BONUS B23 – 150kW – 30m Tower Foundation

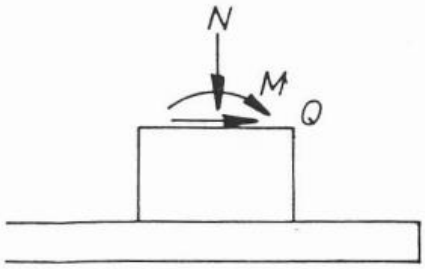
Groundwater level above foundation level.
All measurements are in mm.
The concrete work is carried out in class III
A cleaning layer is poured into the excavation before the iron work begins
Cover layer for all reinforcement: 35 mm.
Concrete:
s bk = 20 MN/m2 - generally
s bk = 25 MN/m2 - upper 6 m3 of foundation block.

Joint length:	T10	T12	T14	T16	T18	T20
	450	530	620	710	800	890 mm

If welded reinforcement is used:
- the reinforcing steel must be weldable.
- the welding must take place at the factory and be approved by the Danish State Testing Institute.
- Welding on the foundation bolts is NOT permitted.

The calculated bearing capacity of the soil > 150 kN/m2
The foundation depth is 2.4 m below ground level, unless otherwise agreed with the client.
The foundation bolts are prestressed according to the specifications of Danregn Vindkraft A/S.

The tower is undercast with EMBECO 636 from Master Builders (08) 18.30.77
The soil above the foundation must be suitable for filling.
The fill is compacted during placement.
The bulk density after filling and compaction must be at least 1500 kg/m3



Regningsmæssig last:

M	3815	kNm
Q	164	kN
N	190	kN

13 OKT. 1988

FORELØBIG TRYK

TRIPOD ENGINEERING ADS	150 kW BONUS mølle		
	Fundament til 30 m rørtårn		
	Højt grundvandsspejl		
	tegning nr 62	b	2. aug 1988

BONUS B23 – 150kW – 30m Tower Foundation

Opening.

Quantity: 4.9 l per 25 kg cement

Formwork: simple, but tight as the mortar is easy flowing.
The concrete surface is cleaned and watered several times, so that
it does not absorb water from the fresh mortar. During casting, no water should be left standing on the concrete surface.

Do not use a vibration/mixer during casting but ensure that no air pockets are created.

After casting, cover with plastic to prevent evaporation.

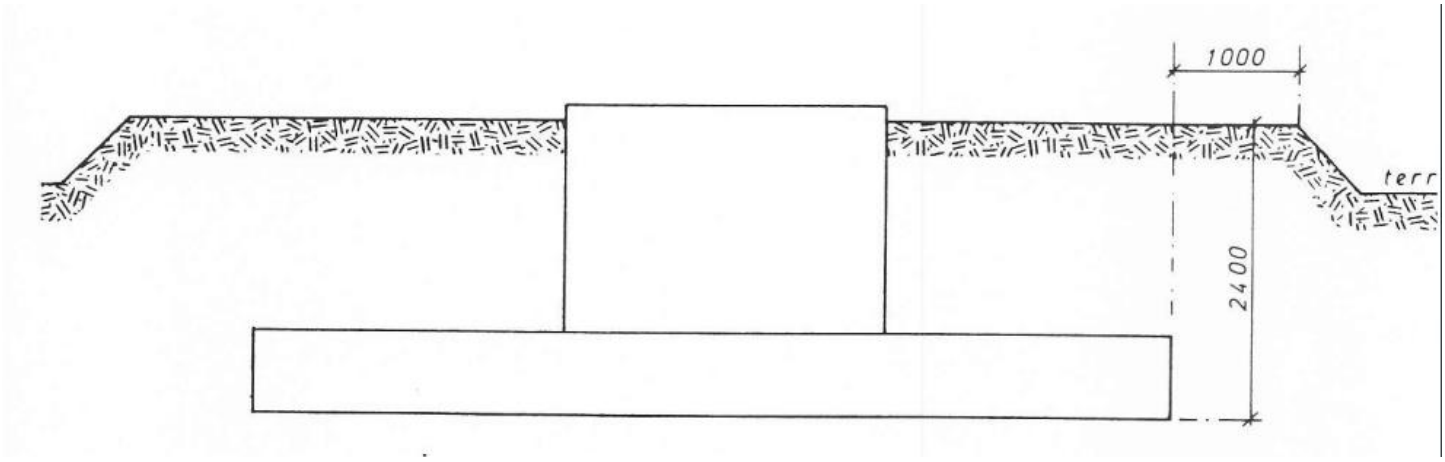
After casting, cover with plastic to prevent evaporation.
After 24 hours, remove the formwork and chip away any excess mortar. Smooth the surface and correct any defects with mortar. Finish by applying sealing fluid, MB 429.

