MOUNTING REPORT

Business Academy Aarhus

Architectural Technology and Construction Management

3rd semester

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Z komentarzem [CN1]: Overskrifterne har ikke samme font.

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Problem statement

How does the mounting contractor make use of the tender material and how is this information transformed into the planning of link processes that the assembly work consist of?

Our role

<u>WAfter when the tender bid was transferred</u> to the production drawing and taken from the advisor, the company started producing elements. <u>Afterwards tThehe</u> next step is to mount the prefabricated concrete elements on <u>f</u> the walls.- <u>Right nowThen</u> we change our role from advisors to the role as<u>to</u> building site managers.

<u>The Bb</u>uilding site manager is responsible for the sit<u>e every daye running during of</u> the project-<u>every day</u>. He needs to take care of <u>the timesetime scheduleale</u> and budget of <u>thea</u> project. <u>Further, he needs to</u> and solve the problems <u>which are arising accumulates</u> on the site. He is involved of <u>in</u> the quality assurance, health <u>and</u> and safety and inspection of <u>the</u> work. He is also responsible <u>forof</u> the communication between all <u>employerstrades</u>.



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Fingerprint concrete

About 10 years ago, *Erik Fingerprint* established the company *Fingerprint* <u>Ceoncrete</u>-<u>company</u>. The company takes care of mounting and production of prefabricated concrete panels. Over the years, the company became increasingly specialised. In 2006, the company changed its policy and it offereds delivery and mounting of anything connected to prefabricated concrete panels. The company operates nationally and employs a number of experienced fitters and managers.

The company wishes to be known as a competent partner within the profession. The <u>c</u>-company brand is_-characterized by high quality and fast service. In the future, the company wants to increase <u>their</u> working range into Europe.

The company takes care of both individual customers and companies. When the client has signed a contract with the company *Fingerprint Concrete*, it-is ensuresd all-delivery on site in the shortest possible time and precisely mounted.

Company organisation

Our company consist of a CEO and a Technical Director. The CEO are in charge over the administration and the sales-department while the Technical Director is in charge of the Project department and the Production. Each of the departments are in charge of smaller groups helping the company to function properly.



Sformatowano: Czcionka: Nie Kursywa

Sformatowano: Czcionka: Kursywa

Confidential bid of the delivery

To find our tender bid, wel started out with visualizing the work process that goes into producing one element (FE_A1 work process, see figure 1 on the next page). This process gave me-us_an idea of how muchlong time each process wshould take and when it show finish and how many workers we wanted to assign each task related to the production. Each view on the drawing shows a step in our production from building the casting box to purring the last portion of concrete to create the front plate.

On figure 1, you see the estimated amount of workers and hours that we expect to use in each level of the process. Since we have to make eight walls with the same procedure, we expect it to take less time to make the eighth one than the first one. In that sense, we use less time than estimated. When we use less time than expected it will either result in higher profit for us or in a discount for the costumer.



Figure 1: FE_A1 work process

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We divided the process and added them into the excel sheet below. This meant that we could take the hours that we assigned each process previously estimated and put them in the excel sheet and start calculating the price of our element. The materials necessary to produce the elements were added using quantity take out and finding prices from the internet.

