

Work Specifications

Carpentry trade

Project specific specifications

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4. Building component specifications

The building component-ID, title for the building component specifications

Each building component comprises the following points:

- Scope and location
- Reference to drawings
- Adjacent and adjoining components
- Design
- Materials and products
- Execution of works
- Surfaces
- Samples
- Control
- The work environment

Work specification
Carpenter- External wall

2. Scope

Carpentry trade works on external wall- From ground floor until the roof.

2.1. General information

The work comprises the building components and other services stated in point 2.2, which are described in more detail in the work specifications or in the drawings.

In addition, the work comprises the stipulations in the Case Specifications and any services required in tender forms, for example extra work or omissions that can be connected to the current works.

2.2. Building components

The work comprises all works and deliveries that are necessary for the full completion of building components.

The work encompasses the following building components:

The carpenter contractor has to do the wall and floor coverings in:

- External walls
- Internal walls
- Storey partition
- Roof

The following components, delivered by the employer/other contractor, are mounted as part of the current works:

- Carpenter
 - Internal studs
 - External Battens (Counter battens, Distance list, Battens)
 - Façade covering (Wood covering)
 - Plywood
 - Fiber Board
 - Mounting windows and doors
 - Putting Fire box
 - Weather board
 - Insulation
- Painter
 - Painting fiber board
- Electrician
 - Lighting fixtures
 - Electrical conduit (tube)
- Mason
 - Joints
 - Watertight layer
 - Balcony

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- Brickman
 - Steel tower

2.3. Design and detail design

No design work is included.

2.4. The building site

Refer to building site drawing I100_F6_H1_N10

2.5 Health and Safety

Health and Safety plan according to Case specification I100_C08_N01, chapter 5.

2.6 The surrounding environment

No noise and vibrations between 18:00 and 7:00 on working days, and no noise during weekends.

2.7. Quality Assurance

2.7.1. General information

2.7.2. Documentation of quality

The quality for these works should be documented by taking pictures of different work phases and by keeping the producers data sheets.

2.7.3. O&M (Operation and Maintenance)-documentation

The correct use and maintenance of a external wall will reduce the impact on materials and constructions and thereby increase the life time.

- Correct cleaning and maintenance of wall
- Hangers and such should be hung without damaging the walls

Pay attention to:

- How cracks in the wall surfaces may indicate movements in the underlying constructions
- If there's growth of fungi – this might be a signal of insufficient ventilation/air change.

2.8. Planning and scheduling of work

The construction work is scheduled to start on 2016. – When should we start the works?
For a more detailed time schedule of the work, refer to I100_C12_N01 Tender time schedule.

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2.9. Samples

(when I want a window with specific u-value then MC is giving me samples of sizes)

3. General Specifications

3.1. Reference

All references made in this work specifications can be found on the Dropbox project web, in the folder called A6_DetailDesign 2.

3.1.1. Norms and standards

Follow EU normas. If you follow standard norms, then you don't have to mention anything

(The norms and standards mentioned below, in their latest editions and with any enclosures are valid for the works - - with any amendments, additions and omissions that are stated in these work specifications and on the drawings.

The notes and directions, etc. stated in the references are to be construed as requirements that only can be deviated from if they are stated in these work specifications and/or on the drawings, or agreed with the project management.)

3.1.2. Directions/instructions

- General external wall demand- BR10, Timber Frame Houses 56, TRAE 66
- Tolerance demands- <http://www.tolerancer.dk>
- Moisture demands- Timber Construction LudwigSteiger p.11
- Façade Panel Inspiration- http://www.rockpanel.pl/files/RP%20Files/Images/Products/Rockpanel%20Woods/Large/Rockpanel_Woods_Ebony_Agate2.jpg

(Where the directions, reports and other documents in their latest edition, with any enclosures and together with the project documents, are made valid for the works, the stated recommendations, directions, procedures, advice, etc., must be construed as demands.

(If you want to refer to existing bond patterns, or other kinds of benchmarks for these works, then you list them here. You can also refer to journals, brochures or a real building which style you would like to copy for the building you are erecting in this project!)

