AUTOMATIC LUBRICATION SYSTEM

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Abstract - This study examines and studies the Automatic Lubrication System. Due to the friction created by the moving parts, any spinning or sliding parts may generate a certain amount of heat, which leads to wear and tear and a reduction in power. The most efficient way to keep friction to a minimum and protect metals from effective lubrication is achieved by wear and tear, and the substance utilized for this is known as a lubricant. The most crucial setup for the effective operation of engines and machine elements is a proper lubrication system.

Index Terms – 1. Lubricant, 2. Oil Pump, 3. Oil Cooling, 4. Oil Filter

Introduction- Lubrication is the process or technique to reduce the friction between, and wear of one or both, surfaces in proximity and moving relative to each other, by interfering a substance called lubricant in amongst them. The mechanics tend to lubricate the chart in line with manually applied lubricants, which is the fundamental distinction between automatic and manual lubrication. There Automation has several benefits over manual application.

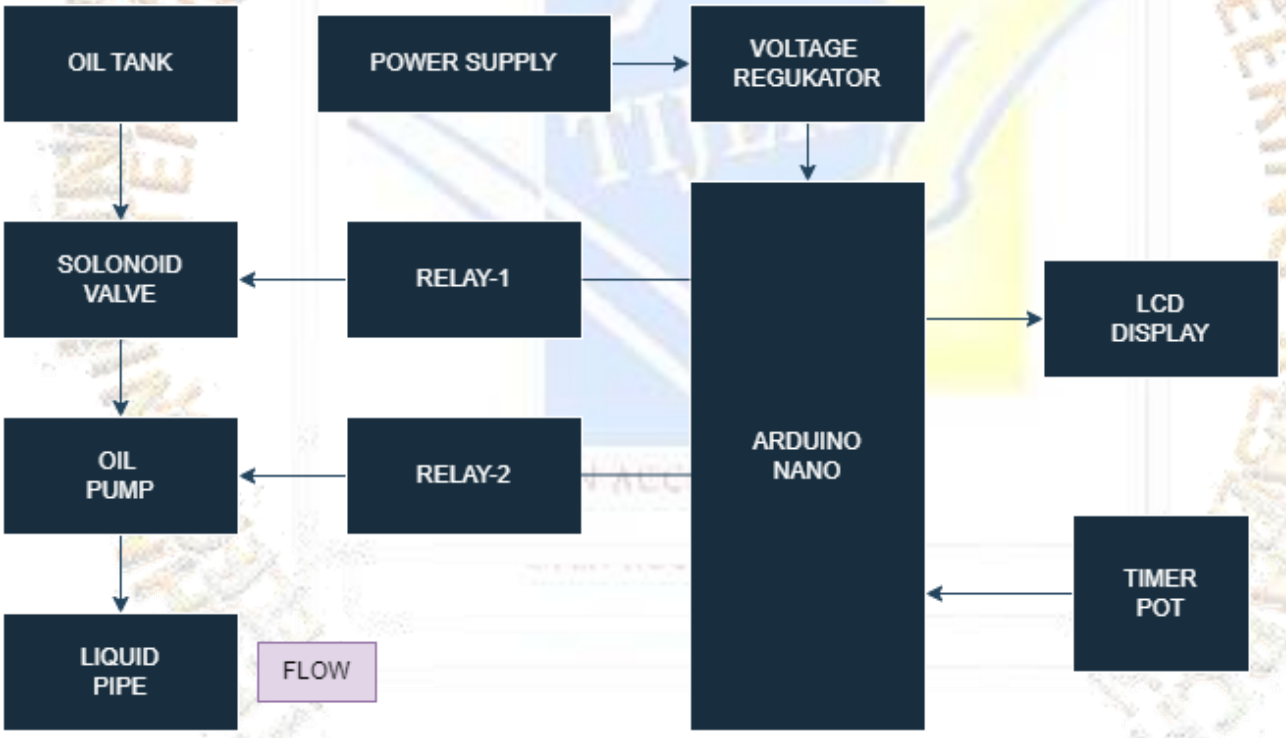
Literature survey-

1.	1.Dr. Mariya Mamaeva1	Development of Innovative Methods for the Assessment of its Technical Condition of the Gearboxes of the Mine Belt Conveyors	1. In order to get proper lubrication of oil in gearbox, the oil was examined with an optical emission spectrometer. For lubricating oil, in which excess wear was observed, a microscopic examination was carried out to clarify the types of wear.
	2. Evgeniy Kuzin	in the Parameters of the Lubricating Oil.	2. Samples of working oils from the gearboxes of mine belt conveyors were selected to be studied.

