2023 IPLOCA HSE AWARD

EMERGENCY EVACUATION TRACKING SYSTEM (EETS)

May 2023

National Petroleum Construction Company (NPCC) is a world class Engineering, Procurement and Construction (EPC) company that offers full EPC solutions to the Offshore and Onshore Oil & Gas industries, including engineering, procurement, project management, fabrication, installation and commissioning to project owners and operators.

Since its inception, NPCC has successfully completed more than 1200 projects over the span of five decades, while maintaining a high standard of excellence, growth, and integrity.
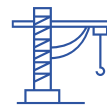

Headquartered in Abu Dhabi, NPCC operates throughout the Arabian Gulf, South Asia and Southeast Asia, with plans to expand its operations to Africa and the Caspian region.

It has longstanding relationships with most of the Operating Companies (OPCOs), National Oil Companies (NOCs) and International Oil Companies (IOCs), building on its proven track record of project delivery, quality, safety and customer satisfaction.

NPCC Engineering, a wholly owned subsidiary of NPCC, provides innovative basic, detailed and offshore engineering solutions, utilizing the latest and most advanced design software. The company's engineering services are provided by a team of over 1400 engineers based in four engineering centers in Abu Dhabi, UAE, Hyderabad and Mumbai, India and La Ciotat, France.

NPCC has a state-of-the-art fabrication facilities in Mussafah, Abu Dhabi set in an area of 1.3 million sq. meters, and the largest manufacturing yard in the region capable of fabricating up to 100,000 MT of structural steel every year.

The company owns a fleet of 22 offshore vessels equipped with modern facilities to support its shallow and deep-water operations. It can lift structures weighing up to 4,200 Tons and is also equipped for laying sub-sea cables and pipelines, up to 66 inches diameter; in water depths from 10 to 2000 Meters.

During an emergency situation, it is critical to track employees accurately. "Emergency Evacuation Tracking and System (EETS)" provides real-time oversight across NPCC locations.
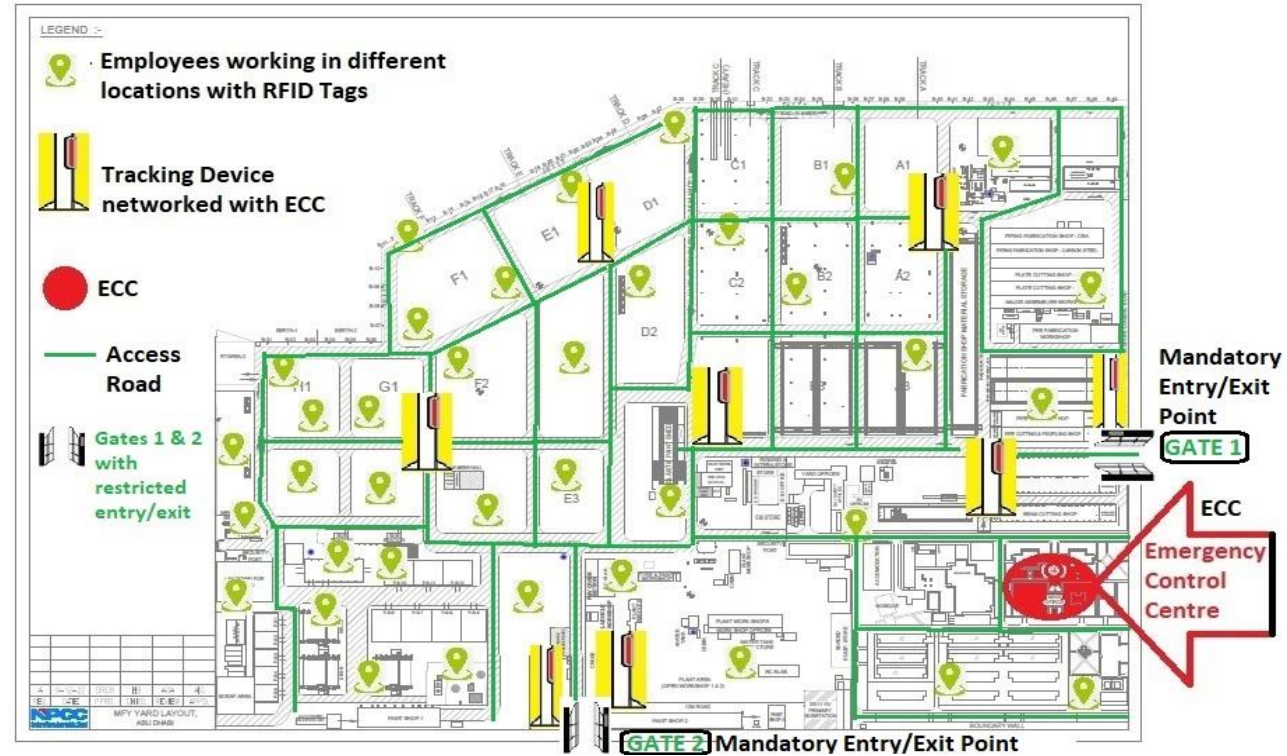
Knowing who is remaining in a site/ workstation and monitoring who has checked into muster points, that enable people to mark themselves as off-site or in need of assistance, improves the speed and capability of our emergency response.

