

DEVELOPING AN ERP FOR TORQUE AND ELECTRICAL CALIBRATION FOR FLUTECH ENGINEERING PVT. LTD

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Abstract:

This project is aimed at computerizations and increasing productivity of process and documentation of flow of calibration instruments from receipt to delivery. The company is mainly focused at offer wide range of services to a diverse market and industry leaders. They serve markets ranging from automobiles to aerospace, manufacturing, steel, mining, power, oil and gas. They are equipped to perform multi parameter , multi domain calibrations, delivering high precision and accurate measurements, covering Torque, Pressure, Force, Temperature, Electrical dimensions and mass. These methodologies are in turn needed to be considered for the calibration of each and every devices that come up on to the table. Each method is been implemented based on the type of the device that has to be calibrated. Each method is in turn divided into further subdivisions. Many calculation processes, reading notifications, parameters considerations are associated with each method and this is different for different methods inclusive of all subdivisions which in turn implies that it changes from one device to another. Certain cases require calibration of a single device using more than one method.

We are building a software that is intended to perform the calibration of a device at a single stretch that from receiving the device from the customer with the extraction of sufficient information from the customer, loading these information on to the database, transferring the device to the lab, performing the necessary calculations required for the calibration process and finally generating an invoice message and a device certificate.

This has been segregated into 5 different modules where each module performs a specific task. Each module is been validated and is assured of not taking invalid inputs. The company along calibration is working as distributors for some of the products that is outsourcing for further addition of obtaining new devices which has also been included in one of the module. We have developed an idea for this kind of requirement and looking forward to implement it which using the CLOUD and DATABASE facilities which will be highlighted in the project.

Introduction:

Developing An ERP For Torque And Electrical Calibration For Flutech Engineering Pvt. Ltd

The project domain involves the interpretation of the device to which type it belongs and is mainly focused on the calculation processes required for calibration.

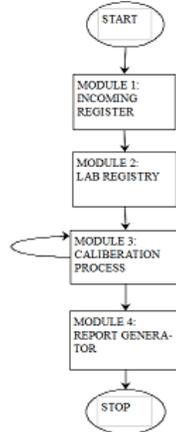
The different they get to calibrate are:

- Manual Torque Wrenches
- Torque Screw Driver
- Dead Weight Tester
- Thermometer

- Pressure Gauge
- Gas Analyzer

Each of the above methods have certain parameters that are to be considered and their respective calculations formulas on which the devices are said to be calibrated

Figure:



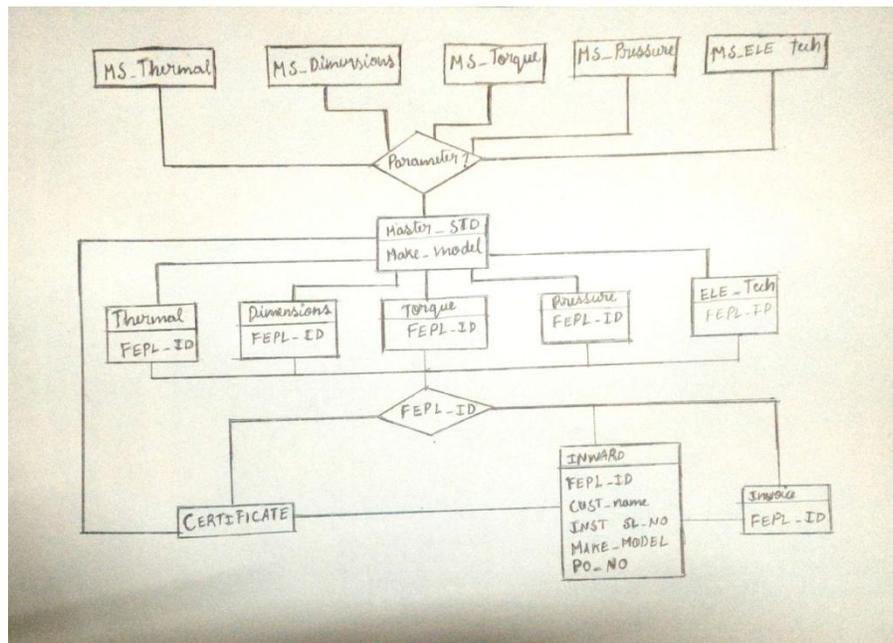
This flowchart indicates the distribution of work done in each module required for the calibration process.

Existing System:

Flutech is currently making use of book registers that is very difficult to maintain. A verification to an older device calibration becomes a tedious process since it involves a very much of registers verification and each register is maintained for each module i.e one for inward one for lab and so on that is being displayed in the above flowchart. Excel sheets are being used for calculation processes.

Proposed System:

We develop an ERP that tries to perform the calculations and the certificate generation in an automatic way irrespective of the type of the method used. The following flowchart displays the process of the device calibration



System Requirement Specifications (Functional & Non-Functional)

- A System with an Operating System such as Windows (XP, 7, 8, 10) or Linux.
- A minimum RAM of at least 2GB.
- WAMP or LAMP server installed.
- Minimum Hard disk size of 500GB.
- Database required is MYSQL Database.