Calculationsheet

Case r	no.	1101			Date of cale	culation:		15.12.	2014		Wage of	Wage of blue collar		174,60
Case		1101_FE_A1			Calculated	by:		CBN			Social co	st %:		41,75
Client		Horsens multipality			Rev. date :						Wage of	blue collar	(DKK):	247,50
Contra	act	Element contract			Controlled h	by:								
Panal	no.:	A1			Element m ²	1	27,99	27,99			Price Ind-	ex :		119
			Use of tim	ne in minutes	Pay of	Pay of work		Materials			Rent of	machines	Cost price	
										Total				
	Act.		Time each	Total time in	Pay an	Total			price at	price		Total		Total
Entry	no.	Description of Activities	m ²	min.	hours	(DKK)	Amount	Unit	each unit	(DKK)	Price	(DKK)	Unit	(DKK)
	1	Receiving control		20,00	247,50	82,50								82,50
	2	Casting box created		80,00	247,50	329,99	23,50	m	23	540,5	j .			870,49
	3	Recesses made		60,00	247,50	247,50	4,00	m2	150	600)			847,50
	4	Control of length and width		20,00	247,50	82,50								82,50
	5	Reinforcement backplate		160,00	247,50	659,99	27,99	m2	50	2799)			3458,99
	6	Control of length/width/diagonal	meassure	20,00	247,50	82,50								82,50
	7	Purring concrete	1	60,00	247,50	247,50	5,50	m3		6611				6858,50
	8	Concrete left to dry		340,00	0,00	0,00								0,00
	9	Control		20,00	247,50	82,50								82,50
	10	Insulation is mounted		110,00	247,50	453,74	27,99	m2	150	4198,5	j.			4652,24
	11	Control		10,00	247,50	41,25								41,25
	12	Reinforcement Frontplate		100,00	247,50	412,49	27,99	m2	26	727,74	1			1140,23
	13	Control of length/width/diagonal	meassure	20,00	247,50	82,50								82,50
	14	Purring concrete	1	60,00	247,50	247,50	2,00	m3		2640)			2887,50
	15	Concrete left to dry		440,00	0,00	0,00								0,00
	16	Control		20,00	247,50	82,50								82,50
	17	Casting box is dismounted		20,00	247,50	82,50								82,50
	18	Element is moved to storage		15,00	247,50	61,87								61,87
				1				1						
														21396,06
		Total	1	1575,00		3279,32				7566,24				10.845,56
													Page	1 af 3

We repeated this process on three elements. This gave us an average square meter price of 712,30 DKK

Average price of calculations

		ge pillee ei ea.	•••••••					
Case	no.	1101			Date of calculation:			15.12.2014
Case		1101_FE_A1			Calculated by:			CBN
Client		Horsens multipality			Rev. date :			
Contra	act	Element contract			Index :			119
					Controlled by:			
	Act.						Cost	price
Entry	no.	Description of Activities	no.	Amount of m ²	Unit	cost price	Unit price	Total
		Frontpanels						
		FE - A1	1	27,99	DKK	21.396,06		kr 21.396,06
		GE - E1		27,99	DKK	19.850,50		kr 19.850,50
		FE - C2LWR		27,99	DKK	18.573,05		kr 18.573,05
	-							
		Total m ² :		83,97	Total price:			kr 59.819,61
		Average price each m ² :		Total price/Total m ²				712,39
		Price each m ² :			DKK/m ²			712,39
							Page	2 af 3

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In the quotation sheet, we added the contribution ratio of 40% that will cover all our fixed costs to machinery, rent and insurance etc. The contribution ratio of 40% is calculated from the 2014 budget.¹ Therefore, we ended up with a total square meter price of 997,35 DKK and a total contribution margin of 402.359,33 DKK. The total price for manufacturing all 1412m² of wall will cost 1.408.257 DKK. In addition, the total price excl. VAT is 1.598.725,02 DKK, which includes transportation, rent of crane, labour and materials.

Notice that the calculations have been change during the process, but the sums informed above are still correct. The calculations in the sheet below are only to explain for the reader what we have done, see the annex 2 for the correct calculations.

