

Offshore Oil and Gas

Offshore Platform's, FPSO's, FSO's, ships and drilling rigs commonly require the application of electric heat tracing systems for the following reasons.

Freeze Protection

25% of known oil and gas resources are located in extremely cold areas and therefore ships and platforms destined for these regions and other cold locations will require varying levels of freeze protection.

Freeze protection of piping, valves, fittings and instrument tubing for fire protection water, potable water, sea and fresh cooling water, drill water and bilge water discharge.

Anti-icing (kept ice free) e.g., door seals, ballast tank vents and cargo system valves.

De-icing (ice removal in 4-6 hours) e.g., helidecks, gangways, walkways, ladders, antenna, scuppers and railings.

Freezer room doors.

Recommended heat tracing system: <u>BSX</u> or <u>RSX</u> self-regulating heating cable with ambient sensing thermostat control.

Process Temperature Maintenance

Oil and Gas products can also require electric heat tracing for process temperature maintenance of pipes, instrumentation and tanks in the following typical situations.

- High wax content and/or pour point of crude oil
- Vapour pipelines from product tanks
- Hydrate prevention on gas pipelines
- Anti condensation heating on gas pipelines

Recommended heat tracing system: <u>HTSX</u> self regulating heating cable with self regulating control.

Personnel Comfort

• Heating cables installed in the floors of changing rooms Recommended heat tracing system: <u>BSX</u> or <u>RSX</u> self-regulating heating cable with floor sensing thermostat control.

Electric Heat Tracing Standards and Codes

Thermon heat tracing systems are tested and certified by major approval agencies to international industry and shipping standards.

Offshore Oil and Gas projects completed by Thermon worldwide.

| EPC | Owner | Location | Project |
|--------------------|----------------------|----------------|---------------------------------|
| Samsung | Sakhalin Energy | Korea Sakhalin | 2 LUN-A Oil Drilling Platform |
| SHI | Sovcomflot | Korea | H1660 Artic Shuttle Tanker |
| Mitsubishi (MHI) | Nippon Yusen | Japan | De icing of heliport LNG tanker |
| Keppel | Hitachi Zosen | Singapore | Wooly Butt FPSO |
| Shanghai | Waigaoqiao Bohai Oil | Singapore | BZ-25 FSO |
| Clough | OMV | Malaysia | Maari Well Head Oil Platform |
| Upstream Petroleum | Anzon | Australia | Crystal Ocean FPSO |

Note . .

This is only a partial list. Contact Thermon for a more comprehensive listing of completed and ongoing projects around the world.



