DESIGN AND SPECIFICATIONS FOR
IPENKCO MARINE LOADING ARMS

IPENKCO
WE MAKE IT POSSIBLE

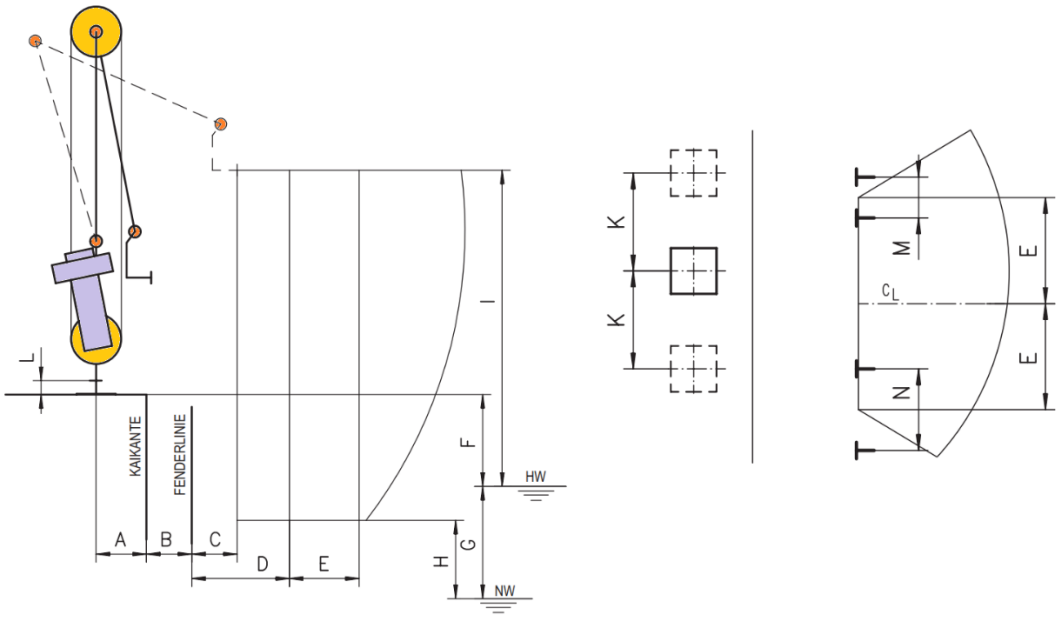
Project:

Location of installation:

Applicable regulations:

Number of loading arms:

| PRODUCT AND SPECIFICATIONS | | | | | |
|---|---|---|---|---|---|
| Loading arm | No. | | | | |
| Constant Position Monitoring System (CPMS) | Yes ☐ | No ☐ | | | |
| Vapor return line | Yes ☐ | No ☐ | | | |
| | | Main line | | Vapor line | |
| Product | | | | | |
| Flow rate | $m^3/h$ | | | | |
| Design pressure | bar | | | | |
| Operating pressure | bar | | | | |
| Design temperature | °C | | | | |
| Operating temperature | °C | | | | |
| Product viscosity | cSt or cP | | | | |
| Specific product weight | $kg/m^3$ | | | | |
| Allowable pressure drops | bar | | | | |
| Fluid group (in case of PED) | | Group I ☐ | Group I ☐ | Group I ☐ | Group II ☐ |
| Emergency release coupler (ERC) | Yes ☐ | No ☐ | | | |
| Quick connect/disconnect coupler (QC/DC) | Yes ☐ | No ☐ | | | |
| Nitrogen purging system | Yes ☐ | No ☐ | | | |
| Trace heating | Yes ☐ | No ☐ | | | |
| Insulation system | Yes ☐ | No ☐ | | | |
| Ice fall control (just for low temperature) | Yes ☐ | No ☐ | | | |
| Leak indicator system | Yes ☐ | No ☐ | | | |
| Auto joint lubrication | Yes ☐ | No ☐ | | | |
| Variable speed control | Yes ☐ | No ☐ | | | |
| Manifold camera monitoring system | Yes ☐ | No ☐ | | | |
| Auto joint to manifold | Yes ☐ | No ☐ | | | |
| Automatic park-position | Yes ☐ | No ☐ | | | |
| Real-time loading arm status monitoring | Yes ☐ | No ☐ | | | |
| Real-time hydraulic power unit monitoring | Yes ☐ | No ☐ | | | |




| VESSEL AND JETTY SPECIFICATIONS | | | |
|---|---|---|---|
| | Minimum size of vessel | | DWT |
| | Maximum size of vessel | | DWT |
| | Wind speed | | m/s |
| | Highest ambient temperature | | °C |
| | Lowest ambient temperature | | °C |
| A | Distance: center line of riser to jetty face | | m |
| B | Distance: jetty face to berthing line | | m |
| C | Shortest distance: berthing line to ship flange | | m |
| D | Widest distance: berthing line to ship flange | | m |
| E | Drift range | | m |
| F | Distance: jetty level to high tide level (HTL) | | m |
| G | Distance: high tide level to low tide level (LTL) | | m |
| H | Distance: LTL to center line of ship flange of smallest ship loaded | | m |
| I | Distance: LTL to center line of ship flange of largest ship unloaded | | m |
| K | Distance: center line to center line of risers (in case of more than one arm) | | m |
| L | Distance: jetty level to connecting flange (land side) | | m |
| M | Smallest distance: center line to center line of ship flanges (more than one arm) | | m |
| N | Widest distance: center line to center line of ship flanges (more than one arm) | | m |

Should dimension A, E, K and L not be available, they will be estimated based on IPENKCO experience.