Vapor Pressure Sensor Systems for Cargo Tanks

Installation, integration & operation of Saab cargo tank pressure systems

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Reasons for VPS Installation

- Regulatory
  - VPS solution should meet the SOLAS requirements for secondary means, they request
    - Pressure alarm limits set to required levels
    - Two fixed and two user defined
    - Visual display in CCR
    - Audible and visual alarms in CCR

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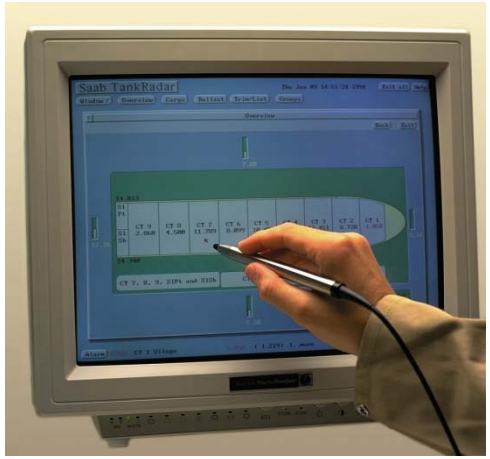
The RTG offering for VPS

To meet the requirements the Saab offering comprises of the following: -

- Digital pressure sensor for each tank
- Work station software enhancement
- Optional alarms / beacons



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The RTG offering for VPS

The vapour pressure sensor, mounted directly, must have operational excellence in demanding tank environments

- Design and material selection are important parameters
  - Digital pressure sensor
  - Corrosion resistance for process wetted area, by use of hastelloy C276 material

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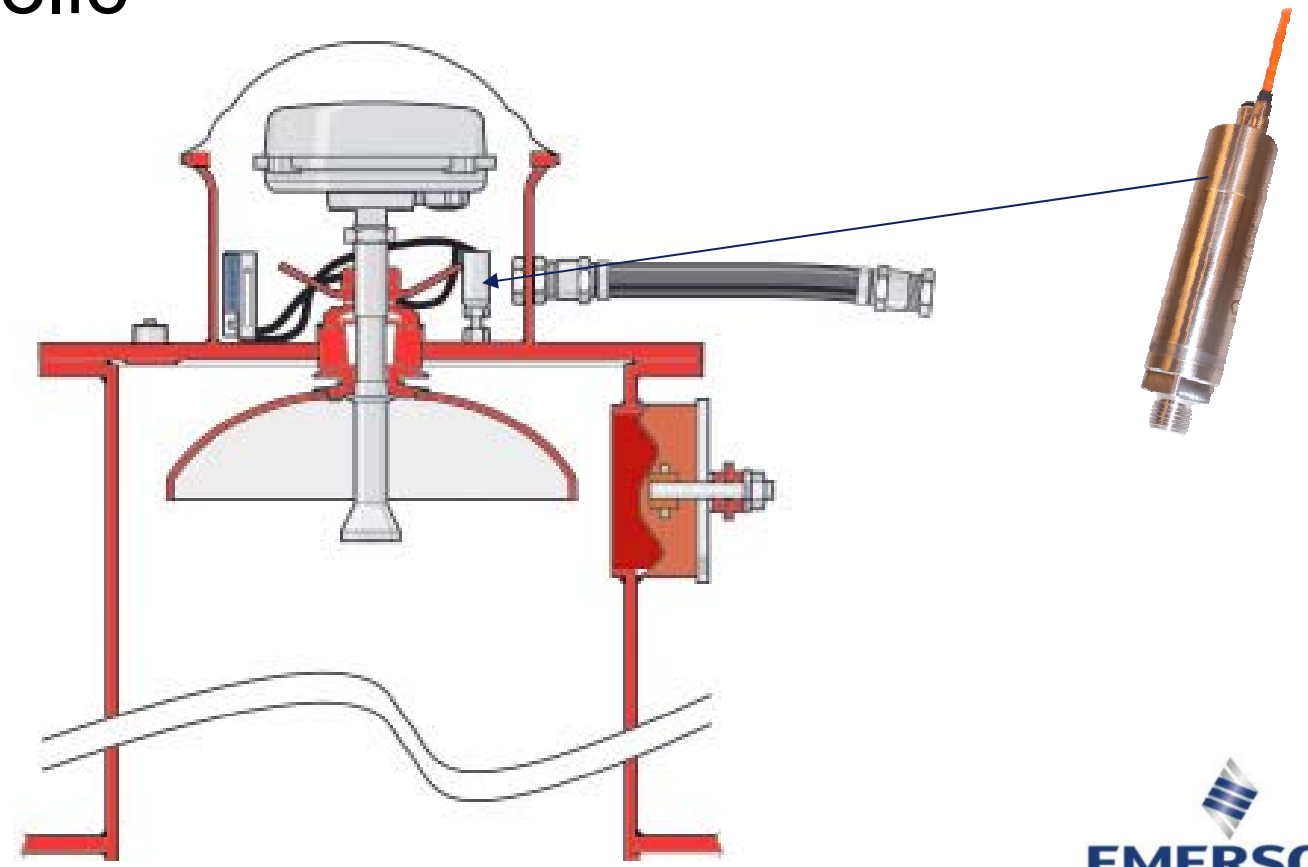
Installing the VPS ….