3.2 Materials and products

- Façade Panel- Rockpanel, Type Ebony Agate 9 mm
- Watertight layer – Alfix Primer
- Insulation- Rockwool Flexi Batts
- Elastic joint – Alfix S-Silicone or Alfix M-Silicone
- Wind barrier- Knauf Weather Board- 9/900 mm Type WB- 3
- Fire box- Rockwool, Conlit 150 Svejsestritter
- Counter Batten 20* 100 mm c/c 600 mm
- IPE 220, 180, 140 (columns)

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- UMP 22 and IPE 240 (beams)
- Distance List/ Distance strip 12*45 c/c 600 mm
- Plywood- 20 mm
- Fiber Board- Knauf Fiber Board- 12,5/ 1200 mm Type G-3
- Windows: Dannebrog windows 1600* 910 mm
- Door: 2400* 900 mm

Materials and products of specific brands can be prescribed for the works. Other product brands can be used if they are on the same footing as the ones prescribed. Documentation for this must be presented to the project management.

(The required documentation for the materials and products used, for example in the form of product certificates, receipts, etc., must be presented for the project management for their approval.

The following materials and products must not be delivered onto the building site before the project management's documentation for them are available:
(If you would like to demand that mortar and other materials have to be from a certified Euro plant or Danish plant, you have to put your demand in this section)

3.3 Execution of works

Construction works have to be done in a way that no water penetration to further construction is possible.

The wall should be done in accordance with the level measurements.

A watertight membrane of at least 1mm is to be put on the wall- 1/3 of total thickness of the wall.

Steel should have 50 mm insulation around it- to avoid cold bridges.

Ventilation cavity should at least have 12 mm.

Metal flashing should have slope of 1:5 and should be placed on height of min 50 mm

Bitumen Felt is mounted along the bottom of windows and doors.

Insulation should be starts to put from top to bottom.

Distance between rain screen and distance list should be 20 mm

External cladding is assumed to have 18% +/- 2% moisture content.

All joints have to be airtight.

(If there are demands for best practice, these must be stated here)

3.4. Control

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The following Tender Control Plan must be worked into the contractor's Tender Control Plan (I100_C08_N03).

Tender Control Plan							
No.	Subject	Reference	Method	Extent	Time	Acceptation criteria	Demands for documentation
1	Steel tower	BCJ	Visual, Measuring,Picture	Normal Control	When the steel tower is placed	Tolerance	Photo documentation, Data sheets
2	Fire box	BCJ	Visual, Measuring,Picture	Normal Control	After the steel tower is placed	Conlit 150, placed around steel, max 55 mm on edges and ends	Photo documentation, Data sheets
3	Studs, size	BCJ	Measure	Normal Control	When they arrived	195* 45mm c/c 600 mm	Photo documentation, Data sheets
4	Studs, strenght	BCJ	Breaking test	Normal Control	Before mounting, when they arrived		Photo documentation, Data sheets
5	Battens, size	BCJ	Measure	Normal Control	When they arrived	45*45 mm c/c 600 mm	Photo documentation, Data sheets
6	Battens, strenght	BCJ	Breaking test	Normal Control	Before mounting, when they arrived		Photo documentation, Data sheets
7	DPM	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	Without damages, thickness of min 1mm, Only 1 layer of watertight layer is allowed	Photo documentation, Data sheets
8	Insulation	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	Rockwool FlexiBatts 195 mm (in between studs) 45 mm (in between battens)	Photo documentation, Data sheets
9	Wind Barrier	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	Knauf Weather Board- 9/900 mm Type WB-3, Have to be tight, without cracks	Photo documentation, Data sheets
10	Distance List	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	12*45 c/c 600 mm	Photo documentation, Data sheets
11	Counter Batte	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	20*200 mm c/c 600 mm	Photo documentation, Data sheets
12	Facade Panel	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	20 mm Rockpanel Ebony Agate	Photo documentation, Data sheets
13	Plywood	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	20 mm, Without damages	Photo documentation, Data sheets
14	Gypsum Board	BCJ	Visual, Picture	Normal Control	Before mounting, during the operation of wall up	Knauf Fiber Board- 12,5/ 1200 mm Type G-3, without damages	Photo documentation, Data sheets

3.5 Relation to other works

A watertight membrane of at least 1mm is to be put on the wall- 1/3 of total thickness of the wall.
Steel should have 50 mm insulation around it- to avoid cold bridges.
Ventilation cavity should at least have 12 mm.
Metal flashing should have slope of 1:5 and should be placed on height of min 50 mm
Bitumen Felt is mounted along the bottom of windows and doors.
Insulation should be starts to put from top to bottom.
Distance between rain screen and distance list should be 20 mm
External cladding is assumed to have 18% +/- 2% moisture content.
All joints have to be airtight.