Quot	atio	onssheet					1.		
Case no. Case		1101 1101 FE A1	_			Calculated by: Date of calculation:	CBN 15.12.2014	Social cost:	41.75%
Client Contract		Horsens multipality Element contract				Rev. date : Controlled by:		Index :	119
	11. 2	Figures from the Result budget			-				1 1000 1000 1000
		Turnover pr. year							51.000.000,00
		Variable cost			· · · · · ·				36.320.000,00
	-	Contribution margin		_					20.368.000,00
		Contribution ratio	(ex. 2	0.368.0	00 x 100)	(51.000.000)			40%
					-		Cost	price	
Entry	NO.	Description of Activities	Unit	Time	Amount	Calculation	Unit	unit price	Total in DKK/kr.
	10 3	Price kr. each m ² :		31	i		DKK/m ²	712,39	
	1	Contribution and a (40 MA)		2	10	-(204 42 - 0.40)	OPPE	20100	
	1	Contribution ratio (40 %)	70	2	40	=[/04,42 X 0,40]	UNIN	284,90	
		Total cost price / m ²					DKK/m ⁻	997,35	
		Contribution margin on this case	m'		1412	=(305,77 x 1412)		402.359,33	402.359,33
	-		-			-			
Figures to	o ente	r in the bidlist	2	2	2		- 24	9. 93	Quotation price
92329	100	Quotation	7	15	5			3	Total in DKK/kr.
		Manufacturing the panels Costprice panels	m²	26	1412		DKK/m ²	997,35	1.408.257,66
		Transport of panels from factory to the				for a found balance	DUNING		90 504 PB
Sub cont	ractor	site	101	100	1912	(or a fixed total price)	UNINIT	27,99	39.021,88
oup com	1 deser	Rent of crane	hour	64	-		OKK/ hour	1500.00	96.000.00
	2.3	Contribution ratio sub contrator 5%		8		=(96.000 x 0,05)	1	S	4.800,00
		Working salary for the mounting the panels	hour	64			DKK/ hour	261.17	16,715,16
	0.8	Contribution ratio sub contrator 5%		8	8 3	=(16.715,16 x 0,05)		3	835,76
	8-8	Quotation excl. VAT	8	23	8 - 3	2	3		1.565.294,70
		and an experimental		8	13		1		-marganet
	0.3	VAT (25 %)	3	5		6		2	391.323,68
_	1	Quotation Incl. VAY	3	1	5		DKK	3	1.956.618.38
								Page	3 af 3

¹ See annex 1: budget 2014

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Mounting process

In the mounting process, we hand out a mounting plan, which determine the order, and the transportation of the elements arriving on site. Each element is named differently according to a company standard, which helps placing the elements in the right position.



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Logistic delivery planning

Building logistic concerns planning, managing, organising and co-ordinating the delivering of materials within building industries. The main issue of logistic is to reduce the total cost of administration, transport, storage, waste and mounting time. The aim is not only to lower the transportation cost but all cost related to the building process and delivery of materials. Logistic in the mounting face is based on several plans and schedules.

Unit schedule

The schedule below is based on the mounting plan with the prefabricated concrete wall elements. The elements are grouped in loads or units according to the mounting plan. On the schedule, we can see how many elements that are delivered on site (56 elements) and the article number of the elements as well as gable or facade. We divide the elements in loads to calculate the needed transport to get them to the site. The schedule is continued on the following page.

UNIT SCHED	ULI	E			
Unit number:					
Name :		Christian Nielsen	Date:		2014-12-11
Total amount :		56	Initials:		
Supplier:		Fingerprint concrete	Revision:		
Contract / trade :		Concrete element			
Case:	Ho	rsens Multipurposehall			
Article no. /component no. :	No.	Description/subjec t:	Quantity		Unit.
GE - E4LWR3	14	Gable		1	1
FE - A1LWR	2	Facade		1	1
CE - 2	22	Corner		1	1
FE - B3LWR	5	Facade		1	2
FE - D3LWR	12	Facade		1	2
FE - C2LWR	8	Facade		1	2
FE - A1LWR	2	Facade		1	3
FE - B1LWR	4	Facade		1	3
FE - D1LWR	10	Facade		1	3

