

Calculation of manhours								
Pos.: 12.1					Name	María García Lloris		
					Date	December 2013		
					Case	Vejlevej 19		
		Activity:	waste water pipes	Reference:		kav-5031		
				Ø 110 plastic pipe				
Calc. Quant.:		61,30 m						
Guiding time:							7,60	min/m
					add./red.			
			Add. Small quant.		10%		0,76	
					Total		8,36	
conditions:			Difficulty of the work			20%	1,67	
			Volume		OK	0%	0,00	
			Weather / season		Winter	20%	1,67	
			distance		0	10%	0,84	
			Other		No	0%	0,00	
					Total		12,54	
Workrelated allowance:								
			Scaffolding		No	0%	0,00	
			Other		No	0%	0,00	
			Total				12,54	min/m

Calculation of manhours								
Pos.:	12.2				Name	María García Lloris		
					Date	December 2013		
					Case	Vejlevej 19		
		Activity:	rain pipes	Reference:	kav-5031			
					Ø 110 plastic pipe			
Calc. Quant.:	114,68	m						
Guiding time:							7,60	
					add./red.			
			Add. Small quant.		10%		0,76	
				Total			8,36	
conditions:			Difficulty of the work		20%		1,67	
			Volume	OK	0%		0,00	
			Weather / season	Winter	20%		1,67	
			distance	0	10%		0,84	
			Other	No	0%		0,00	
				Total			12,54	
Workrelated allowance:								
			Scaffolding	No	0%		0,00	
			Other	No	0%		0,00	
			Total				12,54	min/m

Calculation of manhours								
Pos.: 12.3					Name	María García Lloris		
					Date	December 2013		
					Case	Vejlevej 19		
			drainage					
		Activity:	foundation pipes		Reference:	kav-5031		
Calc. Quant.:		190,81	m					
Guiding time:							7,60	min/m
					add./red.			
			Add. Small quant.		10%		0,76	
				Total			8,36	
conditions:			Difficulty of the work			20%	1,67	
			Volume	OK	0%		0,00	
			Weather / season	Winter	20%		1,67	
			distance	0	10%		0,84	
			Other	No	0%		0,00	
				Total			12,54	
Workrelated allowance:								
			Scaffolding	No	0%		0,00	
			Other	No	0%		0,00	
			Total				12,54	min/m

Calculation of manhours								
Pos.: 12.4					Name	María García Lloris		
					Date	December 2013		
					Case	Vejlevej 19		
		Activity:	wells	Reference:	kav-5031			
Calc. Quant.:		5 units						
Guiding time:							50,00	min/unit
					add./red.			
			Add. Small quant.		5%		2,50	
				Total			52,50	
conditions:		Difficulty of the work			20%		1,67	
			Volume	OK	0%		0,00	
			Weather / season	Winter	20%		1,67	
			distance	0	5%		0,42	
			Other	No	0%		0,00	
				Total			56,26	
Workrelated allowance:								
			Scaffolding	No	0%		0,00	
			Other	No	0%		0,00	

			Total					56,26	min/unit
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Calculation of manhours								
Pos.: 13.5				Name	María García Lloris			
				Date	December 2013			
				Case	Vejlevej 19			
		Activity:	drainage grates	Reference:	kav-5031			
Calc. Quant.:	12	units						
Guiding time:							50,00	min/unit
					add./red.			
			Add. Small quant.		5%		2,50	
				Total			52,50	
conditions:			Difficulty of the work		20%		1,67	
			Volume	OK	0%		0,00	
			Weather / season	Winter	20%		1,67	
			distance	0	5%		0,42	
			Other	No	0%		0,00	
				Total			56,26	
Workrelated allowance:								
			Scaffolding	No	0%		0,00	

			Other		No	0%		0,00	
			Total					56,26	min/unit

Calculation of manhours								
Pos.: 12.6					Name	María García Lloris		
					Date	December 2013		
					Case	Vejlevej 19		
			conection with public installation					
		Activity:			Reference:	kav-5031		
Calc. Quant.:		3 units						
Guiding time:							50,00	min/unit
					add./red.			
			Add. Small quant.		5%		2,50	
					Total		52,50	
conditions:			Difficulty of the work		20%		1,67	
			Volume	OK	0%		0,00	
			Weather / season	Winter	20%		1,67	
			distance	0	5%		0,42	
			Other	No	0%		0,00	
					Total		56,26	
Workrelated allowance:								

