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DRG. NO.

DRAWING NO	SHEET	DESIGNATION	DESCRIPTION
F207600	1/3	PAGE DE GARDE	SUMMARY PAGE
F207600	2/3	CARACTERISTIQUES DES T.C et T.P	C.T and V.T CHARACTERISTICS
F207600	3/3	SCHEMA UNIFILAIRE	SINGLE LINE DIAGRAM

B.H.T.	
Distribution	
DEVIS	3
POSTES	2
SCHEMAS	1
ORDO Gal	1
AQ chantier	1
GEST PROD	1
CONTROLE	1
NOTICES	1
TEX	1
METHODES	1
ind.A unqt	
AFFAIRES	5

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Echelles: Scales :	IND.	NUMERO	DATE
Format: Size : A2	Q	F01231	29/03/12
Dessine : Drawn :	P	F01218	02/03/12
Verifie : Checked :	O	FOH774	03/10/11
	N	FOH642	24/08/11
	M	FOH450	27/05/11
	A	CREATION	30/04/04

OGA of GIS Component
Drawings
GIS T155

ALSTOM GRID

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F207600

Q

NHPC LTD./एन एच पी सी लिमिटेड
डिजाइन (ई एंड एम) विभाग
Design (E&M) Division
Cat.I-Approved/श्रेणी-I-अनुमोदित
श्रेणी-II-स्वीकृत करने पर अनुमोदित
Cat.II-Approved Subject to Comments
श्रेणी-III-संशोधन कर पुनः जमा करें
Cat.III-Modify & Resubmit
श्रेणी-IV-सूचना हेतु स्वीकृत
Cat.IV-Accepted for Information

subject to approval of the change in the name of sub-vendor

6/60 G/S

30/3/12

30/3/12



NHPC Limited
(A GOVERNMENT OF INDIA ENTERPRISE)

LOT-5:ELECTRICAL & MECHANICAL WORKS
PBTII-GIS01GA002-12

ADDITIONAL INFORMATION	PARBATI HYDROELECTRIC PROJECT STAGE-II (H.P.) INDIA																								
STATUS OF DRAWING FOR APPROVAL																									
DISTRIBUTION OF PRINTS																									
SUB - VENDOR ALSTOM GRID		बीएचईएल भारत हेवी इलेक्ट्रिकल लिमिटेड ट्रान्smिशन प्रोजेक्ट्स विभाग, भोपाल BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION, BHOPAL		<table><tr><td>क्रमांक/ NO.</td><td>नाम/ NAME</td><td>हस्ताक्षर/ SIGN</td><td>दिनांक/ DATE</td><td>वेरिफिकेशन/ NO. OF VAR</td></tr><tr><td>DRN</td><td>P Armand</td><td>PA</td><td>30/04/04</td><td></td></tr><tr><td>CKD</td><td>P Combe</td><td>CP</td><td>30/04/04</td><td></td></tr><tr><td>APPO</td><td>G Cayon</td><td>GC</td><td>30/04/04</td><td></td></tr></table>		क्रमांक/ NO.	नाम/ NAME	हस्ताक्षर/ SIGN	दिनांक/ DATE	वेरिफिकेशन/ NO. OF VAR	DRN	P Armand	PA	30/04/04		CKD	P Combe	CP	30/04/04		APPO	G Cayon	GC	30/04/04	
क्रमांक/ NO.	नाम/ NAME	हस्ताक्षर/ SIGN	दिनांक/ DATE	वेरिफिकेशन/ NO. OF VAR																					
DRN	P Armand	PA	30/04/04																						
CKD	P Combe	CP	30/04/04																						
APPO	G Cayon	GC	30/04/04																						
विभाग/ DEPT		अनुपात/ SCALE	भारत/ WEIGHT (K.G.)	असेम्बली ड्राइंग का संदर्भ/ REF. TO ASSY. DRG.																					
कोड/ CODE		अनुपात/ SCALE		वस्तु क्रमांक/ ITEM NO.																					
शीर्षक/ TITLE		ड्राइंग क्रमांक/ DRAWING NO.		पृष्ठ क्रमांक/ REV																					
OGA of GIS Component Drawings		F207600		12																					
		पृष्ठ क्रमांक/ SHT. No.		पृष्ठों की संख्या/ NO. OF SHT.																					
		1		3																					

