Casting concrete floor sloping towards grid in wet areas on concrete floors

Pre-conditions

Preparation

Self-inspection

Execution

This **work instruction** is designed for use in detailed planning and preparation of work on construction projects. With thorough planning high levels of personal safety and optimal work apportionment can be achieved at the same time as the work can be organized efficiently and cost effectively.

Work activity & Problem	P	C	Risk= P*C	Action
Slips, trips	30	5	150	Base should be checked regarding level differences, cables, etc.
Cluttered workplace =Twist / fall injuries	10	5	50	Regular tidying
Concrete splashing, eye injuries	30	1	30	Protective goggles
Stretching, straining	30	1	30	

		Assessment of probability		**Assessment of consequences**		
Probability = P	P = 0,1	Very unlikely	(<1 times/10 years)	C=0,5	Trifle	
Consequence = C	P = 1	Unlikely	(1 times/10 years)	C=1	Tiny	(1 - 2 days sick leave)
Risk = P * C	P = 3	Low probability	(1 times/3 years)	C=5	Small	(3 - 7 days sick leave)
	P = 10	Relative probability	(1 times/year)	C=15	Tactile	(8 - 29 - ” -)
	P = 30	Probable	(1 times/month)	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 safety shoes shall be used unless it is clearly unnecessary.
Other personal protective equipment such as eye protection, hearing protection and gloves when required.

Glasses and hearing

If you have glasses with earpieces that go into the ear under the cushions on the hearing protection this will reduce the sound-damping effect. It is therefore important to choose the hearing protection which provides adequate sound reduction even when worn with glasses.

Equipment

- ☐ Lighting
- ☐ Access to water
- ☐ Concrete Carts
- ☐ Screed wiping boards of different lengths
- ☐ Base for ditto
- ☐ Straight edge and floor trowelling equipment
- ☐ Levels
- ☐ Shovel, screeding broom
- ☐ Bucket and brush

Materials

- ☐ Extension ring for well
- ☐ Concrete for flooring
- ☐ C/KC Cement
- ☐ Lime cement in sack
- ☐ Water

Preparation 2(2)

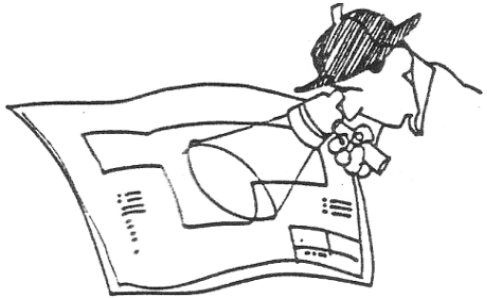
Deliveries - logistics

The floor screeding material is mixed after hand and taken by cart suitably up by elevator.

No	Check	Method or equipment	Frequency	Result	Date Signature	Deviation/Remedy Approval/Non-A
1	Watering	The concrete surface should be dry so that it is light before casting.	Water the concrete day before casting of the screeding			
2	Cleanliness	Check for oil stains	Immediately before casting			
3	Delivery note	Check the delivery note that it is the right concrete, texture and quantity supplied. Also ordered additive and air content.				
4	Time	Concrete is a perishable product - check the time so that there is time for the casting.	At each delivery			
5	Dehydration	Think of curing time when choosing concrete quality.	When ordering			
6	The camber	Spirit level and long leveling board	After casting			
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

- Check in the specification and the drawings the slope and smoothness required
- Do not carry out screeding if the base does not comply with the specification
- Max aggregate size depends on the thickness of the layer
- Take appropriate measures in cold weather

The picture show's a cast wet room after the mouldings have been removed.
Note the grid extension piece to the right.

- Sludge Layers and weak cement layers is removed by machining on the floors to be painted.
  With mechanical processing means, for example, light milling or light blasting with suitable blasting agents.
- Floor surface to be laid is watered one day prior to casting.
- The surface is cleaned immediately before casting. Oil stains are removed.
- The surface vacuumed clean.

To the left is a mounted Adjustable drain ring.

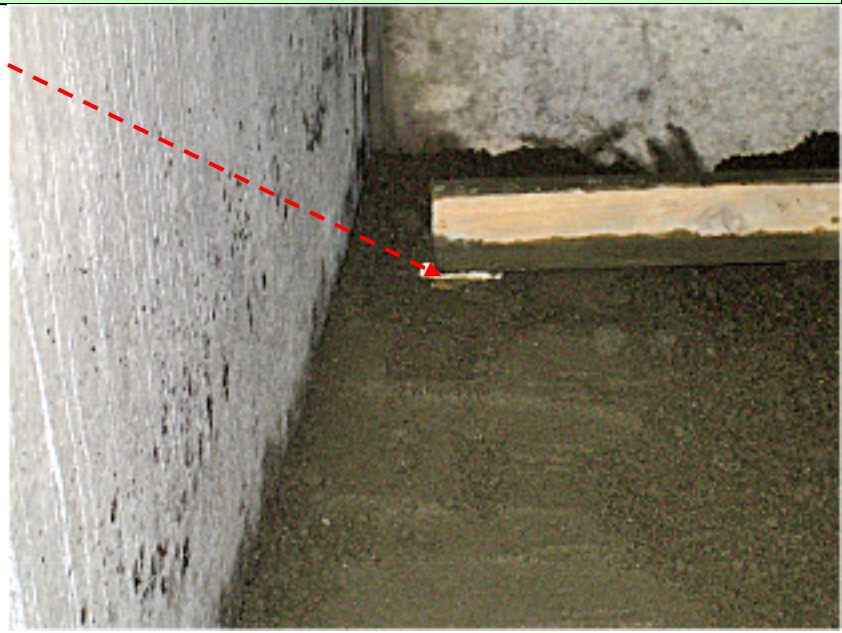
The surface is moistened and some shovel fulls of mortar are brushed into the surface.

Thereafter, the mortar is tipped onto the surface and spread evenly.

On this dark picture is shown how the concrete is pressed below the flange of the extension ring.

In order to control the gradient, a board is laid from the existing floor level to the top of the grid. If the grid is too high it is hammered down until the desired camber is achieved.

Thereafter a distance piece and batten are laid out as a “point” for the skimming board and then pressed down so that a level and correct fall is achieved along the short side.



The same procedure is repeated on the long side and then the concrete surface is trowelled so that the required fall is achieved to the grid.

The concrete surface is roughened up…

…and steel trowelled

Finally:
A perfect steel troweled concrete surface with a 3 cm fall to the floor drain