Casting requires a temperature of at least 7 'C for three days.
If the temperature is lower than this, additional measures are taken to ensure correct casting and curing:

Heat the concrete and the lower part of the tower before casting.
Mix the foundation mortar with warm water. (20 - 30 C)
After pouring, smooth the mortar surfaces with a sealing wash. Smoothing after 1 day is continued.

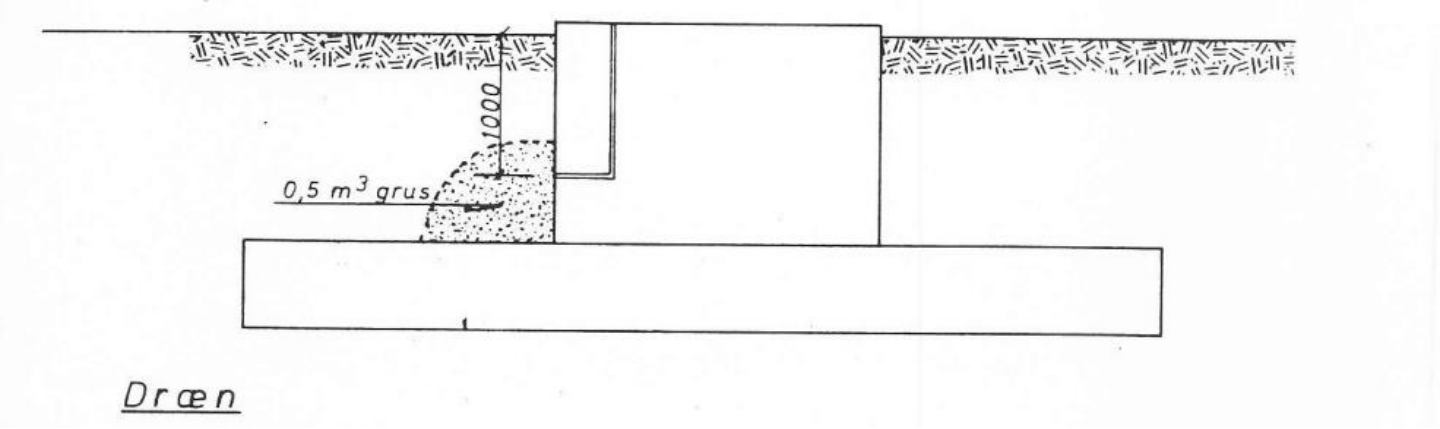
Cover with winter mats, and the necessary heat supply
under these,

Yield approx. 12.0 l per 25 kg cement
approx. 10.0 m2 per liter sealing wash.
Consumption approx. 125 kg cement EMBECO 636
approx. 0.3 l sealing wash MB 429.