(Here you write the final demands you have for these work, e.g., tolerance demands +/- x mm for flatness of tiles, etc., before other work can be built/continued on the basis of the work executed in this trade)

3.6. Work environment

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See I100_C08_N01 Case Specification

4. Building Component Specifications

(Here you have to make a Building Component Specification for each Building Component included in this trade. However, **in the 4th Semester you only have to make one Building Component Specification**, e.g., for the laying of wall- and floor tiles (incl., wet room membrane)). See Chapter 2.2 for the overview of the building components in this trade.)

Building Component ID, the title for the building component specifications

-205.A.01- External lightweight wall

- **Extent and location**

The external wall is located outside the building from ground floor until the roof. It is a new extension part.

The carpenter contractor's works with external wall.

- **References to drawings**

Building component specification	I100_C11_N01		
Detail- Corner wall	F6	H6	I100_F6_H6_N01
Detail- External wall with window	F6	H6	I100_F6_H6_N02
Detail- External wall with storey partition	F6	H6	I100_F6_H6_N03
Detail- Connection between external wall and existing building	F6	H6	I100_F6_H6_N04
Detail- External wall with door	F6	H6	I100_F6_H6_N05
Detail- External wall with internal wall	F6	H6	I100_F6_H6_N06
Detail- End of external wall	F6	H6	I100_F6_H6_N07
Detail- External wall with roof	F6	H6	I100_F6_H6_N08
Detail- Top of window- vertical	F6	H6	I100_F6_H6_N09
Detail- Bottom of window- vertical	F6	H6	I100_F6_H6_N10
Detail- External wall with Balcony	F6	H6	I100_F6_H6_N11

- **Adjoining building components**

Detail- Corner wall	F6	H6	I100_F6_H6_N01
Detail- External wall with window	F6	H6	I100_F6_H6_N02

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Detail- External wall with storey partition	F6	H6	I100_F6_H6_N03
Detail- Connection between external wall and existing building	F6	H6	I100_F6_H6_N04
Detail- External wall with door	F6	H6	I100_F6_H6_N05
Detail- External wall with internal wall	F6	H6	I100_F6_H6_N06
Detail- End of external wall	F6	H6	I100_F6_H6_N07
Detail- External wall with roof	F6	H6	I100_F6_H6_N08
Detail- Top of window- vertical	F6	H6	I100_F6_H6_N09
Detail- Bottom of window- vertical	F6	H6	I100_F6_H6_N10
Detail- External wall with Balcony	F6	H6	I100_F6_H6_N11

- **Design**

None (no design involved for the contractor).

- **Materials and products**

See chapter 3.2

- **Execution**

Steel tower is mounted on the building site according modular grid and it is connected with existing building. After is stable and fixed it is cover with fire box around columns to increase the fire damages. Studs and battens are mounter around steel tower. Damp proof membrane is mounted between studs and battens on 1/3 total thickness of the wall. Insulation is placed in between studs and battens, started from the top to bottom. Wind barrier is mounted on the outer site. Distance strip is mounted on the wind barrier and on this layer the counter battens are mounted and they are creating a ventilation gap. On top of counter batten is mounted façade panel. On the inner site is placed plywood on on top of it is mounted fibre board. Elastic Joints are mounted around windows and doors the same as metal zinc flashing. Window sill is placed on top of flashing.

(Write how the work should be done, including preparation of the adjoining elements before the work on the actual building component starts).

- **Surfaces**

Surface is cover with paint

https://www.google.dk/search?q=beige+color&espv=2&biw=1745&bih=868&source=Inms&tbm=isch&sa=X&ved=0ahUKEwiurLLA7I_KAhUFkiwKHaqHABAQ_AUIBigB#imgsrc=84TEkc8h6DORCM%3A

- **Tests and samples**

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See Tender Control Plan I100_C08_N03
(What tests and samples should be taken/given as part of the work on this building component?)

- **Quality Control**

Joints

Membrane

Wind barrier

See Tender Control Plan I100_C08_N03

(What type/extent of quality control should be done on this building component?)

- **Work Environment**

Work environment law – leave it