			Scaffolding	No	0%		0,00	
			Other	No	0%		0,00	
			Total				56,26	min/unit

Calculation of manhours								
Pos.:					Name			
					Date			
					Case			
		Activity:			Reference:			
Calc. Quant.:								
Guiding time:							0,00	
					add./red.			
			Add. Small quant.		0%		0,00	
				Total			0,00	
conditions:			Difficulty of the work		0%		0,00	
			Volume	OK	0%		0,00	
			Weather / season	Winter	0%		0,00	
			distance	0	0%		0,00	
			Other	No	0%		0,00	
				Total			0,00	

Workrelated allowance:									
			Scaffolding	No	0%		0,00		
			Other	No	0%		0,00		
			Total				0,00		

Calculation of manhours								
Pos.:					Name			
					Date			
					Case			
		Activity:		Reference:				
Calc. Quant.:								
Guiding time:							0,00	
					add./red.			
			Add. Small quant.		0%		0,00	
				Total			0,00	
conditions:			Difficulty of the work		0%		0,00	
			Volume	OK	0%		0,00	
			Weather / season	Winter	0%		0,00	
			distance	0	0%		0,00	

			Other		No	0%		0,00	
					Total			0,00	
Workrelated allowance:									
			Scaffolding		No	0%		0,00	
			Other		No	0%		0,00	
			Total					0,00	

Calculation of manhours								
Pos.:					Name			
					Date			
					Case			
		Activity:			Reference:			
Calc. Quant.:								
Guiding time:							0,00	
					add./red.			
			Add. Small quant.		0%		0,00	
				Total			0,00	
conditions:			Difficulty of the work			0%		0,00
			Volume		OK	0%		0,00

			Weather / season	Winter	0%		0,00	
			distance	0	0%		0,00	
			Other	No	0%		0,00	
				Total			0,00	
Workrelated allowance:								
			Scaffolding	No	0%		0,00	
			Other	No	0%		0,00	
			Total				0,00	

Calculation of manhours								
Pos.:					Name			
					Date			
					Case			
		Activity:		Reference:				
Calc. Quant.:								
Guiding time:							0,00	
					add./red.			
			Add. Small quant.		0%		0,00	
				Total			0,00	
conditions:			Difficulty of the work		0%		0,00	

			Volume		OK	0%		0,00	
			Weather / season		Winter	0%		0,00	
			distance		0	0%		0,00	
			Other		No	0%		0,00	
					Total			0,00	
Workrelated allowance:									
			Scaffolding		No	0%		0,00	
			Other		No	0%		0,00	
			Total					0,00	

Calculation of manhours								
Pos.:					Name			
					Date			
					Case			
		Activity:			Reference:			
Calc. Quant.:								
Guiding time:							0,00	
					add./red.			
		Add. Small quant.			0%		0,00	
				Total			0,00	

conditions:			Difficulty of the work		0%		0,00		
			Volume		OK	0%		0,00	
			Weather / season	Winter		0%		0,00	
			distance	0		0%		0,00	
			Other		No	0%		0,00	
				Total				0,00	
Workrelated allowance:									
			Scaffolding		No	0%		0,00	
			Other		No	0%		0,00	
			Total					0,00	

Calculation of manhours								
Pos.:					Name			
					Date			
					Case			
		Activity:			Reference:			
Calc. Quant.:								
Guiding time:								0,00
					add./red.			

			Add. Small quant.		0%		0,00	
					Total		0,00	
conditions:			Difficulty of the work		0%		0,00	
			Volume	OK	0%		0,00	
			Weather / season	Winter	0%		0,00	
			distance	0	0%		0,00	
			Other	No	0%		0,00	
				Total			0,00	
Workrelated allowance:								
			Scaffolding	No	0%		0,00	
			Other	No	0%		0,00	
			Total				0,00	

Calculation of manhours							
Pos.:					Name		
					Date		
					Case		
		Activity:			Reference:		
Calc. Quant.:							
Guiding time:							0,00
					add./red.		
			Add. Small quant.		0%		0,00
				Total			0,00
conditions:			Difficulty of the work		0%		0,00
			Volume	OK	0%		0,00
			Weather / season	Winter	0%		0,00
			distance	0	0%		0,00
			Other	No	0%		0,00
				Total			0,00
Workrelated allowance:							
			Scaffolding	No	0%		0,00
			Other	No	0%		0,00
			Total				0,00