A2 A

	LEGENDE	LEGEND	QUANTITY (No.)
x-Qyy	DESIGNATION DU CLIENT	CUSTOMER'S DESIGNATION	NA
	DISJONCTEUR	CIRCUIT-BREAKER	21
	SECTIONNEUR	DISCONNECTOR	54
	JEU DE BARRE	BUSBAR SET	2
	TRANSFORMATEUR DE COURANT	CURRENT TRANSFORMER	24
	TRANSFORMATEUR DE TENSION	VOLTAGE TRANSFORMER	6
	SECTIONNEUR DE TERRE RAPIDE	FAST EARTHING SWITCH	6
	SECTIONNEUR DE TERRE RAPIDE ISOLE	INSULATED FAST EARTHING SWITCH	6
	SECTIONNEUR DE TERRE LENT ISOLE	INSULATED MAINTENANCE EARTHING SWITCH	21
	SECTIONNEUR DE TERRE LENT	MAINTENANCE EARTHING SWITCH	27
	CONNEXION DEMONTABLE	REMOVABLE LINK	-
	RACCORDEMENT DE TRANSFORMATEUR	TRANSFORMER CONNECTION	12
	TRAVERSEE SF6-AIR	SF6-AIR BUSHING	6
	PARAFODRE	SURGE ARRESTER	18
	CAPTEUR DECHARGES PARTIELLES	PARTIAL DISCHARGE COUPLER	65
	COMPARTIMENTAGE DU GAZ	GAS PARTITIONING	-
	LIAISON ENTRE COMPARTIMENTS	COMPARTMENTS COMMUNICATION	-
TRAVEE 01	NUMERO ALSTOM	ALSTOM NUMBERING	-
BAY 01	NUMERO CLIENT	CUSTOMER NUMBERING	-

SURGE ARRESTER				
ACCORDING TO IEC 60099-4				
BAY	REF	Uc	In	Class LD
3-4-5-8-9	PSA 336F	269 kV	20 kA	5

IEC RATING	
RATED CURRENT BUSBAR	I _r 4000A
RATED CURRENT GENERATOR / TRANSFORMER BAY	I _r 4000A
RATED CURRENT FEEDER BAY	I _r 4000A
RATED FREQUENCY	F _r 50Hz
SHORT-TIME WITHSTAND CURRENT	I _k 63kA
DURATION	t _k 1s
RATED VOLTAGE	U _r 440kV rms
POWER FREQUENCY WITHSTAND VOLTAGE	U _d 710kV rms
LIGHTING IMPULSE WITHSTAND VOLTAGE	U _p 1550kVc
SWITCHING IMPULSE WITHSTAND VOLTAGE	U _s 1175kVc
PEAK WITHSTAND CURRENT	I _p 157.5kA
THESE VALUES ARE APPLICABLE TO EACH COMPONENT OF GIS	