GE - E4LWR	16	Gable	2	4
GE - E1LWR	13	Gable	1	4
GE - E4LWR2	17	Gable	1	5
GE - EA	15	Gable	1	5
	10	Cable	1	5
GE - E5	10	Gable	1	5
GE - E6	19	Gable	1	6
CE - 1	21	Corner	1	6
FE - B1	3	Facade	1	6
FE - A1	1	Facade	1	7
FE - C1	6	Facade	1	7
FE - D1	9	Facade	1	7
FE - B1	9	Facade	1	8
FE - A1	1	Facade	1	8
FE (2)	2	Facado	1	0
FE - C2	3	Facade	1	8
FE - D1	9	Facade	1	9
FE - B1	3	Facade	1	9
FE - A1	1	Facade	1	9
	0	Facade	1	10
FE - D2	2	Facade	1	10
	1	Facade	1	10
FE - AI	6	Facade	1	11
FE - D1	0	Facade	1	11
FE - B1	3	Facade	1	11
FE - 41	1	Facade	1	12
CE - 1	21	Gable	1	12
GE - E1	13	Gable	1	13
GE - E7	20	Gable	1	13
GE - E1	13	Gable	1	13
GE - E1	13	Gable	3	14
GE - E7	20	Gable	1	15
GE - E1	13	Gable	1	15
FE - C2	7	Facade	1	16
FE - A1	1	Facade	1	16
FE - B1	3	Facade	1	16
FE - D1	9	Facade	1	17
FE - C2	7	Facade	1	17
FE - A1	1	Facade	1	17
FE - B1	3	Facade	1	18
FE - D1	9	Facade	1	18
FE - C1	6	Facade	1	18
FE - A1	1	Facade	1	19
FE - B1	3	Facade	1	19
CE - 1	21	Corner	1	19
Renunciation deadline:	_			
I ype of delivery	_	Truck		
Loading method: Rocking:	_	Stading up	timo	
Facking returned:	-	a concrete elements at a	ume	
Additional information:				

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Time-schedule

The construction time schedule is done and maintained by the project manager Elvijs Josts. The timeschedule shows that for the mounting wall elements are intended 8 days in different weeks. That means that the transport of the elements will also be divided into weeks according to the time schedule. In one day we will mount 9 elements, that means 3 loads = 3 trucks.

In case we need more time, the company will have to contact the project manager and ask him for more time. Both sides have to agree on that, which again needs to be documented.

16	*	Erect and support first 36 sandwich elements	2 days	Tue 12.5.15	Wed 13.5.15
17	*	Connectons between sandwich walls	2 days	Thu 14.5.15	Fri 15.5.15

25	*	Erect and support rest of sandwich wall elements	3 days	Wed 03.6.15	Fri 05.6.15
26	*	Connections between sandwich walls	1 day	Mon 08.6.15	Mon 08.6.15

Delivery plan

This plan informs when the units will be delivered on site according to the time schedule. The plan helps us to track each unit and tells us how many units expected to be delivered per week. In week 20 we will deliver unit number 1-12 and in week 23 unit number 13-17 and so on.

Delivery plan no.:	19			Date:	11.12.2014	
Contact person:	Christian N	ielsen		Initials:		
Case:	Horsens Mu	ultipurposeha	all	Revision:		
				Period :	3 weeks	
Unit no:	Week no.	Week no.	Week no.	Week no.	Week no.	Week no.
1	20					
	20					
2	20					
3	20					
4	20					
5	20					
6	20					
7	20					
	20					
	20					
9	20					
10	20					
11	20					
12	20					
13		23				
14		23				
15		23				
16		23				
17		23				
18			24	L		
19			24	ł		
Renunciation deadline:						
Type of delivery	3 Concrete	elements pe	er load			
Loading method:	Mobile cra	ne				
	Elements	are stading				

Renunciation plan

The renunciation plan is a detailed confirmation of the delivery plan. It is based on the delivery times in days (Monday-Friday) and gives exact time when the materials are wanted on the construction site. In case of any changes in time of delivery, it is necessary to contact the project manager and agree on actual time of delivery (changes in time have to be documented on the revision of the renunciation plan).

