

## **CHAPTER 3**

# **PROBLEM STATEMENT**

### **3.1 Existing System**

The state-of-art inspection methods include magnetic flux leakage, ultrasonic testing, and long range guided wave inspection. All these methods have their own limitations, such as determination of stress corrosion cracking (SCC), limited range of inspection. Inspection of pipeline system ranging a few kilometres may not be efficient using most of existing methods.

### **3.2 Proposed System**

From the above, it may be concluded that a significant amount of research was carried out in corrosion identification using many state-of-art inspection methods. In this system, an attempt is made to identify corrosion using machine learning and image processing

### **3.3 Problem Statement**

To develop an application based on image processing and machine learning for pipe corrosion recognition.

### **3.4 Objectives**

The main objective of our project is to develop a classification model to identify the pipe corrosion and quantification of corrosion using a Machine learning and Image processing platform.