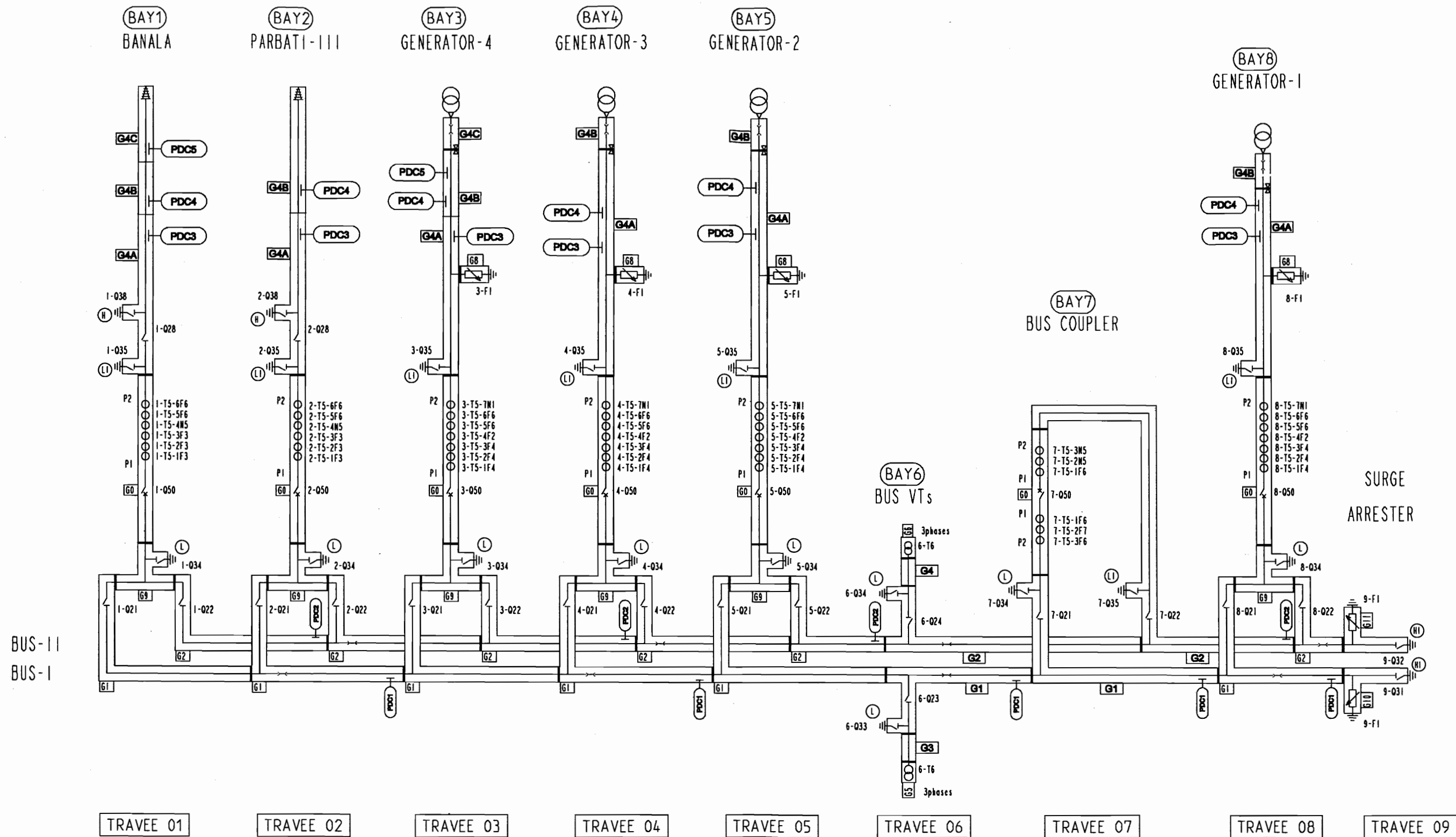
GIS Color	Indoor	LIGHT GREY RAL 7038
	Outdoor	WHITE RAL 9016
LCC Color		LIGHT GREY RAL 1013
SF6/Air Bushing	Color	LIGHT GREY
	Type	COMPOSITE

LISTE DES TRANSFORMATEURS DE TENSION SCHEDULE OF VOLTAGE TRANSFORMERS IEC 60 044-2 : 2003						
DESIGNATION	TORES	TENSION NOMINALE	VT RATIO	CLASSE	PUISSANCE	TYPE
DESCRIPTION	CORE	NOMINAL VOLTAGE		CLASS	BURDEN	PURPOSE
T6	1 2 3	400 kV	400 kV/√3 / 110 V/√3 400 kV/√3 / 110 V/√3 400 kV/√3 / 110 V/√3	0.2 3P 3P	200 VA 200 VA 200 VA	METERING PROTECTION PROTECTION
Rated voltage Factor 1.5 Un 30s						
Rated output simultaneously 600 VA						
Rated thermal burden per secondary (VA) / simultaneously (VA) 500/1500 VA						