Renunciatio	1					Date	:	11.12	2.2014	1								
Contactpers	ion :	Chris	stian N	vielser	ı		Initial	s :										
Case :		Horsens MultiPurposeHall				Hall	Revis	sion:										
							Perio	de:										
			De		otion			Der	unair	tion			Population					
			Re	nunci	auon			Rei	IUNCIa	uon		Rendholadion						
			1	Week	20			N	/eek :	23			V	/eek 2	24			
Unit no. :	Name :	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed	Thu	Fri	Mon	Tue	Wed.	Thu	Fri		
1	GE - E4LWR3, FE - A1LWR, CE - 2		x												<u> </u>			
2	FE-B3LWR, FE-D3LWR, FE-C2LWR		х															
3	FE-A1LWR, FE-B1LWR, FE-D1LWR		x															
4	GE-E4LWR, GE - E1LWR, GE-E4LWR			x														
5	GE-ERLWR2, GE-E4, GE-E5			x														
6	GE-E6, CE-1, FE-B1			x														
7	FE-A1, FE-C1, FE-D1				x													
8	FE-D1, FE-A1, FE-C2				x													
9	FE-D1, FE-D1, FE-A1				x													
10	FE-C1, FE-D2, FE-B1					x												
11	FE-A1, FE-C1, FE-D1					x												
12	FE-D1, FE-A1, CE-1					x												
13	GE-E1, GE-E7, GE-E1								x									
14	GE-E1								x									
15	GE-E7, GE-E1								x									
16	FE-C2, FE-A1, FE-B1									х								
17	FE-D1, FE-C2, FE-A1									x								
18	FE-B1, FE-D1, FE-C1											x						
19	FE-A1, FE-B1, CE-1											x						
Delivery - unloading place:			ading	on the	e site (of buildi	ng Mu	ılti Pu	rpose	Hall								
Unloading method:			le cra	ne														
Return packing:																		
Additional in	formation:	none																

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Logistic profile

From the logistic profile it is clarified how to handle and transport the different units. Since the loads contain different kind of elements it is important to make sure that the elements are handled correct.

LOGISTICPROFILE

Supplier:	Fingerprint Concrete	Date: 11.12.2014
Contract:	Concrete mounting	Initials: CBN
Case:	Horsens Multipurposehall	Revision:
		Control:
Artickle identification :		
Proberties	Suggestion to evaluation	Comments
Article-/material type (processing extent)	All elements are Labeled	
Transport shape/ Distribution	Vertical placement on the truck	
Storage proberties	Can be stored on site rapped in plastic	
How to handle easy/difficult	Only lift with crane in liftinghooks	
Sensibility toward wast loss and damage	In case of damage element must be returned to the factory	
Easy to mark	Labeled	
Accesable (on the market)	Building site is accesable with a road	
Mounting or built-in proberties	Mounted on bricks and supported by blueboys	

Plan of health and safety

Description

The project is about building a Multi-Purpose Hall for Horsens and can be split into two stages. First we have the concrete hall with offices and locker rooms and secondly we have a wooden cafeteria with meeting rooms. Furthermore, there is space for parking close to the entrance.

The construction of the concrete hall is based on prefabricated concrete walls, hollow cores for the first floor deck and TTS beams and waffle slabs. The construction work cover the erection of 56 elements for the concrete hall.

1. Organization of the construction site

Location:	Chr. M. Ostergaards Vej 4, 8700 Horsens Tlf.: 53642569
Project manager:	Elvijs Josts, 8700 Horsens
Safety coordinator:	Viesturs Matisons, 8700 Horsens Tlf.: 54368495
Site manager	Josva Maitilberg, 8700 Horsens
Contractors safety representative:	Marius Raducan Fingerprint concrete, Halmstatgade 8, 8200 Aarhus N Tlf: 31885552

1.1 The plan of health and safety on the site is published to:

- Client ٠
- All specific contractors:

Survey	Electrician
Soil	Landscape
Plumber	Gardener
Carpenter	Cleaning
Concrete element	
Wooden element	
Ventilation	
Steel frame	
Elevator	

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Safety coordinator: Viesturs Matisons

1.2 Safety meetings

The safety coordinator - Viesturs Matisons organizes safety meetings every 1st week and he is also responsible of being chairman and making written minutes during them. Each contractor who is working on the building site must be present on the meeting or someone of his workers must represent him on the meeting.

In case of accident on the building site, the manager must arrange the safety meeting. All contractors, the building site manager and the safety coordinator must be present on the meeting. Should be done the analyse of a reason of what happened and they must undertake activities to prevent this situation in the future. Safety is important thing and it has to be incorporated and connected in all activities in order to ensure secure and quick flow of work.

