

*Fibre cement cladding
as windbreak in external
walls*

Caveat: heavy and hard

Pre-conditions

Preparation

Self-inspection

Execution



Safety — Risk assessment

Work activity & Problem	P	C	Risk= P*C	Action
Overloading, straining. The sheets are heavy and difficult to screw into.	10	50	500	Use the transport and lifting aids. Pre-drill the holes.
Cluttered workplace = Twisting or fall injuries	3	70	210	Regular tidying
Sawing and drilling	0,5	100	50	Use worktable

Probability = P
Consequence = C
Risk = P * C

Assessment of probability
 P = 0,1 Very unlikely (<1 times/10 years)
 P = 1 Unlikely (1 times/10 years)
 P = 3 Low probability (1 times/3 years)
 P = 10 Relative probability (1 times/year)
 P = 30 Probable (1 times/month)

Assessment of consequences
 C=0,5 Trifle
 C=1 Tiny (1 - 2 days sick leave)
 C=5 Small (3 - 7 days sick leave)
 C=15 Tactile (8 - 29 - " -)
 C=70 Severe (30-299 - " -)
 C=500 Very severe (>300 - " -)

Text from the Working Environment Authority's brochure Safer Construction Work

Personal Protective Equipment § 71

Safety helmet and protective footwear should be used unless this is clearly unnecessary. Other personal protective equipment such as eye protection, hearing protection and gloves should be worn when required.

First Aid § 31

First Aid should be available. Staff who are trained to provide First Aid should always be available. Facilities and First Aid equipment should be marked with signs. There shall also be signs presenting phone numbers, address and, if necessary, route description of the local emergency services.

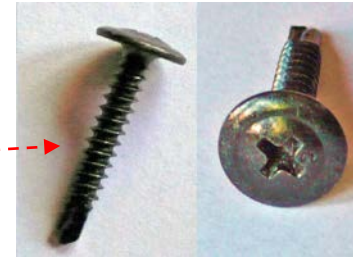
Regulations related to First Aid are presented in AFS 1999:7 "First Aid and Emergency Support".



Equipment and material

Materials:

- Fiber cement claddings are 3.2 to 9 mm thick
- Self-drilling screws with flat surface mounted head
- Special sealing and joint strip for jointing/splicing of the sheets
- Where the support of a strut is missing

**Machinery and equipment:**

- Saw with suction
- Long ruler when cutting possible with clamps
- Screwdrivers
- Drill
- Sheet Holders
- Foot lift
- Two stage **paso** trestles
- Platform with wide standing surface
- Distribution trolley
- Cables 10A, junction box, lamps

- Trash bags for waste





Fiber cement claddings are heavy - heavier than the plasterboards - and 1200 wide.

Ingenious device to the left:

- The discs are placed by crane on to the loading dock
- In the correct working height
- In dust-free environment ...
- the waste container directly below

To the right sheeting trolley for transport and storage.

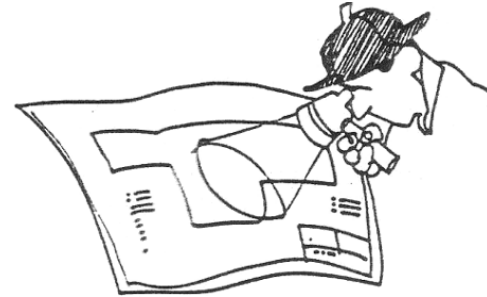


Template & instructions

No	Check	Method or equipment	Frequency	Result	Date Signature	Deviation/Remedy Approval/Non-A
1	Studded framework	Correct dimensions, spacing of battens				
2	Noggins	Ocular				
3	Seams and joints of support or special support or jointing strip	Ocular				
4	Fasteners = as specified					
5						
6						
7						
8						
9						
10						
11						

Quality criteria for the project and the product

- Study Drawings, Specifications and Inspection planning
- Think through the alternative **methods of production** and handling of materials, tools etc. that can meet the requirements



Pay particular attention to

- performs joints and connections as specified and in accordance with the manufacturer's instructions
- Minimize joints and seams
- Seal the penetrations and connections - ensure the proper functioning of the windbreaker
- Do not install damaged sheets

Marking of screw lines, underlying studs and cutting lines.

1. Frame of steel studs

To the right pre-drilled screw holes are being drilled when it was too difficult to stand on the scaffolding and push the screws into the steel studs.





The sheets are heavy. Pictured below two people are collaborating in the assembly process. One person holding the sheet and the other screwing= One person works 20 % of the time - just to keep the sheet in place. The person on the right did the work alone by driving the two knives into the wall below the sheeting thus holding the sheeting in place.

Better methods are sought!

Joints in windbreakers without the support of girders or panel should be performed with special sealing and jointing strips.

Here with unnecessarily long screws.



Pre-drilled holes and screw lines. The windbreaker is emerging.



Oblique window parapet.





Frame with wooden studs

The sheets can be nailed onto the wooden studs with a Nail Gun which takes less time and is more ergonomic.

Nail bands loaded into Nail Gun.



Joints (splices) in wind boards without the support of girders or panels should be installed with special sealing and jointing strip.

Here, the H- profile of 9 mm plasterboard is being used.

Unnecessary work: In this project the architect had prescribed horizontal boards which led to several joints being without the support of studs



Bricks, panels etc. can line the external surface of the Fiber cement claddings. Vertical wooden battens are used to supports the panels.