CURRENT TRANSFORMER IEC 60 044-1 : 2003							
f _r = 50Hz I _{th} = 63 kA I _s I _{dyn} = 157.5 kA I _{cth} = 120 % I _{ext} =I _{cth}							
BAYS	REF	CORES	RATIO	CLASS	BURDEN	E _k ≥ ... V	I _e ≤ ... @E _k /2
FEEDER	BAY 01-02	P2 F6	400-1600-3150/1A	PX	10 - 20 - 20	40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		N5	400-1600-3150/1A	0.5S F55 - 0.2S F55 - 0.2S F55		300Rct + 400 @ all taps	30 mA @ E _k /2 @ 3150/1A
		F3	400-1600-3150/1A	PX		300Rct + 400 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F3	400-1600-3150/1A	PX		300Rct + 400 @ all taps	30 mA @ E _k /2 @ 3150/1A
GENERATOR	BAY 03-04-05-08	P2 N1	400-800-1600/1A	0.2S F55 - 0.2S F55 - 0.2S F55	20 - 50 - 120	40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		F2	400-800-1600/1A	5P20 - 5P20 - 5P20		40Rct + 600 @ all taps	30 mA @ E _k /2 @ 1600/1A
		F4	400-800-1600/1A	PX		40Rct + 600 @ all taps	30 mA @ E _k /2 @ 1600/1A
BUS COUPLER	BAY 07	P1 F4	400-800-1600/1A	PX	30 - 50 - 100	40Rct + 600 @ all taps	30 mA @ E _k /2 @ 1600/1A
		P2 N1	400-800-1600/1A	PX		40Rct + 600 @ all taps	30 mA @ E _k /2 @ 1600/1A
		F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		F7	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
	BAY 07	P1 F6	400-1600-3150/1A	PX	30 - 30 - 30	40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
	BAY 07	P1 F6	400-1600-3150/1A	PX	10 - 20 - 20	40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
	BAY 07	P1 F6	400-1600-3150/1A	PX	10 - 20 - 20	40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A
		P1 F6	400-1600-3150/1A	PX		40Rct + 100 @ all taps	30 mA @ E _k /2 @ 3150/1A

अभिषेक
30/12/12
Engr./AM/DM

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LAY OUT

GIS T155

ALSTOM GRID

DRAWING NO	SHEET	DESIGNATION	DESCRIPTION
F207601	1	PAGE DE GARDE	SUMMARY PAGE
F207601	2 - 3	IMPLANTATION DU POSTE NIVEAU 1355.55	G.I.S LAY OUT AT EL 1355.55
F207601	4 - 5	IMPLANTATION DU POSTE NIVEAU 1347.60	G.I.S LAY OUT AT EL 1347.60
F207601	6	ARMOIRES DE COMMANDE LOCALES ET TRAJECTOIRE CABLES	LOCAL CUBICLE CONTROL DETAIL AND CABLES TRAJECTORY

Echelles: Scales :	IND.	NUMERO	DATE
Format: Size : A2	M	F0G322	30/03/10
Dessine : Drawn :	L	F0G005	13/11/09
Verifie : Checked :	P	F0I218	12/03/12
	O	F0H988	23/12/11
	N	F0G629	02/07/10
	A	CREATION	30/04/04

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F207601

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NHPC LTD./एन एच पी सी लिमिटेड

डिजाइन (ई एंड एम) विभाग

Design (E&M) Division

Cat.I-Approved/श्रेणी-I-अनुमोदित

श्रेणी.III-टिप्पणी समाविष्ट करने पर अनुमोदित

Cat.II-Approved Subject to Comments

श्रेणी.III-संशोधन कर पुन प्रमा करे

Cat.III-Modify & Resubmit

श्रेणी.IV-सूचना हेतु स्वीकृत

Cat.IV-Accepted for Information

subject to approval of
change in the name
of subvendor

7/60 GIS
23/3/12

☒	ARMOIRE DE COMMANDE LOCALE	LOCAL CONTROL CUBICLE(LCC)
☒	VANNE de REMPLISSAGE	FILLING VALVE
☒	DISQUE de RUPTURE	BURSTING DISC
☒	ABSORBEUR d'HUMIDITE	MOISTURE ABSORBING DEVICE
☒	DENSISTAT	DENSITY SWITCH
☒	CAPTEUR DE DECHARGE PARTIELLE	PARTIAL DISCHARGE COUPLER
☒	CONE FERME	GAS BARRIER WITHOUT OPENING
☒	CONE OUVERT	GAS BARRIER WITH OPENING
☒	CONE A COMMUNICATION	GAS BARRIER WITH COMMUNICATION



NHPC Limited
(A GOVERNMENT OF INDIA ENTERPRISE)

LOT-5:ELECTRICAL & MECHANICAL WORKS

P|B|T|I|I|-G|I|S|0|1|G|A|0|0|1|-0|9

ADDITIONAL INFORMATION

STATUS OF DRAWING
FOR APPROVAL

DISTRIBUTION OF PRINTS

PARBATI HYDROELECTRIC PROJECT STAGE-II (H.P.) INDIA



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

दौसगिरिसख पीरव्योक्का विमान, भीपाल

BHARAT HEAVY ELECTRICALS LTD.