Foundation level less than 24 m below ground

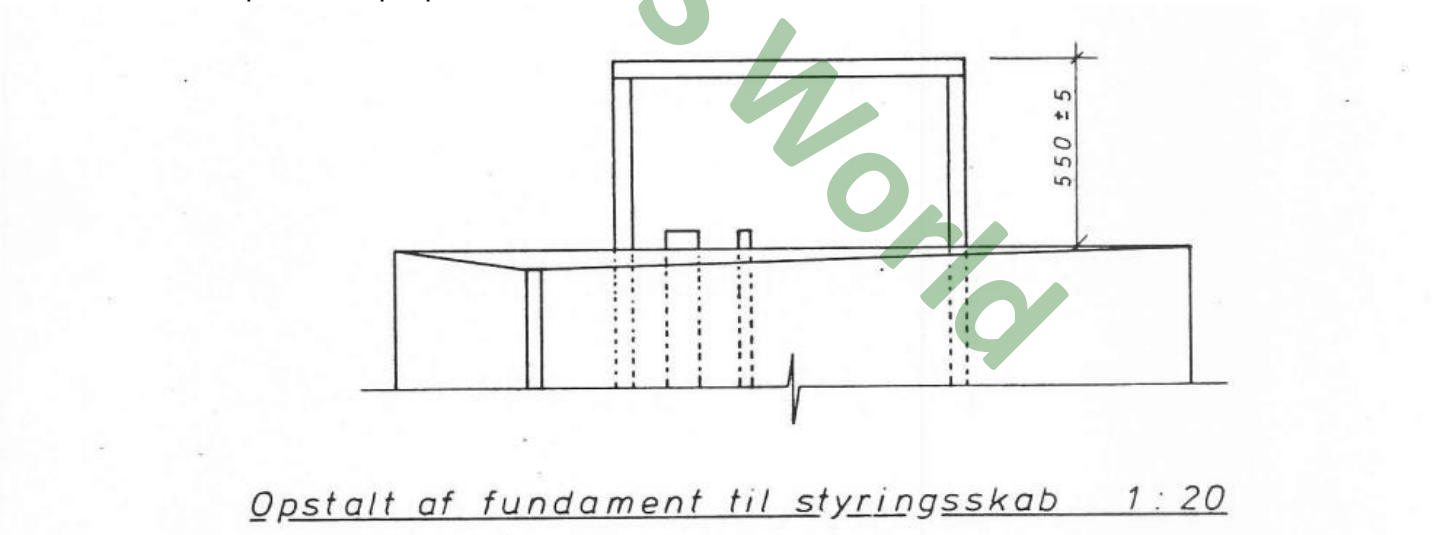
BONUS B23 – 150kW – 30m Tower Foundation



Drain

The concrete foundation in layers.
It is important to avoid metallic contact between the foundation for the control cabinet and reinforcement / bolts.

