

**T/2551968/2023**

**Design, supply, installation, and commissioning of Redundant HVAC and Pressurization System for MPS-3 at A'Seeb Catchment**

**SCOPE SYNOPSIS**

Design, engineering, supply, installation, testing, & commissioning of redundant HVAC and Pressurization System (Ducted split unit).

The air conditioning should maintain the required temperature inside the electrical room.

The pressurization system should maintain the pressure inside the electrical room and prevent from any H<sub>2</sub>S gas exposure. The integrated pressurization system draws air from the inlet of the pressure blower directing it to the return air stream from the building.

If the room lose pressure due to a door opening the system should automatically provide the correct air flow to maintain the room within code.

This air is then preconditioned by DX cooling coil for temperature and humidity and shall allow the correct amount of air flow to maintain the room at a positive pressure in compliance with NFPA 496 Type Z for Pure and Room Pressurization controls.

Once the door opening is closed the system should automatically determine the correct air flow and return to normal operation.

The pressure inside the electrical room shall be in the range of 30 to 70 Pa.

The inlet air should be ensured from the nearest area free from H<sub>2</sub>S.

Provide industrial access door based on best international practice to ensure the redundant HVAC system will work 100 % efficiency (SAS door for entrance room).

The HVAC Equipment selected shall be of robust construction with suitable corrosion resistance, and shall not generate excessive noise during operation, and shall have a long service life, complying with the design requirements and site condition.



