IDEATION PHASE
LITERATURE SURVEY

DATE	4 OCTOBER, 2022.
TEAM ID	PNT2022TMID00340
PROJECT NAME	HAZARDOUS AREA MONITORING IN INDUSTRIAL PLANTS POWERED BY IOT
MAXIMUM MARKS	4 MARKS

S.NO	TITLE	AUTHOR(s)	OBJECTIVE
1.	A Hazardous Area Personal Monitoring System for Operators in Gas Depots and Storage Tanks (2022)	Elia Landi, Lorenzo Parri, Ada Fort, Marco Mugnaini,Valerio Vignoli,Dinesh Tamang, Marco Tani	This work describes a smart monitoring system for the detection of flammable gas residues, toxic gases, and reduced oxygen concentrations. The proposed system aims at reducing the risk of fires and explosions, thus increasing the safety of workers engaged in maintenance or inspection of gasstorages.
2.	IOT based Industrial Monitoring System	Hemlata Yadav, Naomi Oyiza,Sarfaraz Hassan, Dr. Suman Lata, K. Jaya Chitra	The goal of this study is to create an IoT-based industrial monitoring system with intelligent sensors. Because of the integration of big data, the Blynk app can be used to monitor status from anywhere on the planet.
3.	Monitoring of Hazardous Gases in Process Industries Through Internet (2016)	Dr.K.R.Valluvan, P. Ragavi.	The existing detection systems are available to sense only a particular gas and they use GSM technology to indicate the critical situations. The drawback is that the detection system can send a message to only one person. The proposed system is made up of monitoring and alerting system through Internet of Things (IoTs). In these the dangerous, toxic and flammable gases are sensed using individual gas sensors and an Arduino UNO controller. The concentration of all gases values are displayed in ppm using a LCF; when the value exceeds the limited range then an alarm is put on.

4.	IOT based Interactive Industrial Energy Management System and Emergency Alert Using SMS & E-Mail	G.Rama Krishna Prabu, G.Ramkumar, M. Jagadeesh, E.Senthil Kumar, P.Ashok Kumar	The entire monitoring and control progress of the industrial utilities is an appropriate improvement in the industrial growth system. Here, the various industrial parameters are taken up for control such as gas, fire, machine, motor, in embedded based control module. In this module, the fire and gas sensor will analyze its set range variation by the controller. If it exceeds it pre-defined values set in the controller the immediate indication and alert is arrived for to take necessary safety precaution and control in real time application
5.	Android Base dReal-Time Industrial Emission Monitoring SystemUsing IoT Technology (2017)	DennisA. Martillano,Joshua Miguel R. Dita, Christian G. Cruz, and Kunal S. Sadhra	This study aimed to create a system that will allow Industrial plants and factories to monitor the emission of the smoke stacks held in a manufacturing company anytime, anywhere using IoT or Internet of Things Technology.
6.	Security for the Industrial IoT: The Case for Information-Centric Networking (2019)	M. Frey *et al.*,	Sensors are typically used in industrial production plants to monitor or record operations, and actuators are used to enable corrective actions in the event of errors, failures, or harmful situations. With the development of the IoT, embedded controllers connected these "things" to local networks, frequently of low power wireless kind, and are interconnected via gateways to some cloud from the global Internet. Under the industrial IoT, interconnected sensors and actuators form a crucial subsystem that typically operates in challenging circumstances. How to interconnect vital industrial components in a secure and safe way is now up for discussion. In this study, we examine ICN's potential to offer limited controllers in industrial safety systems a secure and reliable networking solution. We compare IP-based methods like CoAP and MQTT with hazardous gas monitoring in common industrial contexts like refineries. Based on our research, information centric networking should be implemented in a safety-critical industrial IoT due to the content-centered security model and improved DoS resistance. Evaluation of the RIOT operating system's crypto efforts for content security reveals their viability in typical deployment settings.

