

RISER ANALYSIS

MOORING ANALYSIS

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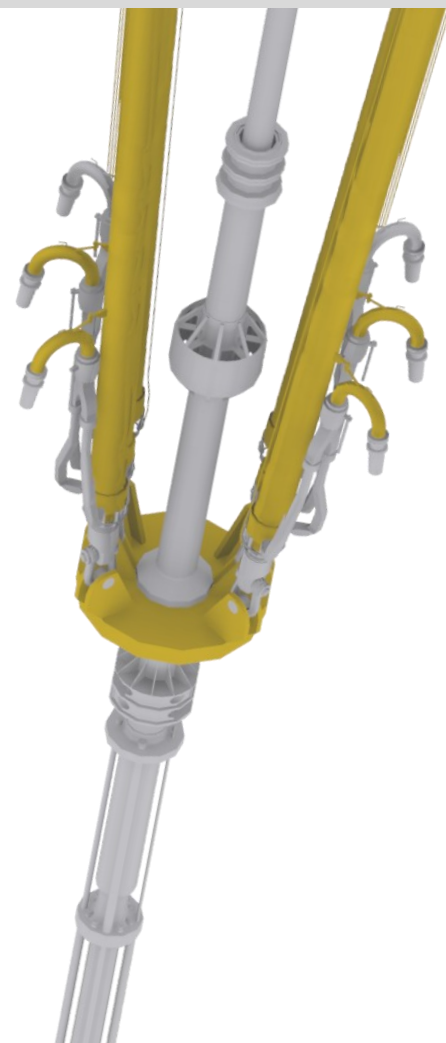
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RISER ANALYSIS

STACK-UP ANALYSIS

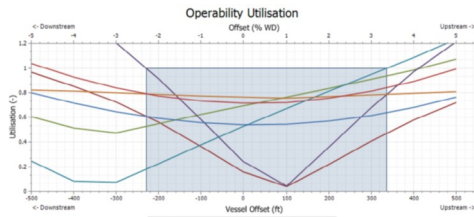
TENSIONING ANALYSIS

DYNAMIC ANALYSIS

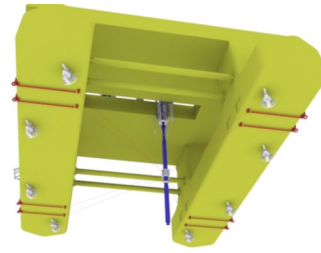
COLLAPSE ANALYSIS

BOP RUNNING ANALYSIS

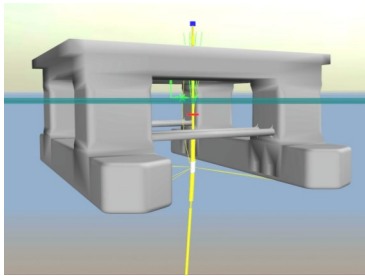
HANG-OFF ANALYSIS



RISER DYNAMIC ANALYSIS



RISER CENTRALIZER SOLUTION



ORCAFLEX™ 3D VISUALIZATION OUTPUT

Pitch Response (deg): No current - NO Trim- BOP depth 500m / 1400m														
Hs (m)	Tz (s)													
	4	5	6	7	8	9	10	11	12	13	14	15	16	
0	1			0.20										
1	2	0.20	0.27	0.40	0.59	0.71	0.77							
2	3	0.30	0.40	0.60	0.88	1.06	1.15	1.17	Heave 1.30m					
3	4		0.53	0.79	1.17	1.41	1.55	1.57	Heave 1.76m					
4	5		0.67	0.99	1.46	1.77	1.91	1.96	Heave 2.17m	Heave 2.53m				
5	6		0.80	1.19	1.76	2.12	2.30	2.35	Heave 2.61m	Heave 3.04m				
6	7			1.39	2.05	2.47	2.68	2.74	Heave 3.04m	Heave 3.55m				
7	8				1.99	2.34	2.83	3.06	3.13	Heave 3.47m	Heave 4.05m			
8	9					2.64	3.16	3.45	3.52	Heave 3.91m	Heave 4.56m			
9	10						2.95	3.53	3.83	3.91	Heave 4.34m			
10	11							3.89	4.21	4.31				
11	12								4.59	4.70				
12	13									4.98	5.09			
13	14													
14	15													
15	16													

BOP RUNNING OPERABILITY ANALYSIS

FATIGUE ANALYSIS

TRANSIT ANALYSIS

CENTRALIZER SOLUTION

RELATCHING ANALYSIS

TENSIONERS ANALYSIS

RECOIL ANALYSIS

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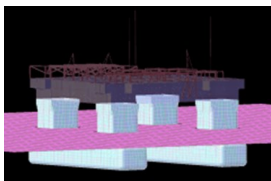
HYDRO DYNAMICS

MOORING SPECIFICATION

INTACT ANALYSIS

DAMAGE ANALYSIS

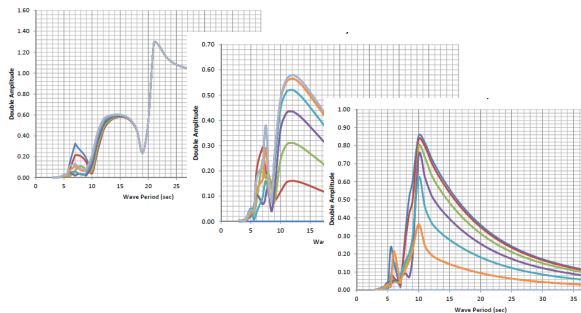
FATIGUE ANALYSIS



WADAM™ HYDRODYNAMICS MODEL



DEEP C™ VISUALIZATION OUTPUT



MOTION RESPONSE RAO (RESPONSE AMPLITUDE OPERATOR)

WHY FRIGSTAD ENGINEERING

TECHNICAL DRILLING KNOW HOW

- More than 25 year experience
- Rig Designer, owner, operator
- Operational experience in riser products

IN DEPTH ENGINEERING CAPABILITY

- Time & frequency domain analysis
- Coupled and uncoupled analysis
- Award winning rig designs
- High end software support
- Cross discipline supports

QUALITY WORKS

- ISO9001 certified
- Compliance to industrial standards

ISO 9001
BUREAU VERITAS
Certification