2. Health and safety management system

2.1 Coordination of safety - duties and roles

The company is responsible for informing and introducing all workers on the building site about their individual roles and duties. Safety coordinator introduced all employees about the consequences of not using health and safety regulations. The safety coordinator carries out inspections at least once weekly on employees and also gives reprimand. Each employee has his own card, and if he did something inconsistent with the health and safety, he will get a mark on his card. If an employee collects the two characters, he cannot work for a year on the building site. These activities are used to establish normal level of the responsibility for health and safety among employees. The safety coordinator has to show the obligation of management by signing and dating the document and also ensure that all employees are aware of the policy's contents.

2.2 Policy

The company wants to create effective health and safety management system. The company decided to establish policy, which contain:

- a demand to follow with government legislation
- a statement of management's commitment to health and safety
- common objectives of the health and safety program
- overall health and safety responsibilities of management, workers, contractors and visitors ٠ while they are on building site
- a requirement to fulfil the our own health and safety standards by all employees •

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3. Planning of building site layout

The company decided to carry out good planning of the construction site in order to increase the productivity and safety.

3.1 Site accessibility

The company arrange the layout of the roads leading to the site as well as internal roads. Otherwise the company planned parking area for employees and visitors. These actions ensure easy accessibility, which will simplify process of logistic, decreases possibilities of accidents and save the time of arrivals and departures.

3.2 Safety

- Construction clothing: safety shoes, helmets, reflective clothing, gloves and goggles, vests
- Fire equipment: fire extinguisher, sprinklers etc.
- Medical devices: first aid kid

3.3 Indicating signs

- Safety signs to have the appropriate outfit for the site as well as to remember about safety rules
- Emergency routes they will be displayed on every floor during the building progresses
- Traffic signs to help in leading movement between trucks, to avoid accidents
- Site plan show everything what is going on the site in good order; it is located in the office of site coordinator and near to entrance

3.4 Security

- Lightning- to ensure workers good conditions as well as during the works carried out in the winter when it is dark faster
- · Entrance- is provided proper security service at the entrance in order to keep track of all visitors
- Fencing ensure better security

3.5 Offices - close to each other, close to the site.

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3.6 Technical Installation (water, electricity etc.) - have water and toilet facilities in convenient locations, supply electricity for machinery etc.

3.7. Storage and site cleaning - it is necessary to plan storage areas for materials.

4. Risk within the building period

- Inappropriate storage of material no protection materials from humidity and also possible to overturn
- Using of installations and equipment electricity
- The use of machinery and technical equipment-must be adequately trained staff, regular machine control, technical supervision
- Working at height
- Transportation of heavy elements and placing them in right position

Every contractor must create a statement with all chemicals and substances that they use and storage on the building site. The statement has to be analysed at the first meeting, where will be all contractors.

5. Building site plan

On the plan of health and safety we can find all mention above things about lighting, first aid, phone, trash containers, containers for materials, containers for workers and electricity box. If something happened on the site according health and safety we need to inform health and safety manager. If we don't know who is this, we can easily find him in the case specifications.



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6. WA - Survey of working conditions

Here we can find similar problems, which we actually have on the building site and we can get knowledge what to do from this tables. We also know who is responsible for that kind of problem.

Wo	Workplace Assessment WA												
Survey of working conditions													
			Tite destructor	+		le.				τ	+		
			Fingerprin	ı		Mu Da	ruų Juo	8		tiemen	l na		
			whitele			ЛИ	uu	m		mounu	ng		
	A High exte	ent,	B some extent	Α	В	С	D	C lo	w extent,	D no probl	em		
DI					- 1- 6-								
Phy	Physical working conditions check the handbook for the safety group												
1	Effects from the we	athe	r, e.g. heavy			х							
2	Welfare accommod	ina, atior	rain or draft			¥.							
-	Noise from machine	anor	ools or other		V /	×		Μίλ	úna heli	netwitht	the		
Ŭ	installations	<i>,</i> , .			~			hea	dohones	K.			
4	4 Vibrations from machines, tools or other					x							
	installations												
5	Work light condition	าร				x							
6	Internal climate con	ditio	ns				X						
	Ventilations, smoke	and	moisture etc.										
	A Hiah ext	ent.	B some extent	Α	В	С	D	C lo	w extent.	D no prob	lem		
	_	,							,				
Erg	onomically workin	g co	nditions check th	ne ha	andb	ook	for th	he sat	fety group				
7	Constructions site,	wor	kshop- and office			х							
0	arrangement etc.							140	· · · · · · · · · · · · · · · · · · ·	1. (1			
8	Machines, equipmo	ent a			×			MUS	sing too	ls for work	ers		
9	9 Heavy lift, heavy work and heavy push				×			Inc	chín au	acement	ofthe		
10	Lifting and carrying	1- is :	a lot of objects			V/		mu	nunes				
	lifted or carried dur	ing a	a working day			~							
11 Working positions					x			Тос	r many p	eople are	on the		
								síte	at the s	ame tíme			
12	One-sided and rep	eate	d work. –the			x							
	same movement in	n a lo	ng time										

