

H2O|CCS - LCO2/LNG/CNG/H2O

Transportation Storage Process Engineering (DG0-DG4)

1. INDUSTRY SEGMENTS

Hydrogen, Carbon Capture and Storage, LNG, LPG, CNG, Liquefied CO₂, Ammonia.

1.1 A project will normative include various subject matter areas

1. Rigs, vessels & drilling units(FLOP), PSV, Shipengine: Wartsila(5500kW).
2. Trading product: LPG, LNG, CNG, Hydrogen(green,blue,grey), CO₂
3. SURF, seabed interventions, manifolds & templates for various tie-in cables, pipelines, compressors, EIT stations. Riserlight Well integration. Mooring.
4. G&G data and visuals, reservoir casing & completions.
5. Chemical, Processing & Material technology
6. Gas & Hydrogen* compression: High Tensile Steel C-Type tanks.
7. Power & Utilities: CCR Automation.
8. Production Assurance Program(PAP)
9. Technology Readiness Level(TRL), OLGA.
10. Subsea Production System, x-mas tree horizontal, Low carbon and methane technologies
11. Aqua culture
12. Admin building, Offices, Meeting room, Mezzanine, Bath, Kitchen. Tech building. Workshop Lab with Gates. Production Processing Building, Logistics Hall. Road Truck gas/charging station.
13. ITT Tender Documentation

2. Project Commercial Management

- Project Planning, Project Cost Reporting, Project Estimations
- Thermodynamics, Fluid velocity. Wind & wave technology.
- Tanks/Cubes, IGC codes, IACS.

- Co2 Processing Station: vaporation, temp, in/out.
- ENVID
- QRA
- ORR
- SFA/SIS
- LCO2 Storage Vessel: 6 tanks for offloading/inloading.
- Quality Management
- HSE Management
- Risk Management
- Project Exit
- Lessons Learned
- Project Financial Realizations
- Cost to Benefit Analysis
- Government Regulations
- Public reporting
- Procurement

3. Project Technical Management

- Wellhead D&W: 9"-42» drilling, casing & completions. P&A. Tubing, Wireline, slickline. Tie back. SURF/compressor, aggregator. DH-PressureTempGauge(DHPTG)
- Horizontal/Vertical directional drilling. Assembly installation. Choking,
- Tie-in flowline connection/umbilicals, Battery power.
- Network switch/router, NIC, TCP/IP link, Subsea Control Module. FiberOptical cable.
- Underwater drone, UAV, ROV
- *Solution 1: A conventional electro-hydraulic umbilical with fibre optic communication cables.*

- *Solution 2: A fluid umbilical plus a DC/FO cable for power supply and communication (NorthernLights, Equinor)*
 - Nexans, Alcatel, cable spooling, SIMULTANEOUS OPS(SIMOP) on cable/fluid trenching. BKK, Lyse, Tampnet, Gassnova, (Statkraft, Statnett).
 - Bowtie Simulations, IMR Inspections. PipelineEndManifold(PLEM).
 - TD or TR from Equinor(STL). Gas processing technology from Total. Plant & Refinery Station with Subsea Pipelining from Shell. D&W Technology from SLB.
 - *Erpduo DC: GeoStationX > containerdeck dualServer data registration via Server-Switch-Router-FO Link-Satellite*
 - 10000 psi gas pressure. Full Pressurised (FP), Semi Refrigerated vessel.
 - Shipment: High Tensile Steel Tanks, General Approval Ship Application(GASA), TRL4, C-Tank, NDE, PWHT welding.
 - LPG: MLA, hoses, radar gauges, filling limits, metering, battery design, shore power size, configurations, storing, waste disposal, mooring, emergency systems, autonomy, surge control.
 - Alternative Risk Based Design
 - DNV and BV verifications.
 - Fuel alternatives, CO2 capture technologies, air lubrication.
 - Ship owner list, rig owner list, vessel ops.
 - Mini FEED/Proof of Concepts. Rapid Design & Application Development.
 - Cost Efficiency: Speed in 1 Knots.
 - SRA Schedule Risk Analysis
 - Safety & Security Management
 - Commercial development – customers and international markets
 - Business development – early concept, buy-outs, lease of services to commissioning
-

CONTACT

BD: ERPDUO, postbox@erpduo.com

R&D: InfraIndus Ltd, office@dpgroup.no

Nasir Iftikhar, Director. ndi@erpduo.com, +47 41300250