Calculation of manhours							
Pos.:					Name		
					Date		
					Case		
		Activity:			Reference:		
Calc. Quant.:							
Guiding time:							0,00
					add./red.		
			Add. Small quant.		0%		0,00
				Total			0,00
conditions:			Difficulty of the work		0%		0,00
			Volume	OK	0%		0,00
			Weather / season	Winter	0%		0,00
			distance	0	0%		0,00
			Other	No	0%		0,00
				Total			0,00
Workrelated allowance:							
			Scaffolding	No	0%		0,00
			Other	No	0%		0,00
			Total				0,00

Calculation of manhours							
Pos.:					Name	María García Lloris	
					Date	December 2013	
					Case	Vejlevej 19	
		Activity:	Bliding layer	Reference:	Drawings		
Calc. Quant.:		13,02					
Guiding time:		0,1					6,00
					add./red.		
			Add. Small quant.		2%		0,12
				Total			6,12
conditions:			Difficulty of the work		15%		0,92
			Volume	OK	0%		0,00
			Weather / season	Winter	20%		1,22
			distance	0	10%		0,61
			Other	No	0%		0,00
				Total			8,87
Workrelated allowance:							
			Scaffolding	No	0%		0,00

			Other		No	0%		0,00
			Total					8,87

Blinding layer

mh/m ²	
Casting of blinding layer	0,07-0,15

Calculation of manhours							
Pos.:				Name	María García Lloris		
				Date	December 2013		
				Case	Vejlevej 19		
		Activity:	Formworks	Reference:	Drawings		
			FOUNDATION				
Calc. Quant.:	196,31	m2					
Guiding time:		1			mh/m2		60,00
					add./red.		
		Add. Small quant.			5%		3,00
				Total			63,00
conditions:		Difficulty of the work			20%		12,60
		Volume		OK	0%		0,00
		Weather / season		Winter	20%		12,60
		distance		0	15%		9,45
		Other		No	0%		0,00
				Total			97,65

Workrelated allowance:								
			Scaffolding		No	0%		0,00
			Other		No	0%		0,00
			Total					97,65

mh/m²	Traditional formwork*	Element formwo
Work volume 400 m ²	1,0	0,7
Work volume 3000 m ²	0,85	0,6

Calculation of manhours							
Pos.:					Name	María García Lloris	
					Date	December 2013	
					Case	Vejlevej 19	
			reinforcement Y12				
		Activity:		Reference:	Drawings performan		
Calc. Quant.:		2366,546	kg/m				
Guiding time:			0,01			MH/KG	0,60
					add./red.		
			Add. Small quant.			5%	0,78
					Total		1,38
conditions:			Difficulty of the work			10%	0,14
			Volume	OK	0%		0,00

			Weather / season	Winter	20%		0,28
			distance	0	10%		0,14
			Other	No	0%		0,00
				Total			1,93
			Workrelated allowance:				
			Scaffolding	No	0%		0,00
			Other	No	0%		0,00
			Total				1,93

Beams and columns steel fixed on the spot

kg/m	mh/t	kg/m	mh/t	kg/m	mh/t
5	15	8	13	20	10
6	14	11	12		

Calculation of manhours							
Pos.:				Name	María García Lloris		
				Date	December 2013		
				Case	Vejlevej 19		
		Activity:	Reinforcement	Reference:	Drawings performar		
			Y8				
Calc. Quant.:	451,074	kg/m					
Guiding time:							0,60
					add./red.		
		Add. Small quant.			5%		0,90
				Total			1,50

conditions:			Difficulty of the work		10%			0,15
			Volume		OK	0%		0,00
			Weather / season	Winter		20%		0,30
			distance		0	10%		0,15
			Other		No	0%		0,00
					Total			2,10
Workrelated allowance:								
			Scaffolding		No	0%		0,00
			Other		No	0%		0,00
			Total					2,10

Calculation of manhours							
Pos.:					Name	María García Lloris	
					Date	December 2013	
					Case	Vejlevej 19	
		Activity:	Reinforcement connetions	Reference:		Drawings performar	
Calc. Quant.:		187,35	kg/m				

Guiding time:								0,60
					add./red.			
			Add. Small quant.		5%			5,00
					Total			5,60
conditions:			Difficulty of the work		10%			0,56
			Volume	OK	0%			0,00
			Weather / season	Winter	20%			1,12
			distance	0	10%			0,56
			Other	No	0%			0,00
				Total				7,84
Workrelated allowance:								
			Scaffolding	No	0%			0,00
			Other	No	0%			0,00
			Total					7,84

