

Civil and Structure Drawings





Petrochemical







Tools used



CREATION OF FOUNDATION DRAWINGS AND PERFORMING STEEL STRUCTURE ANALYSIS

Client Profile

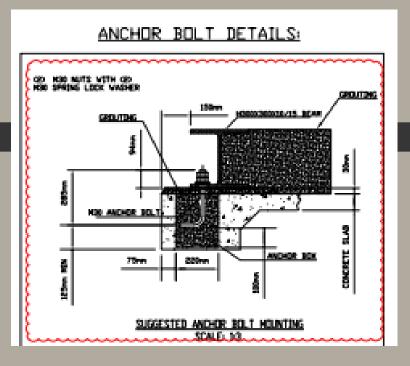
Global leader development and production of membrane-based separation systems for the petrochemical, natural gas, and refining industries.

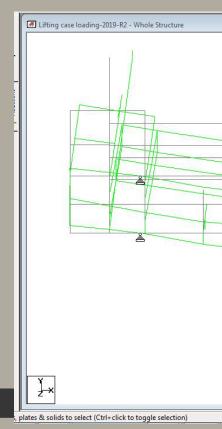
Project Complexity

- Determining the optimum size, length and quantity of the anchor bolts for the given loads.
- Selecting the anchor bolt type based on the foundation at the customer site.
- Selection of appropriate beams/structural members in the initial design such that the changes shall be minimum after the analysis.
- Providing the proper supports for the piping systems.

Team Details

Structural Engineer: 8 yrs Drafting Engineer: 5 yrs Mechanical Engineer: 10 yrs







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Load 3 : Displace

- CONCRETE SLAB FOUNDATION AND THOCKNES HUST BE DETERMINED BY CUSTOMER.
- leveling hortar thickness hust
- ement mortar. The compressor & motor pedestals vith concrete

1	BILL OF	MATERIALS	
DESCRIPTION	SIZE	NOC	GTY (IN NOS)
MONOR BOLT	KOCK285nn LONG	ASTN F1554 GRADE 36. Hot 39° Galvweitig	57
omang lack washers	M30	ASTN F436 HOT DIP GALVWERD	42
HEX. NUT	M30	ASTN ASK3 HOT BIP GALVANIZED	뵇
EX BOLTIFOR LEVELING	HEGK70mm LONG	ASTM A385, Het 35° Galvingers	10