A High extent, B some extent A B C D C low extent, D no problem

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Psy	Psychological working conditions check the handbook for the safety group										
13	Working time length etc.			х							
14	Time pressure - several task in short time			×							
15	One-sided work with constant attentions				x						
16	Missing influence on planning and arrangement of your own work			×							
17	Cooperation and everyday language		x			Use Danish or English.					
18	Working alone – isolation from the others				×						
19	Missing or inadequate direction/ instructions		x			Insufficient instruction of the staff					
С	A High extent, B some extent	Α	В	С	D	C low extent, D no problem					

Chemical working conditions check the handbook for the safety group

20	Substance and materials, that leads to discomfort. Mineral wool, quartz, concrete- or wood dust. Steam or smells.		×		
21	Missing use of personal protections			x	
22	Missing or inadequate direction/ instructions	x			Insufficient instruction of the staff
23	Missing education –epoxy, isocyanides or asbestos etc.			×	
24	Missing or inadequate manuals			x	
25	Missing or inadequate marks – codes or dangerous signs.			×	
26	Missing investigations of substances and materials, if there exist less toxic/dangerous materials than the ones used			×	

A High extent,	B some extent	Α	В	С	D	C low extent,	D no problem
		_		-		-	

Acc	Accidents hazard check the handbook for the safety group									
27	Machines – movable parts are not safe, emergency stops are missing or missing maintenance etc.				x					
28	Missing use of personal protections			x						
29	Missing or inadequate direction/ instructions		x			Training BHP				
30	Missing education – certificates etc.			x						
31	Missing or inadequate manuals				x					
32	Technical aid – use and maintenance etc.		x			Need fulfilment				
33	Missing service check – cranes, trucks, lifts hoist, fall safety equipment etc.			x						
34	Handling of materials			x						
35	Handrails, scaffolds, platforms and			x						

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	landings, working baskets and ladders								
36	Traffic – vehicles				x				
37	Access roads etc.	х				Blocked by traffic jam			
38	Employees, execute dangerous work, according to WEA (ex.order no.589)				×				
39	39 Prevention of accidents			x					
С	A High extent, B some extent	Α	В	С	D	C low extent, D no problem			
Wo	Working conditions related absence check the handbook for the safety group								

Plan of action

Workplace Assessment WA

Plan of action

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	Fingerprint concrete	name	Eler	nent mounting
	The reason for the	How is the	Respons	sible person
	problem	problem solved	Date for execution	Date for the follow up
No. 3	Missing helmets with the headphones	Contact manager to buy more.	8.04.2015	10.04.2015
No. 8	Missing tools for workers	Too many peoples are at the same time on the site or contact manager to ensure more	8.04.2015	10.04.2015
No. 9	Incorrect placement of the machines	A control of the correct placement and routes of the machines is executed	Name executes the control Daily, During the whole day	On safety meeting after every main stage of the construction
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		periodically		
	Too many people are on the site at the same time	Check time schedule and inform manager	During the problem	As fast as possible
No. 17	Use only Danish or English	Follow your contract of employment	08.04.2015	08.04.2015
No. 19	Insufficient instruction of the staff	A safety instruction is handed to every worker and they are obliged to take a test on it with no allowed mistakes	Name provides the employees with the instructions 30.03.2015	Evaluation after use of the new lighting on Safety meeting 02.04.2015 and every meeting from then on
	Training BHP	Contact manager and organize new training or give a reprimand	08.04.2015	08/13.04.2015
No. 32	Need fulfilment in first aid	Contact manager and inform him	As soon as possíble	As soon as possible
No. 37	Access road is blocked by traffic jam	Contact manager to close the street	08.04.2015	It depend of time schedule when are the arrivals of trucks

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Quality assurance

The contractor is responsible to make quality assurance according to the tender control plan and production drawings. After the control checks, he needs to prepare a quality assurance handbook with the possibility to review.