7.	IoT Based Industrial Monitoring System	Solanki, Shashikant& Gaur, Deepak & Rasiq	Due to the advancements in communication technology, the Industrial Internet of Things, or IIoT, has become well known. Using smart devices and sensors, industrial IoT is an IoT application that provides industry control through the Internet. In order to assure effectiveness in any field, monitoring and control are the two key components. With this in mind, we created a low-cost, low-power Wi-Fi based industrial monitoring system that uses a web application to control and monitor distant manufacturing facilities and industries. For internet connectivity, a Wi-Fi module, a barometer sensor for temperature and pressure, a humidity sensor for detecting humidity, and a gas sensor for detecting smoke and dangerous gases are all connected to the model's main micro-controller, an Arduino Mega. These parts are used to construct a monitoring system. In addition to these elements, a number of other sensors are employed to monitor the temperature, pressure, humidity, gas leakage, etc. in the workplace to ensure the workers' safety. This monitoring system alerts employees in the event of a problem and delivers information to registered users via the Blynk App. This study's main goal is to summarize the important role that IoT plays in monitoring industries.
8.	Industrial Parameter Monitoring and Alarming System using IOT	G.Rajalakshmi[1], T.Thaj Mary Delsy[1], D. Jamunarani[1], V. Amalarani[1] and P Kalyan Sai Chakravarthy[2]	The infrastructure systems of today connect our world more than we ever imagined thanks to smart grids, smart houses, smart water systems, and intelligent transportation. The common idea of such systems is typically linked to a single concept, the Internet of Things (IOT), in which all physical infrastructure is closely connected to information e-communication technologies and intelligent monitoring and management can be accomplished through the use of integrated networks devices. To share various forms of data, these gadgets will be connected to the Internet. For an industrial monitoring system, the suggested system makes use of the ubidots server and detecting apps for the internet of things. In this document, many characteristics like the quantity of production, illumination intensity, the detection of toxic gases, and ambient temperature are checked using detection devices.
9.	Industrial Environmental Monitoring and Controlling with Password Protection circuit Breaker System using IOT	Rushita S. Joshi, Kirit Bhalsod	The goal of the project is to create an IOT-based application. Maintaining temperature and humidity management for food storage, production systems, etc. is crucial in dangerous situations. It determines the calibre of manufactured industrial goods or food products. The project presents a system for monitoring humidity, temperature, and the amount of AC load in terms of voltage and current. By receiving the temperature and humidity values from the sensor, the system automatically maintains the temperature and humidity. Temperature, humidity, GSM modem, and WiFi Module ESP8266 are all connected to Arduino. The WiFi Module ESP8266 is connected to the Arduino board to realise the IOT idea. The creation of a smartphone app that allows users to view the present status of humidity, temperature, device status on or off, AC voltage and AC current. If the system load increases, the hardware turns off all devices and sends SMS to registered mobile number through GSM Modem. User has to type the password received on mobile as SMS, to activate the system again and start monitoring.

10.	Environmental Surveillance Monitoring System In Industries Using Industrial Internet Of Things	Ajay Sudhir Bale, Subhashish Tiwari, Pravesh Ponnuvelu, Kishore Prabhu.	All industries must monitor the environment since it has a significant impact on human well-being, comfort, and productivity. Because it is a crucial component that significantly affects the health of the workforce and other factors like intruder detection, fire, smoke, and dust, as well as weather forecasts in industries. However, the technologies currently in use are complicated, pricey, unreliable, and unable to deliver real-time data in a timely manner. Consequently, a reliable, affordable monitoring and warning solution is required. The suggested system can be used in industries for real-time analysis and is not only a trustworthy option for environment surveillance but also one that is affordable, effective, and efficient. Industry 4.0:. One of the greatest technologies for this kind of application is the Industrial Internet of Things (IIoT), which enables communication between devices utilising unique identifiers (UIDs) through a network while also providing monitoring and warning systems.