There are two type of antennae to be considered

Parabolic



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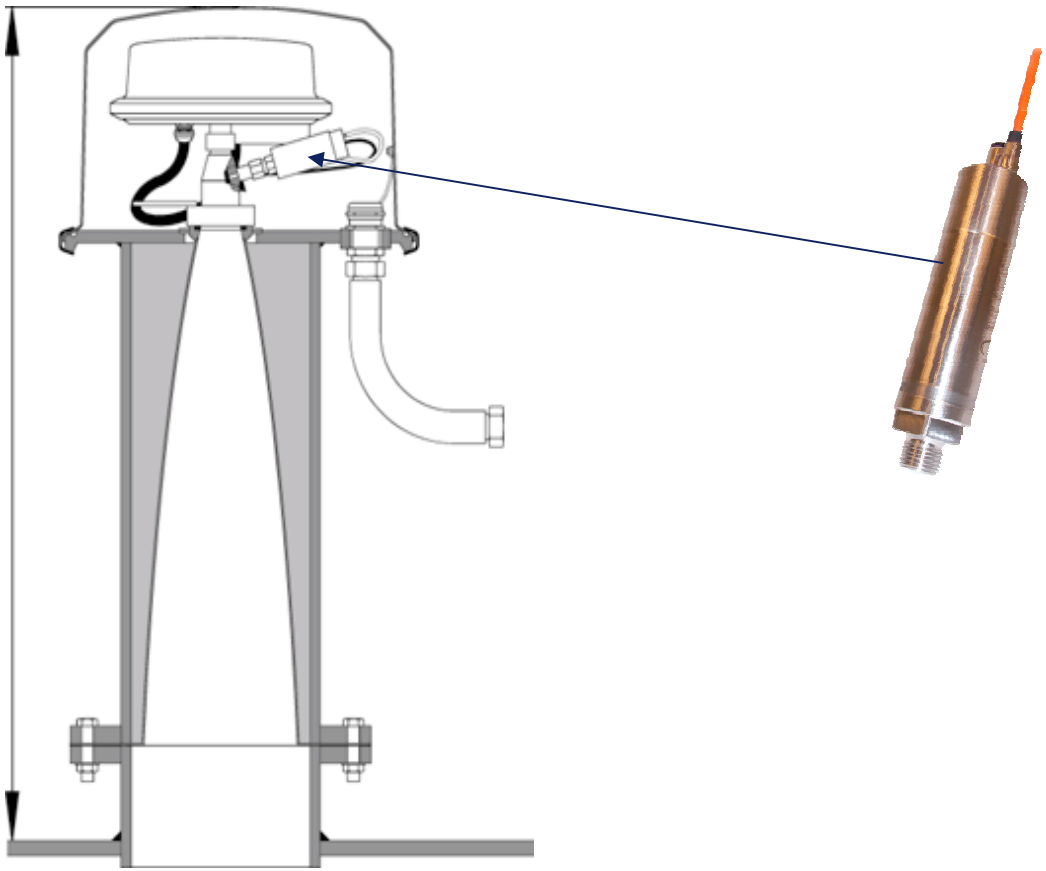
Installing the VPS ....

There are two type of antennae to be considered

Cone



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Installing the VPS ….

Summary

If the existing radar head is ’pre-prepared’ no cutting/drilling/tapping is required.