QUALI	TY ASSURA	NCE			MC	UNTING
CASE	Multi Purpose Hall				DATE	08.12.14
ADDRESS	Frueringvej 5, Skanderbor	g, DK			RESP.	MR
CONTROL PLAN						
Subject of control	What is to be controled	How is it to be controlled	Control frequency to be met	Documents according to	which the control is done	How should it be documented
Wall elements	Geometry /	Visual	100%	Detail d	rawing	Pictures,
	Placement					Control Plan
Joints	Tightness /	Visual	100%	Detail d	rawing	Pictures,
	Placement					Control Plan
Anchoring	Security of	Visual	100%	Detail d	rawing	Pictures,
	casted elem.					Control Plan
MOUNTING STA MOUNTING ENE	RT (DD/MM/YYYY - HH:MN 0 (DD/MM/YYYY - HH:MN	1): /):				
MOUNTER	Name:		Date:		Signatu	re:
	Name:		. Date:		Signatu	re:
	Name:		Date:		Signatu	re:
	Name:		. Date:		Signatu	re:
	Name:		Date:		Signatu	re:
	Name:		. Date:		Signatu	re:
	Name:		. Date:		Signatu	re:
	Name:	1	. vate:		Signatu	re:
CRANE	Name:		Date:		Signatu	re:
OPERATOR	Name:		Date:		Signatu	re:
	Name:		Date:		Signatu	re:
					0.00	

No. 3	Material	Dimension	Amount
	Façade element		1 pcs
	Corner element		1 pcs
	Gable element		1 pcs
	Iron rod	ø10mm L7.8m	2 pcs
	Concrete	MPa 30	0.13 m3
	Insulation joint	T16xW250mm L=7.8m	2 pcs
· 1	Elastic joint	ø20mm L=7.8	4 pcs
·	Joint	ø20mm L=7.8	4 pcs
		Picture number	
	Date	Signature	
See detail 1101_F01_H5_I	N06		

No. 1		Material	Dimension	Amount
		Laser		2 pcs
		Steel Bricks	100x150x25	2 pcs
	φ	Concrete	MPa 30	0.016 m3
		Insulation joint	T16xW250mm L=7.8m	1 pcs
		Elastic joint	ø20mm L=7.8	2 pcs
		Joint	ø20mm L=7.8	2 pcs
1.0	and a P	Façade/Gable/Corner Element		1 pcs
	200 000			
			Picture number	
		Date	Signature	
See detail 1101 E01 H5 N02		107		

No. 2 Material Dimension Amount Laser 2 pcs ø10mm L7.8m Iron rod 1 pcs Concrete MPa 30 0.07 m3 sulation joint T16xW250mm L=7.8 ø20mm L=7.8 1 pcs Elastic joint 2 pcs Joint ø20mm L=7.8 2 pcs açade/Gable Element 2 pcs Picture number Date Signature See detail I101_F01_H5_N05

Conclusion

First, the report gives an overview over the company and its structure. Then we explain our total price and calculations of it, which will be handed over to VIA Horsens. The mounting plan and the logistic plan are presented with the intension of giving us an overview of the needed transportation. Guidelines of health and safety during the mounting faze is represented to make sure that the elements are handled with care. Mounting face is based on the transformed information from tender face and planning.

List of resources

- Introducing Building Logistic SBI191
- Logistic 2014 + Waste (presentation)
- Annex 1: budget 2014
- Annex 2: Tender bid
- http://en.wikipedia.org/wiki/Site_manager

Kod pola został zmieniony

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