ages in real-time, facilitate remote collaboration, and provide access to specialized expertise. DAS improves diagnostic productivity, boosts patient outcomes, and enables smooth integration of imaging equipment into clinical processes by assuring dependable wireless communication.

A DAS's antennas may need to be omnidirectional to offer coverage in all directions, or they may need to be directional to concentrate signal coverage in particular locations. Antennas should be able to cover the intended region with enough gain to offset signal loss in the distribution system. Depending on the particular deployment scenario, different gain requirements may vary. Proposed distributed antenna system of three monopoles improves the bandwidth. The efficiency in free-space settings exhibits greater resilience, compared to a single monopole solution and a distributed system consisting of two monopoles.

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УДК 681

CORROSION RADAR DEVICE

Student master degree Sharopov H. N.
Associate Professor Abdukarimov M. M.
Tashkent State Technical University named after Islam Karimov, Tashkent, Uzbekistan

Corrosion is a significant problem in the oil and gas industry that can cause equipment failure and environmental hazards. There are several factors that emphasize the seriousness of the corrosion problem in this direction. Based on the statistics of the world, it was announced that the annual cost of corrosion in industrial organizations is 2.5 trillion dollars.

There are several types of corrosion, including: Corrosion caused by liquid fuels is also included in chemical corrosion. The main components of liquid fuel do not corrode metals, but corrosion occurs as a result of the effect of sulfur, hydrogen sulfide and sulfur-containing organic substances contained in petroleum and lubricating oils on metals. This effect is manifested only in waterless conditions. Converts to electrochemical corrosion in water.

Of course! Prevention of corrosion in process pipelines in mines is essential to maintain their integrity and ensure safe and efficient operation. There are several common methods used to prevent corrosion. One of the devices being implemented today through innovative technologies is the

Corrosion RADAR device. Purpose and tasks of the device, monitoring of currents in insulated pipes, remote detection, prediction of corrosion.

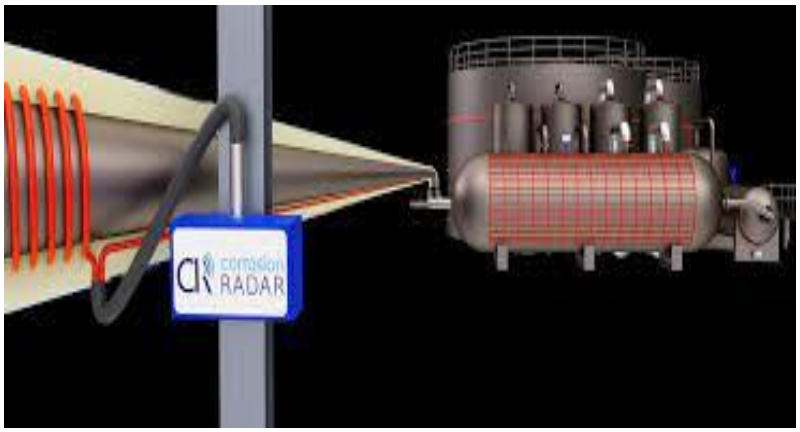

Fig. 1. Corrosion radar technology

The technology uses sensors and artificial intelligence to monitor this corrosion in real-time, enabling early detection and prevention of corrosion seen in industry. Their technology can be used in a variety of industries, including oil and gas, marine, and mining. In addition, the advantage of the device is that it can be used in complex technological devices, including the most complex geometric shapes, and in the hottest (+300 °C) or cold (–190 °C) industrial devices. As a result, based on the reports that will be presented at the installation, it provides the necessary information for the protection of the technological pipelines and the protection of the devices.

Sensor technology: Corrosion RADAR uses non-intrusive wireless sensors that are attached to the surface of the structure or pipeline being monitored. These sensors are designed to detect changes in the electrochemical properties of metal, providing early signs of corrosion.

Real-time monitoring: Sensors continuously collect data on corrosion rate, metal loss and other relevant parameters. This real-time monitoring enables immediate detection of corrosion and enables proactive maintenance and intervention.

Artificial Intelligence (AI): Corrosion RADAR uses artificial intelligence algorithms to analyze data collected by sensors. An artificial intelligence algorithm can identify patterns, identify corrosion hotspots, and predict future corrosion behavior based on historical data. This will help you optimize your maintenance strategy and prevent serious damage.

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УДК 681

SMART SECURITY SYSTEM USING RASPBERRY PI

Suhas Kale[1]
Professor Dr. Dipak P. Patil[2]
[1]Sandip Institute of Technology and Research Centre, Nashik, India
[2]Sandip Institute of Engineering and Management, Nashik, India

Now a day's Detecting burglary and theft is a major security concern in a variety of contexts, ranging from small residences to large industries. The need for cameras is expanding rapidly for theft monitoring, yet these cameras do not provide an alarm when motion is detected. CCTV cameras are expensive due to the incorporation of computer technology in surveillance systems. It allocates too much space for continuous recording and necessitates person to identify unauthorized activity. Hamzah H. Qasim et al. [1] proposes real time monitoring using IoT and SMS. D. Mathew et al. [2] proposes the