



DESIGN DATA FOR MARINE LOADING ARMS

GENERAL

Client			
Location			
Contact person	E-mail		
Project	<input type="checkbox"/> Replacement	<input type="checkbox"/> Facility expansion	<input type="checkbox"/> New terminal / plant
Project phase	<input type="checkbox"/> Budget	<input type="checkbox"/> FEED Study	<input type="checkbox"/> Tender
Planned date of site delivery			

ENVIRONMENTAL DETAILS

Terminal / plant name				
Location	City		Country	
Temperature	Min		Max	°C
Humidity	Min		Max	%
Seismic load				Peak ground acceleration (g)
Max. wind speed				km/h
Hazardous Area Classification				

MARINE LOADING ARM DATA

Quantity			
Diameter (in inches)			
Length of riser	mm		
Length of inboard arm	mm		
Length of outboard arm	mm		
Piping material			
Mode of operation	<input type="checkbox"/> Manual <input type="checkbox"/> Hydraulic		
Operation (loading and unloading)	<input type="checkbox"/> Loading <input type="checkbox"/> Unloading <input type="checkbox"/> Both		
Vapour return line	<input type="checkbox"/> Yes (Diameter _____) <input type="checkbox"/> No		
Tracing and Insulation	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vacuum breaker	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Emergency Release System (ERS)	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Quick Connect/Disconnect Coupler (QC/DC)	<input type="checkbox"/> Yes (Operation: <input type="checkbox"/> Hydraulic <input type="checkbox"/> Manual) <input type="checkbox"/> No		

* If arm lengths are not known, please fill out "DIMENSIONS OF INSTALLATION" and "CONTROL SYSTEM";

* If ERS should be included, electric hydraulic control system is mandatory.

PROCESS PARAMETERS

Product / Medium			
Density	kg/m ³	Viscosity	cp
Loading flow rate	m ³ /h	Unloading flow rate	m ³ /h
Operating pressure	bar	Design pressure	bar
Operating temperature	min/max °C	Design temperature	min/max °C
Ship connection flange type		Arm inlet flange type	

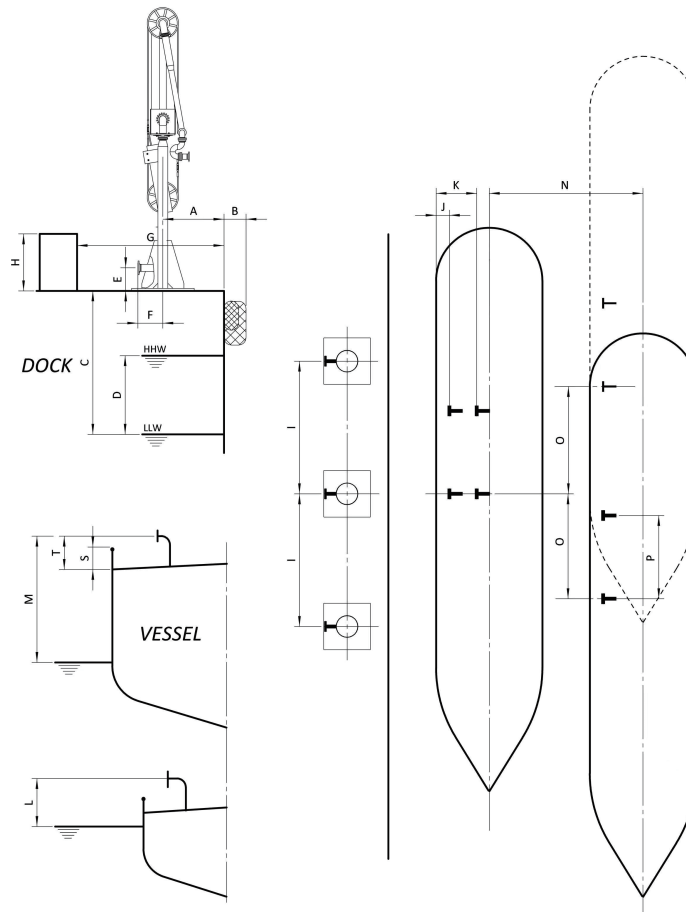
DIMENSIONS OF INSTALLATION

Jetty Dimensions

A	Centerline of base riser to dock face	mm	
B	Dock face to compressed fender	mm	
C	Dock level to lowest low water	mm	
D	Difference between lowest low water and highest high water (MAX)	mm	
E	Centerline of inlet flange to dock level	mm	
F	Centerline of base riser to Inlet flange face	mm	
G	Any dock conditions that limit the arm design	mm	
H	Any dock conditions that limit the arm design	mm	
I	Spacing between different base risers	mm	

Vessel Data

J	Min. Distance from ship railing to ship connection flange	mm	
K	Max. Distance from ship railing to ship connection flange	mm	
L	Min. difference between Highest high water and ship connection flange	mm	
M	Max. difference between Lowest low water and ship connection flange	mm	
N	Sway FOR/AFT	mm	
O	Surge FOR/AFT	mm	
P	Spacing between different ship connection flanges (Max/Min)	mm	
S	Rail height (Is the rail removable?)	mm	
T	Height of center of ship connection flange to deck	mm	



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CONTROL SYSTEM

Item		Configuration	Hazardous area classification	Included
1	Hydraulic Power Unit	Outside on jetty		<input type="checkbox"/> Yes <input type="checkbox"/> No
2	Separate control power			<input type="checkbox"/> Yes <input type="checkbox"/> No
3	Operation Control Panel at jetty nearby MLA	<input type="checkbox"/> Outdoor on jetty <input type="checkbox"/> Indoor in Berth control room		<input type="checkbox"/> Yes <input type="checkbox"/> No
4	PLC control cabinet	<input type="checkbox"/> Integrated in operation control panel <input type="checkbox"/> Standalone PLC cabinet in control room		<input type="checkbox"/> Yes <input type="checkbox"/> No
5	Alarm indicators	<input type="checkbox"/> Beacon (flashlight) <input type="checkbox"/> Horn		<input type="checkbox"/> Yes <input type="checkbox"/> No
6	Radio remote control			<input type="checkbox"/> Yes <input type="checkbox"/> No
7	Pendant remote control	<input type="checkbox"/> On berth <input type="checkbox"/> At TSA (shipside)		<input type="checkbox"/> Yes <input type="checkbox"/> No

* Main power supply (voltage): _____

* Quantity of arms to control: _____ + extra for future: _____

SENSORS, CONTROLS & ACCESSORIES

Item		Included
1	Drain connector	<input type="checkbox"/> Land side <input type="checkbox"/> Ship side
2	Purge system	<input type="checkbox"/> Yes <input type="checkbox"/> No
3	Rest position locker	<input type="checkbox"/> Yes <input type="checkbox"/> No
4	Safety ladders	<input type="checkbox"/> Yes <input type="checkbox"/> No
5	Adjustable support jack	<input type="checkbox"/> Yes <input type="checkbox"/> No
6	Emergency shut-off valve	<input type="checkbox"/> Yes <input type="checkbox"/> No
7	Range limit system (Position monitoring system (PMS))	<input type="checkbox"/> Yes <input type="checkbox"/> No
8	Electric hydraulic control system	<input type="checkbox"/> Yes <input type="checkbox"/> No

REMARKS & SPECIAL COMMENTS