TRANSMISSION PROJECTS DIVISION, BHOPAL

नाम/ NAME	हस्ताक्षर/ SIGN	दिनांक/ DATE	वैशेषिक की संख्या/ NO. OF VAR
P Armand	PA	30/04/04	
P Combe	CP	30/04/04	
G Cayon	GC	30/04/04	

भाग/ DEPT	कमल टाइटल/ UNTOL.DIMS. GR.	अनुपात/ SCALE	भार/ WEIGHT (K.G.)	असेम्बली ड्राइंग का संदर्भ/ REF. TO ASSY. DRG.	वस्तु का क्र. / ITEM NO.	वस्तु का संख्या/ NO. OF ITEM
क्रेड कोड/ CODE						

SUB - VENDOR

ALSTOM GRID

शीर्षक/ TITLE

GIS LAYOUT

ड्राइंग का क्र./ DRAWING NO.

F207601

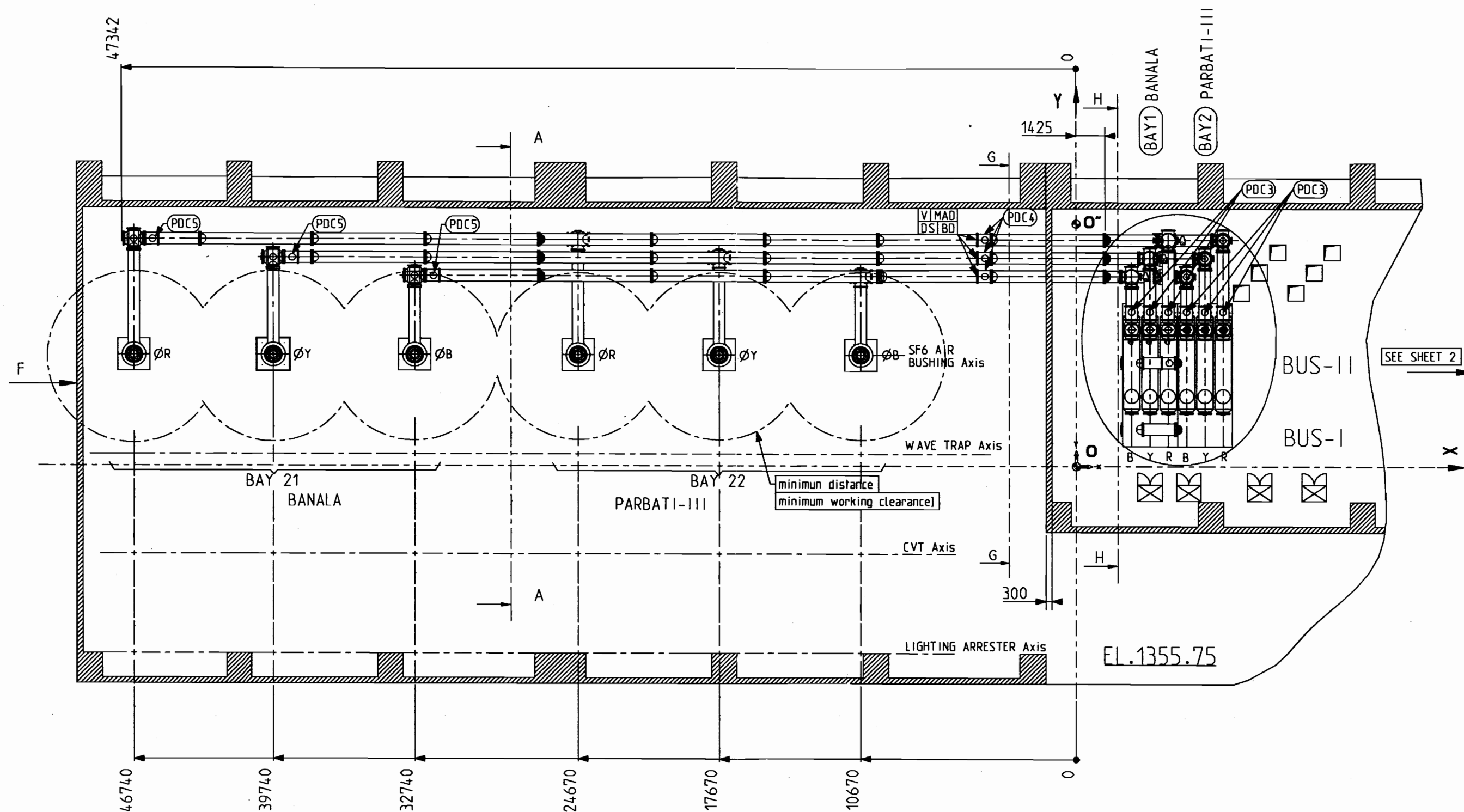
पृष्ठ संख्या/ REV

09

कमल का क्र./ SHT. No. 1 कमल की संख्या/ NO. OF SHT. 6

SIGN. & DATE REF. DRG. NO.