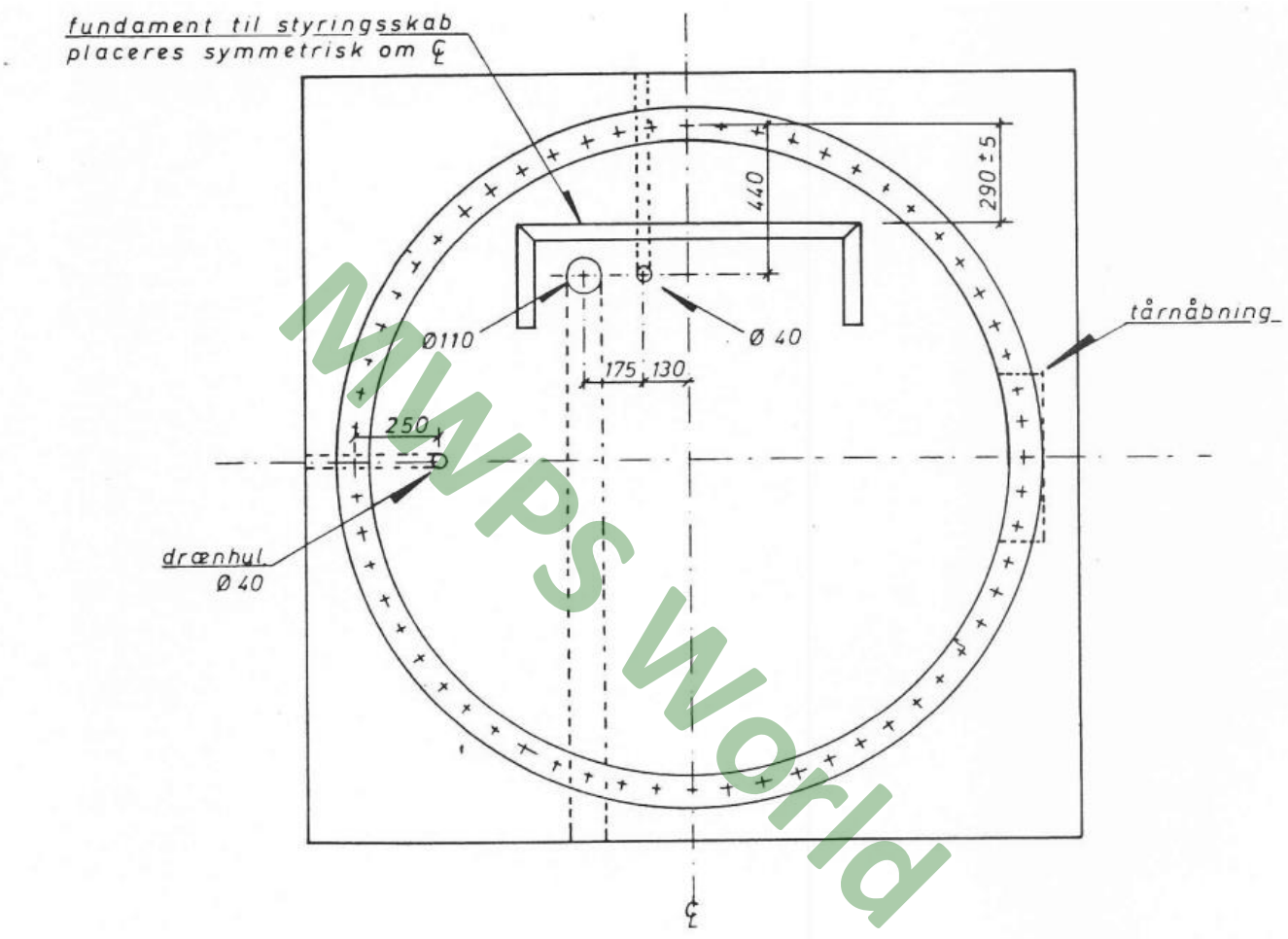
This is agreed upon with the client. where the entrance to the tower is desired. The foundation for the control cabinet is placed in proportion to this.



