


Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures				
Rig Manufacturer :		Soilmec		Rig Type : SR30
Operation mode:		CFA		
Completed by:	20/07/2004	Checked by:		
Item	Mass (kg)	Moment arm (m)	Moment (kNm)	
UPPER WORKS	1080	3.50	37.08	
LOWER WORKS	29800	-0.04	-11.69	
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	6250	3.42	209.69	
COUNTERWEIGHT	1000	-3.65	-35.81	
OTHER	0	0.00	0.00	
TOTAL	38130	0.53	199.27	
Tracks				
Track bearing length (m)	3.35			
Track pad width (m)	0.6			
Distance between centrelines of tracks (m)	3.2			
Front Foot Pads				
Pad Bearing Area (m ²)	1.50	Actual Dimensions	1.2 x 1.2m	
Pad Maximum Loading (kN)	350.00	Actual Shape	Square	
Pad Moment Arm (m)	3.20			
Rear Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Forces				
Maximum Extraction Force (kN)	380.00			
Maximum Penetration Force (kN)	10.00			
Maximum Auxillary Force (kN)	10.00	Auxillary Force Moment Arm (m)	3.75	
Pressure Summary for Platform Design (unfactored)				
MODE	BRE LOAD CASE (1 or 2)	Length (m)	Width (m)	UDL Pressure (kPa)
Standing	1	2.43	0.6	150
Travelling	1	2.43	0.6	150
Handling	1	2.28	0.6	167
Penetrating	2	3.14	0.6	86
Extracting	2	1.96	0.6	205
Other	NOT USED	N/A	0.6	N/A
MODE	WARNING MESSAGES	ERROR MESSAGES FOR FORCES		
Standing	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
MODE	ERROR MESSAGES FOR FOOT PADS		<u>Notes</u>	
Standing	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for rig operation on level ground with a vertical mast, unless noted below !	
Travelling	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for use where the rig is working on a ground supported platform !	
Handling	Front Foot Pad Force OK	Rear Foot Pad Force OK	Foot pad pressures are adjusted to equalise with the track pressures !	
Penetrating	Front Foot Pad Force OK	Rear Foot Pad Force OK	Rigs to be operated in accordance with manufacturer's & employer's instructions	
Extracting	Front Foot Pad Force OK	Rear Foot Pad Force OK	No limits on working practice.	
Other	Front Foot Pad Force OK	Rear Foot Pad Force OK		
COLETS PILING				

Note: The disclaimer on the first worksheet applies to all tables in this workbook

Rig Manufacturer : SOILMEC		Rig Type : SR-30 (kelly mode)	
Completed by: Bruno Bettini SOILMEC SpA		Operation mode: KELLY (cylinder crowd)	
		Checked by:	

Main Components :				
	Item	Mass (kg)	Moment arm (m)	Moment (kNm)
UPPER WORKS	Mast assembly & rotary head	6505	2.83	180.78
	Mast rams / kinematism	2815	1.61	44.43
				0.00
				0.00
				0.00
				0.00
LOWER WORKS	Undercarriage	10700	0.00	0.00
	Slewing mainframe	9000	-1.00	-88.29
				0.00
				0.00
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	Kelly bar (4x11m locking type)	4300	3.50	147.64
	Tool	1500	3.50	51.50
	---	0	0.00	0.00
				0.00
COUNT.	Counterweight	3500	-3.60	-123.61
				0.00
OTHER	Other	0	0.00	0.00
				0.00


Main Components Totals			
UPPER WORKS	9320	2.46	225.21
LOWER WORKS	19700	-0.46	-88.29
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	5800	3.50	199.14
COUNTERWEIGHT	3500	-3.60	-123.61
OTHER	0	0.00	0.00
TOTAL	38320	0.57	212.45

Tracks	
Track bearing length (m)	3.71
Track pad width (m)	0.6
Distance between centrelines of tracks (m)	3.10

Front Foot Pads			
Pad Bearing Area (m ²)	#N/D	Actual Dimensions	#N/D
Pad Maximum Loading (kN)	#N/D	Actual Shape	#N/D
Pad Moment Arm (m)	#N/D		

Rear Foot Pads			
Pad Bearing Area (m ²)	#N/D	Actual Dimensions	#N/D
Pad Maximum Loading (kN)	#N/D	Actual Shape	#N/D
Pad Moment Arm (m)	#N/D		

Forces			
Maximum Extraction Force (kN)	135.00		
Maximum Penetration Force (kN)	124.00		
Maximum Auxillary Force (kN)	65.00	Auxillary Force Moment Arm (m)	4.25

<p>Note: The disclaimer on the first worksheet applies to all tables in this workbook</p>		<p>Notes</p> <p>Max working radius 3,50m. Weight of kelly bar and tool may vary. It's recommended that weight of kelly bal + tool + soil does not exceed 7500kg for good drilling performance.</p>