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| ESPACIO PARA SER DILIGENCIADO POR EL ESTUDIANTE | | | |
| **Título de la Propuesta:** | | | |
| Development of the Monitoring and Control System for the operation of the prototype of a Salt Spray Machine for the laboratories of the Faculty of Mechanical Engineering | | | |
| **Opción de grado:** | | | |
| Proyecto de investigación | Monografía | Desarrollo tecnológico | Pasantía empresarial |
| **Objetivo General** | | | |
| Implement the prototype of a Salt Spray Machine, capable of generating acidic atmospheres that allow the deterioration, aging and artificial oxidation of laboratory materials; through the union of electronic, electrical, mechanical and software systems. | | | |
| **Objetivos específicos** | | | |
| 1. Develop the Software that allows the monitoring of the different physical variables present in the operation of the Salt Spray Machine, making use of modules developed in CLI for functional testing; real-time recording of operation history with generation of separate files and databases; and a graphical GUI interface, local or external, that allows the orderly visualization of the different environmental and local fluctuations of the prototype. 2. Design the Software responsible for controlling the actuators present in the Salt Spray Machine, based on the operation process and the physical variables present in the operation of the system in real time. 3. Develop the different electronic PCBs that allow communicating the computer center, RaspberryPI 400, with the different actuators and sensor section used by the Salt Spray Machine in its operation. 4. Perform the respective instrumentation of the different mechanical, electrical and electronic components that make up the Salt Spray Machine for its operation. 5. Compare the results obtained in the elaboration of the Salt Spray Machine with its industrial counterpart, contrasting the mechanisms developed to operate the prototype, the materials used and the software developed; with those used in the industrial model. | | | |

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| ESPACIO PARA SER DILIGENCIADO POR EL COMITÉ DE TRABAJOS DE GRADO | |
| **Concepto del Comité de Trabajos de Grado:** | |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | APROBADO |  | APROBADO CON OBSERVACIONES |  | NO APROBADO | | |
| **Fecha de recepción:** | día - mes - año |
| **Comentarios:** | |
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