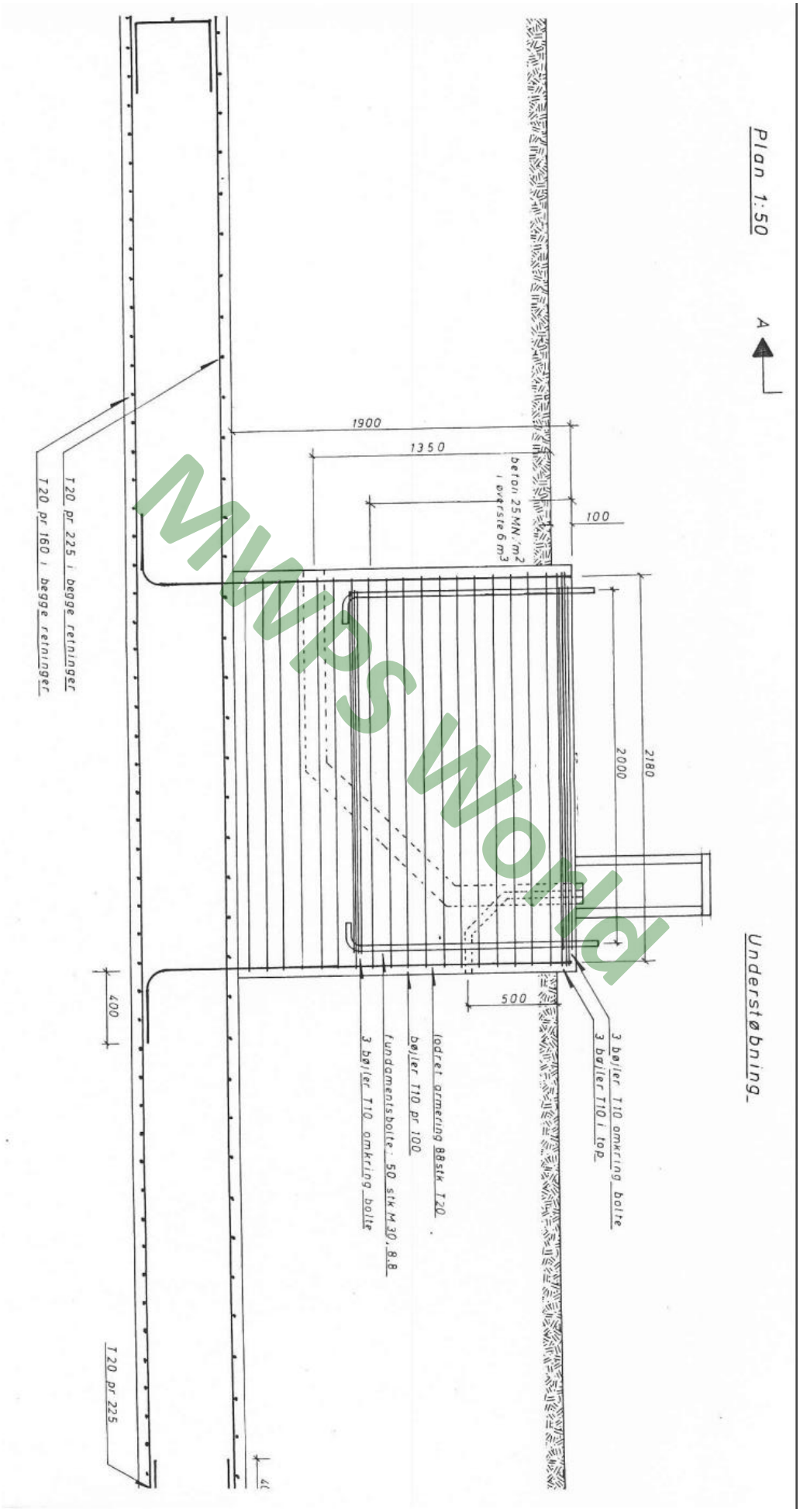
Elevation of foundation for control cabinet 1: 20

