/2011 | Leakage | Contamination / Foreign Particles |
| **N** | 25/02/2014 | Internal Leakage | Contamination / Foreign Particles |
| **O** | 17/04/2013 | Leakage | wear |
| **P** | 10/11/2015 | External Leakage | wrong spec gasket |
| **Q** | 29/04/2015 | Leakage | External Corrosion |
| **R** | 08/10/2015 | Leakage |  |
| **S** | 24/04/2017 | Leakage | Contamination / Foreign Particles |
| **T** | 13/11/2017 | Leakage | thread leakage |
| **U** | 24/02/2016 | Leakage | Contamination / Foreign Particles |
| **V** | 17/12/2014 | Leakage | Contamination / Foreign Particles |
| **W** | 16/09/2013 | Leakage | External Corrosion |
| **X** | 02/04/2015 | Leakage | Contamination / Foreign Particles |