



3101 New Haven Ave
Fort Wayne, IN 46803

Barge Configuration Calculation & Engineering Analysis

4/11/16

QTY	Description	Weight/ea [lbs]	Total Weight [lbs]	Vert C of G [ft]
DECK LOAD				
3	Loaded Cement Truck	70,000	210,000	10.0
35	Crane Mats, 12"	4,000	140,000	3.5
2	Concrete Pump	10,000	20,000	8.0
1	Compressor	3,000	3,000	8.0
1	P65 Double Drum Deck winch	4,520	4,520	8.0
1	Misc Deck Payload	20,000	20,000	10.0
	Total Deck Load		397,520	

HULL WEIGHT				
10	40' x 10' x 5' P1 Barge	23,089	230,890	2.5
4	20' x 10' x 5' P1 Barge	12,730	50,920	2.5
98	P1 Connector Pins	55	5,390	2.5
2	Spud Pocket- P1-5	1,794	3,588	2.5
	Total Hull Weight		290,788	

OPERATIONAL DETAILS

Crane Lift Radius	N/A	ft	
Crane Boom Length	N/A	ft	
Crane Track Width Center-to-Center	N/A	ft	
Crane Pick Load	N/A	lbs	
Effective Pick Height	N/A	ft	
Complete Weight of Rig	688,308	lbs	
Net Vertical Center of Gravity of Rig	5.1	ft	
Overturning Moment (trim)	2,800,000	ft-lbs	truck onload
Overturning Moment (heel) (10ft Cof G off)	700,000	ft-lbs	truck off CL



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HYDROSTATICS

Waterplane Area	4800 ft ²	
Vertical Center of Buoyancy	1.15 ft	
Pounds Per Inch Immersion	24,960 lbs	
Average Draft in Seawater	2.24 ft	26.9 inches
Average Draft in Freshwater	2.30 ft	27.6 inches
Displaced Volume in Seawater	10,755 ft ³	80,446 gal
Displaced Volume in Freshwater	11,048 ft ³	82,641 gal
Longitudinal Moment of Inertia	3727196 ft ⁴	
Transverse Moment of Inertia	928706 ft ⁴	
	BM _L	337 ft
	BM _T	84 ft
	GM _L	333 ft
	GM _T	80 ft

WORKING OVER THE END OF THE PLATFORM:

TRIM ANGLE DUE TO OVERTURNING MOMENT 0.70 degrees (longitudinal)

WORKING OVER THE SIDE OF THE PLATFORM

LIST ANGLE DUE TO OVERTURNING MOMENT 0.73 degrees (transverse)

****ALL CALCULATIONS ASSUME CRANE CENTER PIN IS LOCATED AT BARGE PLATFORM CENTER OF FLOTATION****

This analysis is provided for the evaluation of buoyancy and stability based upon the project parameters submitted to Poseidon Barge Corp. There are project and worksite conditions and variables which are unforeseeable and beyond the control of Poseidon Barge Corp. and therefore, we cannot accept responsibility and specifically deny any liability for the safe use of Poseidon Barge Corp. equipment. This analysis is a guideline and does not constitute a guarantee that there will not be circumstances that prevent and do not allow for the intended use of the equipment. Approval of the analysis and ultimate project engineering is the sole responsibility of the contractor/lessee. Please review our website for further information concerning our Disclaimer of Warranties.

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