BONUS B23 – 150kW – 30m Tower Foundation

Foundation for control cabinet is placed symmetrically around



BONUS B23 – 150kW – 30m Tower Foundation



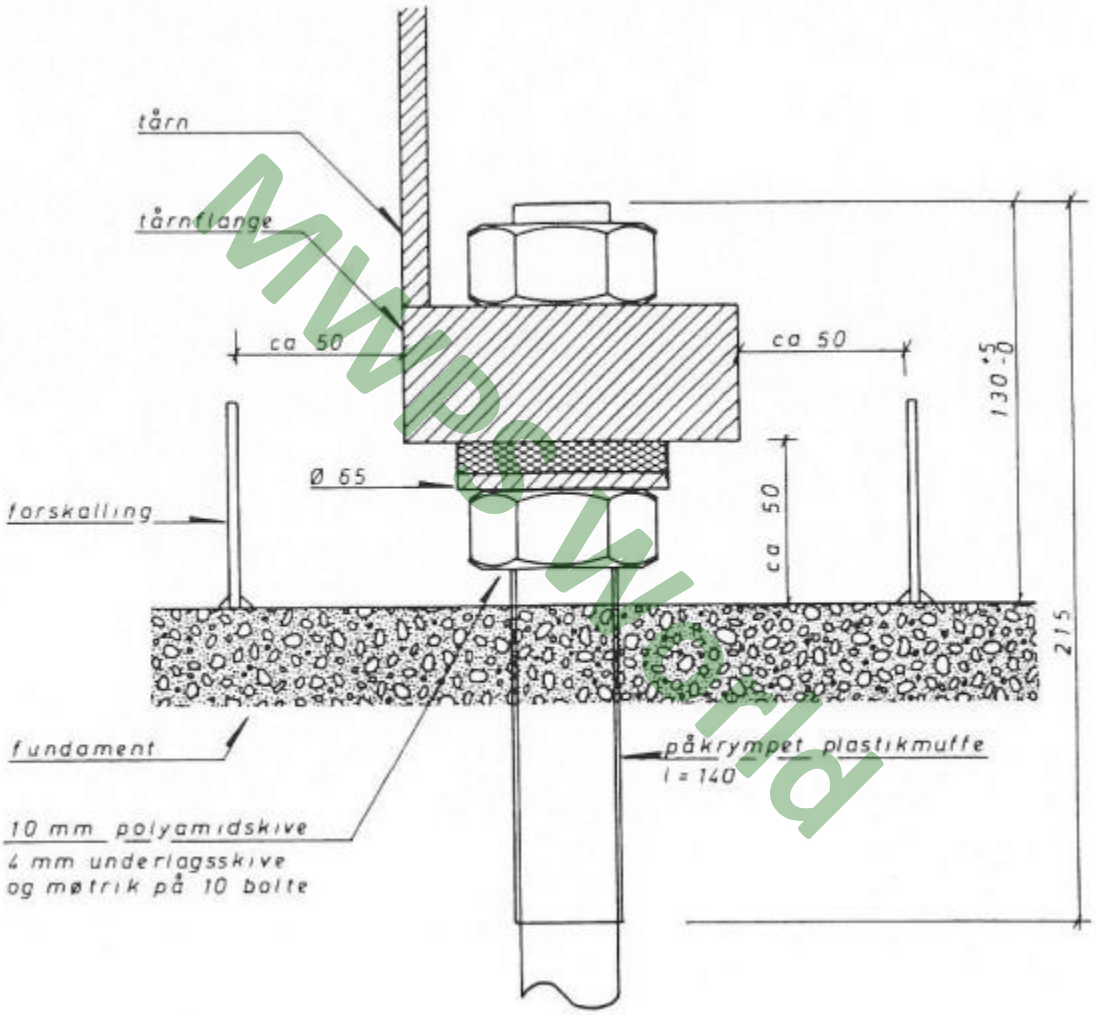
BONUS B23 – 150kW – 30m Tower Foundation