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			Horizontal	Vertical	Horizontal	Resultant		Rotationa
	Node	L/C	x	Y	Z	mm	rX rad	rY rad
Max X	84	3 DEAD	4.841	0.589	-3.760	6.158	-0.001	0.00
Min X	65	3 DEAD	-2.270	-0.829	-0.136	2.420	-0.000	0.00
Max Y	1	3 DEAD	-0.000	1.721	0.000	1.721	-0.000	-0.00
Min Y	98	3 DEAD	-0.648	-4.745	-0.011	4.789	-0.000	-0.00
Max Z	103	3 DEAD	-2.166	-0.261	2.045	2.990	0.001	0.00
Min Z	84	3 DEAD	4.841	0.589	-3.760	6.158	-0.001	0.00
Max rX	77	3 DEAD	2.103	-0.562	2.024	2.973	0.001	-0.00
Min rX	7	3 DEAD	0.000	-1.154	-0.013	1.154	-0.001	-0.00
Max rY	45	3 DEAD	1.314	-0.283	0.027	1.344	0.000	0.00
Min rY	75	3 DEAD	2.103	1.613	0.496	2.696	0.000	-0.00
Max rZ	25	3 DEAD	0.000	-1.164	-0.016	1.164	0.001	-0.00
Min rZ	10	3 DEAD	-0.003	1.339	-0.000	1.339	-0.000	-0.00
Max Rs	84	3 DEAD	4.841	0.589	-3.760	6.158	-0.001	0.00
		ding-2019-R2 - E Relative Disp	lacement /	Max Relat	ive Displac			
🔳 Lifti		Relative Disp	lacement /	Displacemer Max Relat y	ive Displac z	Resultant		
Lifti		Relative Disp	lacement /	Displacemer Max Relat y mm	ive Displac z mm	Resultant mm		
		Relative Disp Dist m 0.000	lacement / mm 0.000	Displacemer Max Relat y mm 0.000	tive Displac z mm 0.000	Resultant mm 0.000		
Lifti		Relative Disp Dist m 0.000 0.312	lacement / x mm 0.000 0.000	Displacement Max Relat y mm 0.000 0.005	tive Displac z mm 0.000 -0.000	Resultant mm 0.000 0.005		
Lifti		Relative Disp Dist 0.000 0.312 0.625	lacement / x mm 0.000 0.000 -0.000	Displacemer Max Relat y mm 0.000 0.005 -0.019	tive Displac z 0.000 -0.000 -0.000	Resultant mm 0.000 0.005 0.019		
Lifti		Relative Disp Dist m 0.000 0.312	lacement / x mm 0.000 0.000	Displacement Max Relat y mm 0.000 0.005	tive Displac z mm 0.000 -0.000	Resultant mm 0.000 0.005		
Lifti		Relative Disp Dist 0.000 0.312 0.625 0.937	lacement / x mm 0.000 0.000 -0.000 0.000	Displacemer Max Relat y mm 0.000 0.005 -0.019 -0.034	tive Displac z 0.000 -0.000 -0.000 -0.000	Resultant mm 0.000 0.005 0.019 0.034		
E Lifti Beam 183	All I L/C 3 DEAD	Relative Disp Dist m 0.000 0.312 0.625 0.937 1.249	lacement / x mm 0.000 0.000 -0.000 0.000 0.000	Displacemer Max Relat ymm 0.000 0.005 -0.019 -0.034 0.000	tive Displac z 0.000 -0.000 -0.000 -0.000 0.000 0.000	Resultant mm 0.000 0.005 0.019 0.034 0.000		
E Lifti Beam 183	All I L/C 3 DEAD	Relative Disp Dist m 0.000 0.312 0.625 0.937 1.249 0.000	lacement / x mm 0.000 0.000 -0.000 0.000 0.000 0.000	Displacemen Max Relat y mm 0.000 0.005 -0.019 -0.034 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 -0.000 0.000 0.000	Resultant mm 0.000 0.005 0.019 0.034 0.000 0.000		
E Lifti Beam 183	All I L/C 3 DEAD	Relative Disp Dist m 0.000 0.312 0.625 0.937 1.249 0.000 0.028	lacement / x mm 0.000 0.000 0.000 0.000 0.000 0.000 -0.000	Displacement Max Relat 9 0.000 0.005 -0.019 -0.034 0.000 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 0.000 0.000 0.000 -0.000	Resultant mm 0.000 0.005 0.019 0.034 0.000 0.000 0.000		
E Lifti Beam 183	All I L/C 3 DEAD	Relative Disp Dist m 0.000 0.312 0.625 0.937 1.249 0.000 0.028 0.057	Iacement / x mm 0.000 -0.000 0.000 0.000 0.000 -0.000 -0.000 -0.000	Displacement Max Relat y 0.000 0.005 -0.019 -0.034 0.000 0.000 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 0.000 0.000 0.000 -0.000 -0.000 -0.000	Resultant mm 0.000 0.005 0.019 0.034 0.000 0.000 0.000 0.000		
E Lifti Beam 183	All I L/C 3 DEAD	Relative Disp m 0.000 0.312 0.625 0.937 1.249 0.000 0.028 0.057 0.085	Accement x mm 0.000 0.000 0.000 0.000 0.000 -0.000 -0.000 -0.000 -0.000	Displacemen Max Relat y mm 0.000 0.005 -0.019 -0.034 0.000 0.000 0.000 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 0.000 0.000 -0.000 -0.000 -0.000 -0.000	Resultant mm 0.000 0.019 0.034 0.000 0.000 0.000 0.000 0.000 0.000 0.000		
Eeam 183	All I L/C 3 DEAD	Relative Disp m 0.000 0.312 0.625 0.937 1.249 0.000 0.028 0.057 0.085 0.114	Accement x mm 0.000 0.000 0.000 0.000 0.000 -0.000 -0.000 -0.000 0.000 0.000	Displacement Max Relat y 0.000 0.005 -0.019 -0.034 0.000 0.000 0.000 0.000 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 0.000 0.000 -0.000 -0.000 -0.000 0.000	Resultant mm mm 0.000 0.005 0.019 0.034 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000		
Eeam 183	All I L/C 3 DEAD	Relative Disp Dist m 0.000 0.312 0.625 0.937 1.249 0.000 0.028 0.057 0.085 0.114 0.000	Lacement x mm 0.000 0.000 0.000 0.000 0.000 -0.000 -0.000 0.000 0.000 0.000 0.000	Displacemen Max Relat y mm 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 0.000 0.000 -0.000 -0.000 -0.000 0.000 0.000	Resultant mm 0.000 0.019 0.034 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000		
Eeam 183	All I L/C 3 DEAD	Dist m 0.000 0.312 0.625 0.937 1.249 0.000 0.028 0.057 0.085 0.114 0.000 0.28	Accement x mm 0.000 0.000 -0.000 0.000 -0.000 -0.000 -0.000 0.000 0.000 -0.000 0.000 -0.000 0.000	Displacement Max Relat ymm -0.000 -0.019 -0.034 0.000 0.000 0.000 0.000 0.000 0.000 0.000	tive Displac z mm 0.000 -0.000 -0.000 0.000 0.000 -0.000 -0.000 -0.000 0.000 0.000 0.000	Resultant mm mm 0.000 0.005 0.019 0.034 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000		