INVENTORY NO.



View as per F and A-A & G-G section (see sheet n°F206792 5/6)
PBTII-GIS01GA003

ECHELLE : 1/140
SCALE : 1/140

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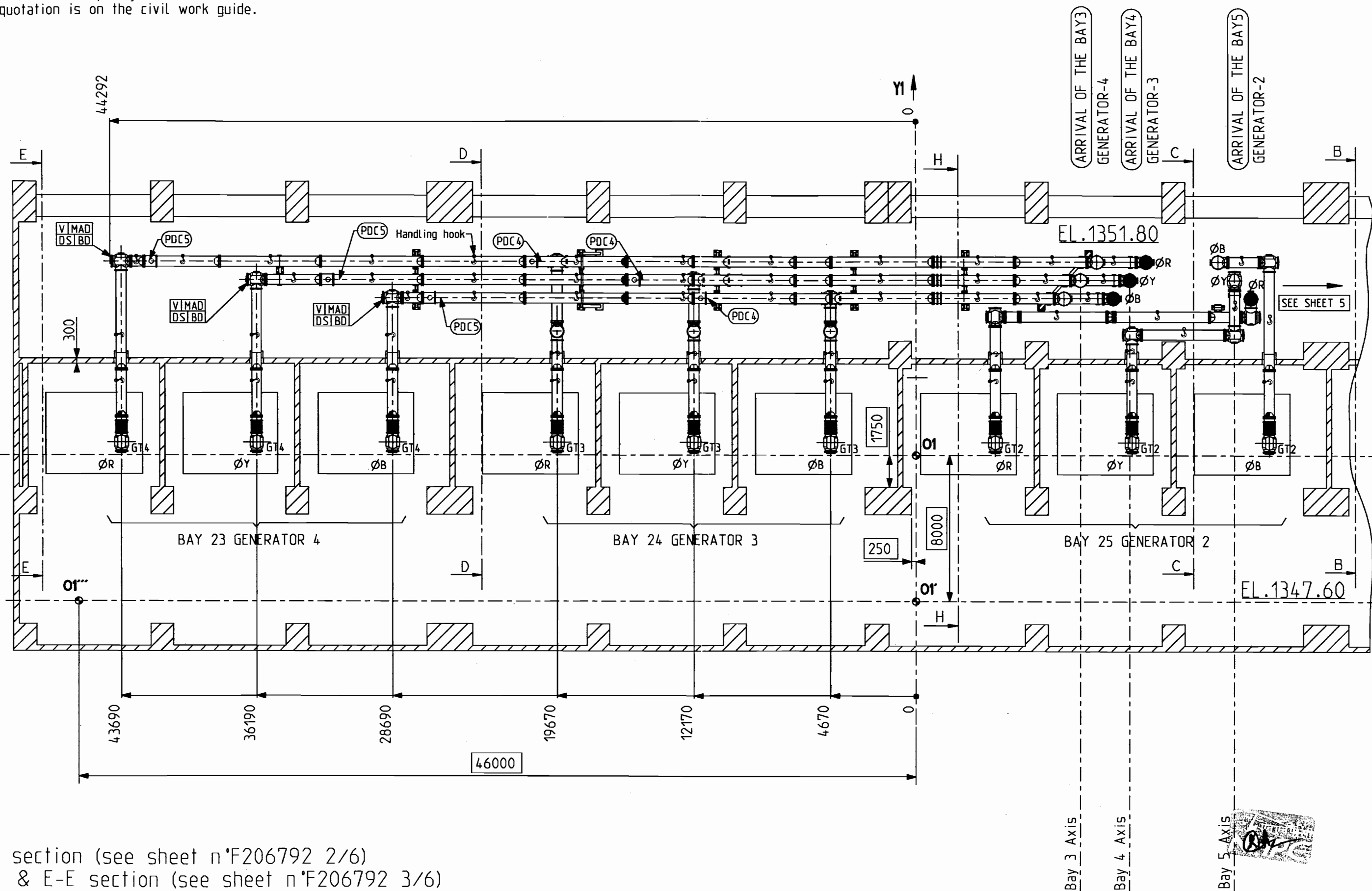
REVISION
P

A2

A

Hooks are positioned in the ceiling to support temporarily a tackle for the assembly of the busduct, with a capacity minimum of 1000 daN. The quotation is on the civil work guide.