Calculation of manhours							
Pos.:				Name	María García Lloris		
				Date	December 2013		

					Case	Vejlevej 19	
		Activity:	cast concrete	Reference:		Drawings performar	
Calc. Quant.:	1059,3	m3					
Guiding time:		0,7			mh/m3		42,00
					add./red.		
			Add. Small quant.		2%		0,84
				Total			42,84
conditions:			Difficulty of the work		15%		6,43
			Volume	OK	10%		4,28
			Weather / season	Winter	20%		8,57
			distance	0	10%		4,28
			Other	No	0%		0,00
				Total			66,40
Workrelated allowance:							
			Scaffolding	No	0%		0,00
			Other	No	0%		0,00
			Total				66,40

Foundations

mh/m ³	Width of foundation 250 mm	Width of foundation 500 mm
Casting with crane	1,0	0,7
Casting with pump	0,5	0,4
Casting with conveyor belt	0,7	0,4

Calculation of manhours							
Pos.:					Name	María García Lloris	
					Date	December 2013	
					Case	Vejlevej 19	
		Activity:	insulation	Reference:	Drawings		
Calc. Quant.:	232,634						
Guiding time:		0,12			mh/m2		0,00
					add./red.		7,20
		Add. Small quant.			0%		0,00
				Total			7,20
conditions:		Difficulty of the work			2%		0,00
		Volume		OK	10%		0,00
		Weather / season		Winter	20%		0,00
		distance		0	10%		0,00
		Other		No	0%		0,00
				Total			7,20
Workrelated allowance:							
		Scaffolding		No	0%		0,00
		Other		No	0%		0,00
		Total					7,20

Setting up insulation

	mh/m ²
Mineralwool	0,07

Woodwool and cork	0,12
Gas concrete blocks t=100-150 mm	0,35
Leca blocks t=100-150 mm	0,45

Calculation of manhours							
Pos.:					Name	María García Lloris	
					Date	December 2013	
					Case	Vejlevej 19	
		Activity:	formwork for slab		Reference:		
Calc. Quant.:	232,634	m2					
Guiding time:		0,8			mh/m2		60,00
					add./red.		
		Add. Small quant.			5%		3,00
					Total		63,00
conditions:		Difficulty of the work			20%		12,60
		Volume		OK	0%		0,00
		Weather / season		Winter	20%		12,60
		distance		0	15%		9,45
		Other		No	0%		0,00
				Total			97,65
Workrelated allowance:							
		Scaffolding		No	0%		0,00
		Other		No	0%		0,00
		Total					97,65

Deck form deckthickness 180-300 mm

mh/m ²	Work volume 400 m ²	Work volume 3000 m ²
Traditional 2,8 m above ground level	0,8	0,7
Traditional 2,8 m above ground level	1,2	1,0
System girders 2,8-4,0 m	0,7	0,6

Calculation of manhours							
Pos.:					Name	María García Lloris	
					Date	December 2013	
					Case	Vejlevej 19	
		Activity:	reinforcement floors	Reference:			
Calc. Quant.:	807,326	kg					
Guiding time:		0,19			mh/kg		
					add./red.		11,40
		Add. Small quant.			2%		0,23
				Total			11,63
conditions:		Difficulty of the work		10%			1,16
		Volume		OK	0%		0,00
		Weather / season	Winter	20%			2,33
		distance	0	10%			1,16
		Other	No	0%			0,00
			Total				16,28
Workrelated allowance:							

			Scaffolding	No	0%		0,00
			Other	No	0%		0,00
			Total				16,28

kg/m	mh/t	kg/m	mh/t
5	0,19	25	0,50
15	0,28	50	0,90

Calculation of manhours							
Pos.:				Name	María García Lloris		
				Date	December 2013		
				Case	Vejlevej 19		
		Activity:	casting elevator walls	Reference:			
Calc. Quant.:	2,23	m3					
Guiding time:		0,55			mh/m3		
					add./red.		33,00
			Add. Small quant.		0%		0,00
				Total			33,00
conditions:			Difficulty of the work		5%		1,65
			Volume	OK	0%		0,00
			Weather / season	Winter	20%		6,60
			distance	0	10%		3,30
			Other	No	0%		0,00

					Total			44,55
Workrelated allowance:								
			Scaffolding		No	0%		0,00
			Other		No	0%		0,00
			Total					44,55

[illegible]

small job 1 day job

months of winter

big area big building site

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