



REV.	DESCRIPTION	DATE	APPROVED								
<div>POSEIDON</div> <div>POSEIDON BARGE CORP.</div> <div>3101 New Haven Ave. Fort Wayne, Indiana 46803</div> <div>Phone: 1-260-422-8767 Fax: 1-260-207-8636</div>		ALL DIMENSIONS ARE IN INCHES EXCEPT WHERE STATED OTHERWISE, TOLERANCES ON ANGLE DIMENSIONS ±0.25°		<div>PROPRIETARY INFORMATION</div> <div>Poseidon Corp. claims rights to all information disclosed on this drawing. It is in confidence for engineering information only and may not be reproduced or used to manufacture anything disclosed within the confines of this drawing without written authorization from Poseidon Corp.</div>		CUSTOMER:		MATERIAL: -		SCALE: NTS	
		x.xx = +/- 0.01 x.x = +/- 0.03 x/x = +/- 1/16				DATE: 4/11/2016		DRAWN BY: J. EMCH		DESCRIPTION: Poseidon I Barge Assembly 100' x 50' x 5'	
						FILE NAME: 100X50X5 P1 PLATFORM FOR CEMENT TRUCKS AND PUMPS.DWG		PART #:		SHEET:	



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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)
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WORKING OVER THE SIDE OF THE PLATFORM

LIST ANGLE DUE TO OVERTURNING MOMENT	0.73 degrees	(transverse)
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****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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