If the existing system is ’pre-prepared’ no extra electrical cabling is required. Pressure signals will be transmitted back to the Work Station

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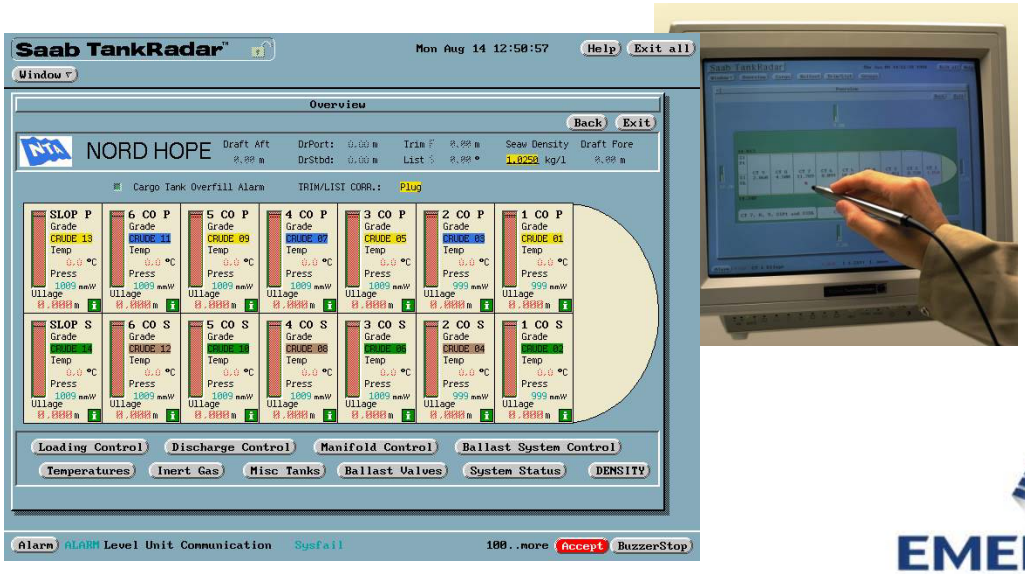
Work Station Software Upgrades...

The ship's database must be modified to enable visual display and alarm functions. This is carried out prior to installation and uploaded at time of installation.

Alarm limits to be configured to right pressure



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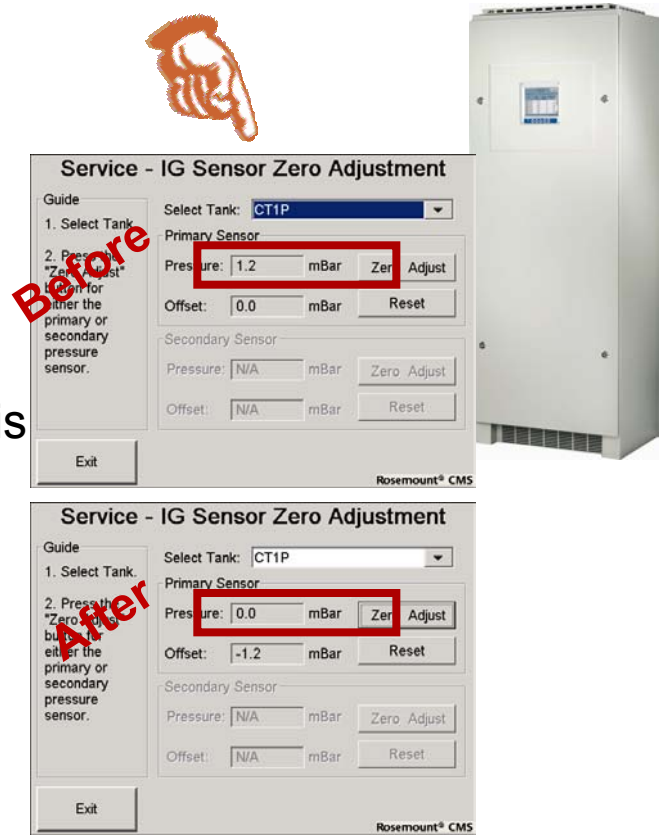
Optional system considerations…

- Be prepared for vetting or quarterly inspections
  - Service Display – Easy onboard analysis and recovery
  - Diagnostic functions
    - Zero adjustment of vapor pressure



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Optional system considerations…

Additional and/or remote beacons or alarms

Display on bridge to meet ‘Exxon Mobil’ requirements

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Other related services provided by RTG

- On board service assistance for all Saab systems
- Spares availability – next day
- 7 day technical support
- Work station upgrades and replacements (All systems)
- Tank Splitting upgrades (low sulphur fuels)
- SCU display upgrades (G5)
- LNG Refits and Sworn Surveyor calibrations
- LNG service and spares
- LNG LU upgrades

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