2.	herbert j. brouillette	Automatic lubrication System for Single & Double line/Multi line supply system.	1. Author use centralized lubrication system to delivered controlled amount lubrication to the multiple location of machine while machine in operating state. 2. To Lubricated oil in accessible parts he developed single line supply System and to lubricated oil in a immense amount to the machinery he developed Double/Multi line supply system. To prevent effect of oil He also study of the lubrication oil.
3.	1. Prop V. Elakkiya 2.Asst. Prof A. Anita	Design and fabrication of autonomous lubrication of chain.	1. There are many surveys done on lubrication systems but this AUTONOMOUS SELF LUBRICATION SYSTEM holds its own importance as the idea of lubrication on the intricate parts which cannot be lubricated manually are made to lubricate through this system. 2. A complete literature survey on designing and manufacturing an automated lubrication control system in cnc machine tool guideways for more precise machining and less oil consumption
4.	W. Rchter (1969)	Automatic Lubrication System of SPM	1. The paper entitled Automatic Stock Lubricating System, this disclosure is directed to a metal forming machine in combination with a lubricating system for automatically
			lubricating stock material as it is fed toward the forming station of the machine.

5.	1.Sang Hyeon Lee, Man Ho Kim, 2.Suk Lee and Kyung Chang Lee	New Concept and Design of Electronically Controlled Cylinder Lubrication System for Large Two-Stroke Marine Diesel Engines	1. Author identified the cost of transporting coal from to the mines to delivered place in order to have required output, author find out the issue and start inspecting on belt conveyors Gearbox hence he find out that there is proper lubrication issue and sorted out throughout that. 2. For lubricating oil, in which excess wear was observed, a microscopic examination was carried out to clarify the types of wear.

Methodology-



- Design and fabricate low cost system
- Flexible time adjustment
- Oil level ending alert system
- Proper output quantity flow
- To display machine status on LCD
- To keep the machine part durable for long period

The Automatic Lubrication system consists of a sensor, fuel pump, solenoid valve, battery, relay, fuel tank, connecting pipes and the mechanism to be lubricated. Automatic lubrication systems are designed to supply lubricant to various parts of a machine or equipment in a controlled and precise manner. These systems consist of several components that work together to deliver the required amount of lubricant to the various parts of the machinery.

An automatic lubrication system is designed to provide a constant and precise amount of lubricant to machinery parts that require lubrication. Here are some features of automatic lubrication systems:

Precision: Automatic lubrication systems are designed to provide precise amounts of lubricant to machinery parts at specific intervals.

Consistency: Automatic lubrication systems ensure that the lubrication of machinery parts is consistent, regardless of the operating conditions or the operator's level of experience.

CONCLUSIONS-

It is inferred from the Automatic Lubrication system that the expense and labor needed for lubricating the various grease points can be eliminated. An absence of Compared to hand greasing, grease during lubrication decreases. Both the operator and the lubricating component are kept secure by the system. After studying the Automatic Lubrication System, it was determined that control system optimization, which results in the right quantity of lubricant at the right point, reduces lubricant waste. It lowers the amount of labor needed to lubricate various grease points, maintenance expenses, and waste costs. It increases component production and decreases labor consumption. This system provides worker and tool protection. Compared to hand lubrication, there is less grease loss. This technology makes it possible to grease places that an operator cannot reach and it also cuts down on downtime.

References-

[1] H. J. Cho, Y. I. Cho, S. W. Cho, J. K. Lee, M. C. Park, D. J. Kim, and K. H. Lee, “Performance evaluation of Nano-Lubricants at thrust slide bearing of scroll compressor, ” Journal of the Korean Society for Precision Engineering. 29 (2012), p. 121-125

[2] E. Kuzin, B. Gerike et al., IOP Conf. Ser.: Mater. Sci.Eng., 253, 012013 (2017)

[3] Walter Richter, Syosset, N.Y., Automatic Stock lubricating System. assignor to Hudson Machine & Tool Corporation, Farmingdale, N.Y. Filed Dec. 16, 1965, United State Patentoffice, Serial No. 514,34

[4] John A. Rebsamen, ThomasA. Norden Lubricating System For Metal Forming Die. United State Patent office ,Ser. No. 32,797, filed Apr. 29, 1970, 5Satnam.

[5] Safety - no climbing around machinery or inaccessible areas (gases, exhaust, confined spaces, etc.)