See detail C3 Folio 8 on drawing PBTII-GIS01GA004 / F206793 / Civil Work Guide



C-C section (see sheet n°F206792 2/6)

D-D & E-E section (see sheet n°F206792 3/6)

PBTII-GIS01GA003

ECHELLE : 1/140

SCALE : 1/140

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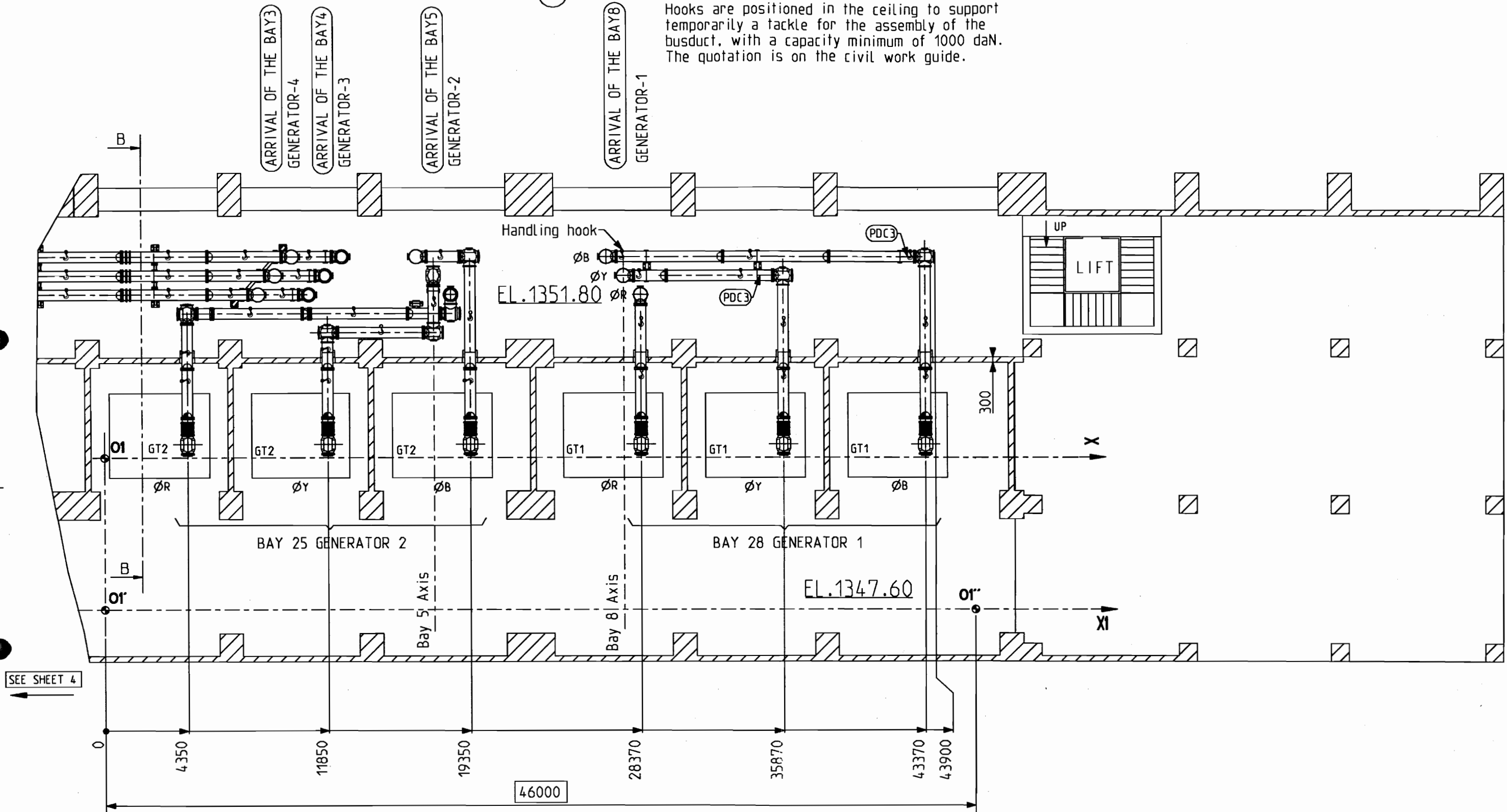
F207601