AIM

- To Manage workforce and contractors across NPCC locations effectively with real-time tracking during an emergency evacuation
- Precise Head Counting
- Improved search and rescue actions
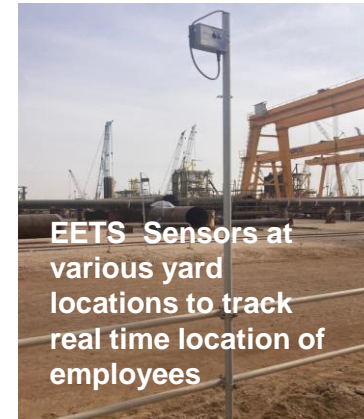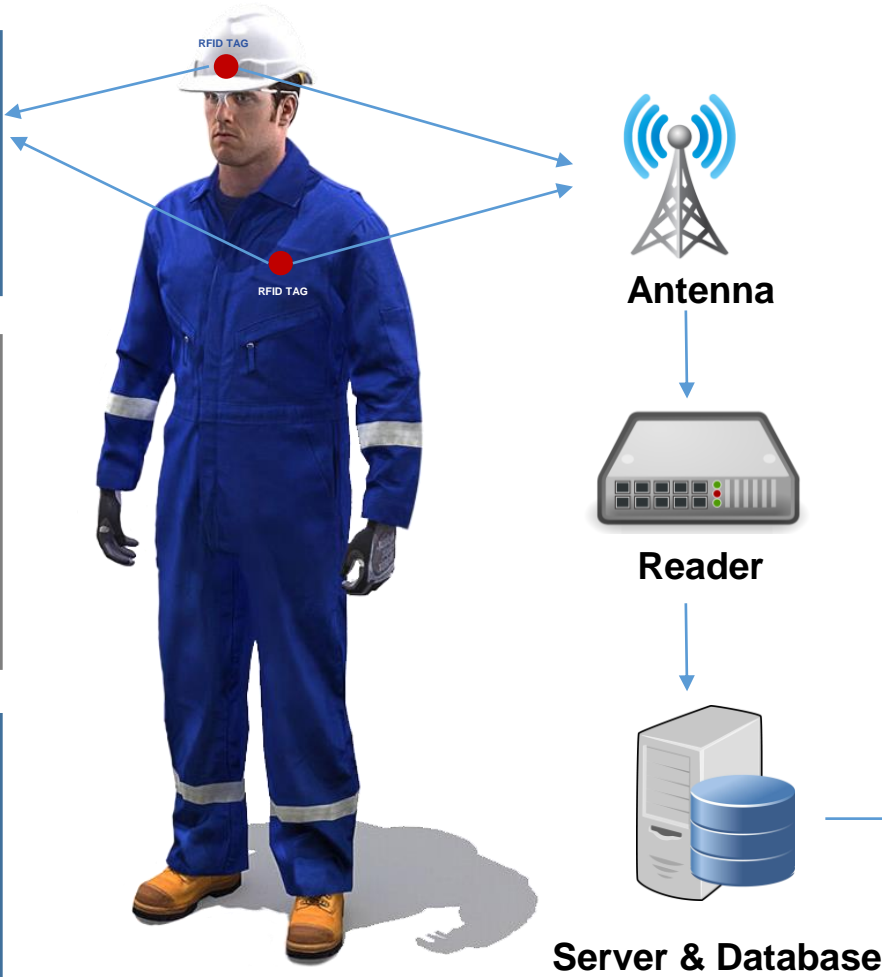- Eliminate untoward incidents

PROCESS FLOW

| Emergency | Evacuation Monitoring Real Time | Headcount Using Technology at Muster Point | Identifying the Location of the Missing Personnel | Search & Rescue Operations |

3.0 Solution

1 EETS ensures RFID wireless employee trackers (in Helmets) distributed to all personnel.

2 These badges work in conjunction with real time software mesh network to create an invisible "indoor tracking system" that tracks every employee and visitor with the highest location accuracy available

3 EETS ensures that accurate information is captured and feed back, helping to manage emergency evacuation with real-time personnel tracking system

RFID TAG

RFID TAG

Antenna

Reader

Server & Database

EETS Sensors at various yard locations to track real time location of employees

EMERGENCY CONTROL CENTER

For evacuation, tracking and head counting at the muster points

4.0 Achievements

Faster Evacuations

- In an emergency, quickly tracking occupants and sending notifications is paramount.
- An employee evacuation tracking system identifies who is in the building, site, their location, and who is missing.
- This information helps send real-time alerts or text messages for evacuation.

Improved Communication

- Knowledge gained from tracking occupants is useful for communication purposes.
- For example, automated notifications allow to alert site occupants of incidents and provide them with important information on routes and muster points.
- It ensures everyone is aware of the crisis and takes necessary precautions.
- It enables emergency management teams to record all the data related to emergency for record keeping and investigation
- During an evacuation, two-way communications can be sent, prompting responses indicating the status of the visitor, for example:
- * Safe * Out of work location * Require Assistance

Identifying Those in Need of Assistance

- Identifying those needing help is among the main benefits of tracking occupants in an emergency.
- In an emergency, it is vital to identify who requires aid, such as those with special needs or medical issues, to ensure swift assistance.
- This allows the responders to focus on those who need immediate help while following established emergency response plans.

Search & Rescue Operations

- It enables emergency management teams to respond faster and more efficiently with Search and Rescue Operations
- To identify who requires medical aid, quick search for any one abandoned, person working at height & enclosed area etc.
- To identify the realistic scenarios as a lesson learnt from any emergency situations to have effective planning

Thank You