revision

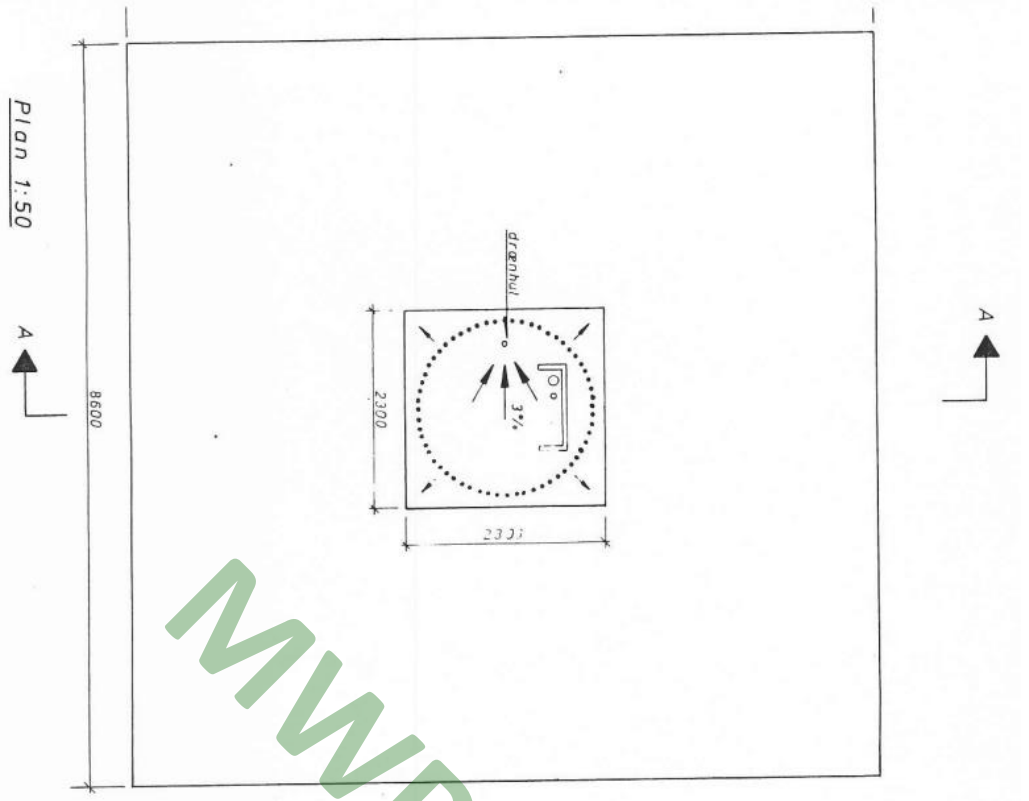
b	16. aug. 1988

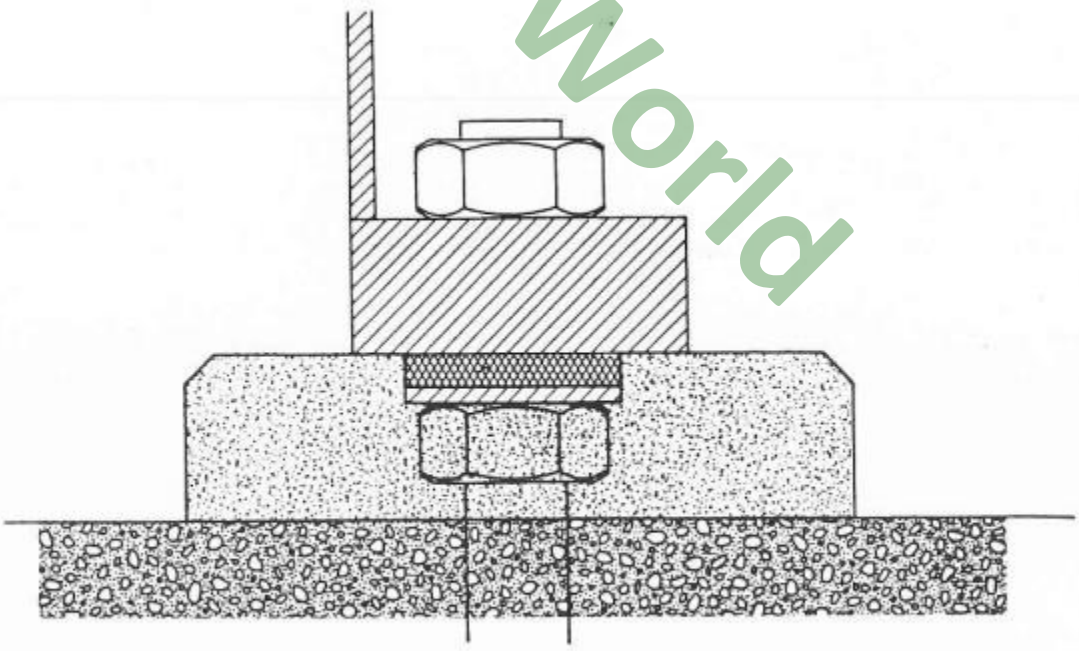
ca mængder:
beton 55 m^3
armering 5.500 kg

