

CHAPTER ONE

1.1 General introduction:

Since the beginning of humanity rises up the need to maintain the simple tools and equipment. But the maintenance management system concept came with the industrial revolution in the century to avoid the long time which generate with breakdown of production and the probability of losing the machines and human resources because of unexpected failures.

The major concept of maintenance was just as repairing process but this system comes to include new types of maintenance such as preventive and predictive maintenance. And with time it has been developed to be a complete system gathering all types of maintenance. Until these days there is a developing in systems of maintenance management as a Part of industrial management.

A cross all industries, maintenance departments are typically viewed as a cost centers. when the economy struggles, they look at you and your department for profit saving layoff. Very few business executives see the real value that maintenance plays in daily operations especially in Sudan because it's one of the developing countries and suffering from weakness in industrial management system. The truth is maintenance departments keep operations from bottle-necking. They ensure

things run smoothly and efficiently which has a direct effect on an organizations bottom line.

Within the developing of technology computers became a necessary value which can use it in maintenance field too. A Computerized Maintenance Management System (CMMS) is a way to optimize the maintenance works by using a computer program which can create equipment logs to record events associated with a piece of equipment, create work order automatically according to a schedule or manually from service requests: record authorized uses of equipment, and track scheduled services, training, maintenance history, employee time, downtime of a device, parts inventory, purchase orders, and much more. The computer program enables maintenance professionals to work smarter than ever before by streamlining their workflows and generating data those managers can use to make better decisions about facility, asset, and equipment maintenance. It proves their value to the organizations they work for.

1.2 Problem and importance of the project:

Most of factories in Sudan are suffering from reduction in production efficiency which caused by weakness and unorganized production and maintenance management.

The optimal solution to increase the efficiency is by documenting any single part in the production line. That process

provides production, maintenance and quality control managers with a historical data which is analyzed to predict the failure in production line *this* will improve the maintenance management system and estimate the inventory requirements of spare parts. Above all, that helps the financial department to determine the expenses.

1.3 Objective of the project:

Developing computerized maintenance management system by using low cost programs for the purpose of maximization the efficiency.

1.4 The scope of the project:

This research is an applied study in small scale industry which has low capital investment, a small number of workers and limited ability to production.

The main program used is Visual Basic.Net 2015 (Interface) SQL Server (Database) because it is cheap to own, easy to work in and every worker which has a low level of education can learn it.