Snit A-A 1:20



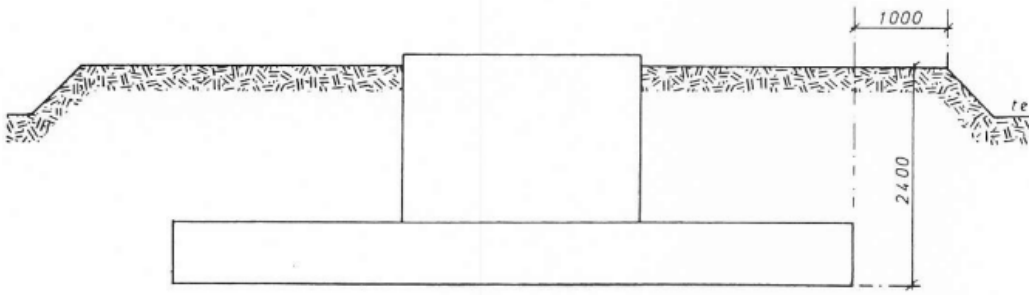
BONUS B23 – 150kW – 30m Tower Foundation





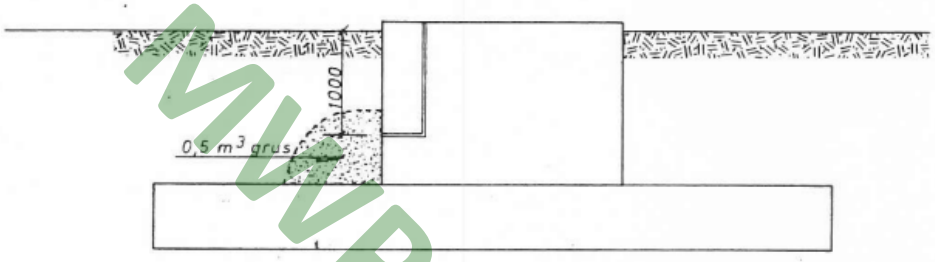
Understøbning

BONUS B23 – 150kW – 30m Tower Foundation



Funderingsniveau mindre end 2,4 m under terræn

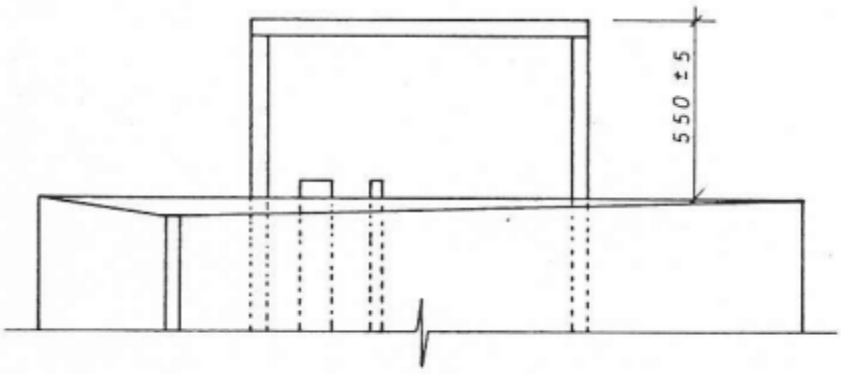
Foundation level less than 2.4 m below ground level



Dræn

Drain

The foundation for the control cabinet is cast into the concrete foundation in battens.
It is important to avoid metallic contact between the foundation for the control cabinet and the reinforcement/bolts.
It is agreed with the client where the entrance to the tower is desired. The foundation for the control cabinet is placed in proportion to this.



Opstalt af fundament til styringsskab 1 : 20

BONUS B23 – 150kW – 30m Tower Foundation

Elevation of foundation for control cabinet 1:20

Foundation for control cabinet placed symmetrically around