REVISION
P



See detail C3 Folio 8 on drawing PBTII-GIS01GA004 / F206793 / Civil Work Guide

Hooks are positioned in the ceiling to support temporarily a tackle for the assembly of the busduct, with a capacity minimum of 1000 daN. The quotation is on the civil work guide.



B-B section (see sheet n° F206792 2/6)

PBTII-GIS01GA003

ECHELLE : 1/140
SCALE : 1/140

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F207601

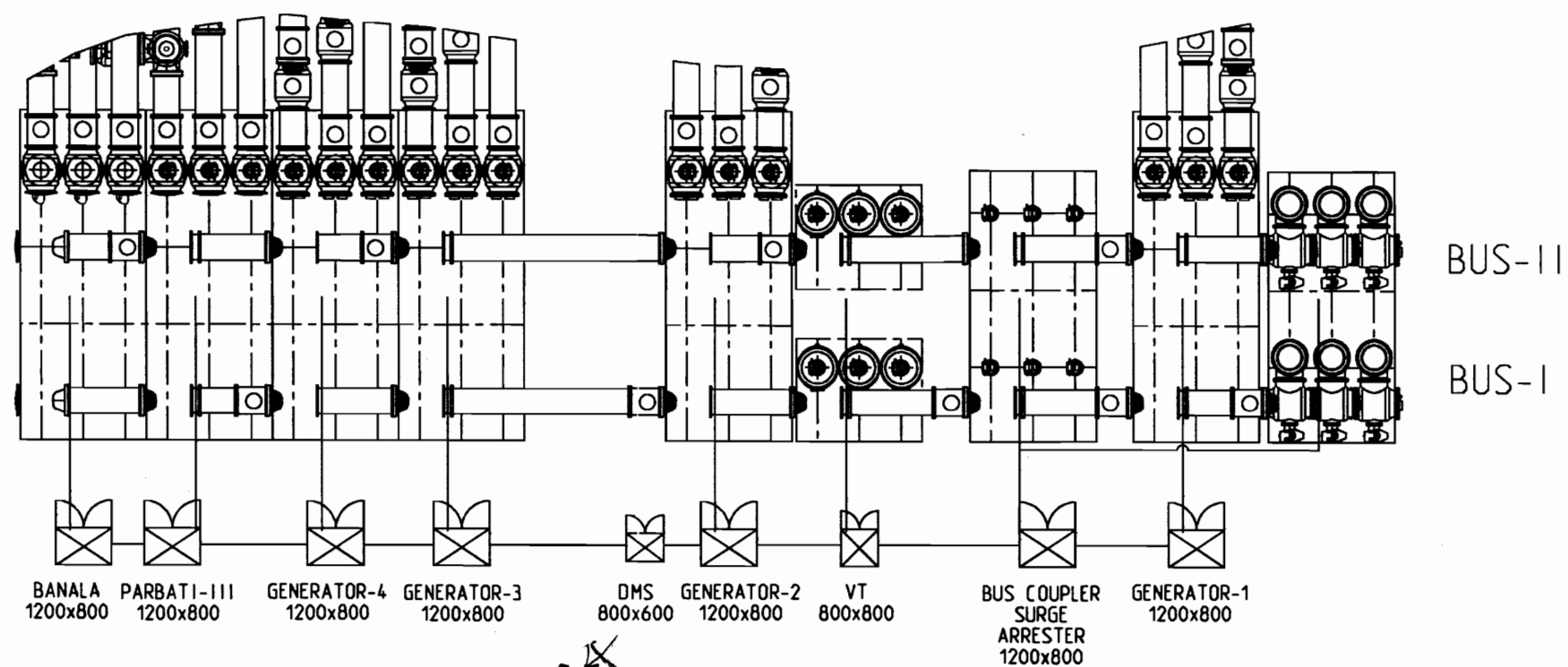
REVISION
P

D

C

B

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Cables Tray Out Of GIS Manufacturer supply

ALSTOM GRID

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F207601

REVISION
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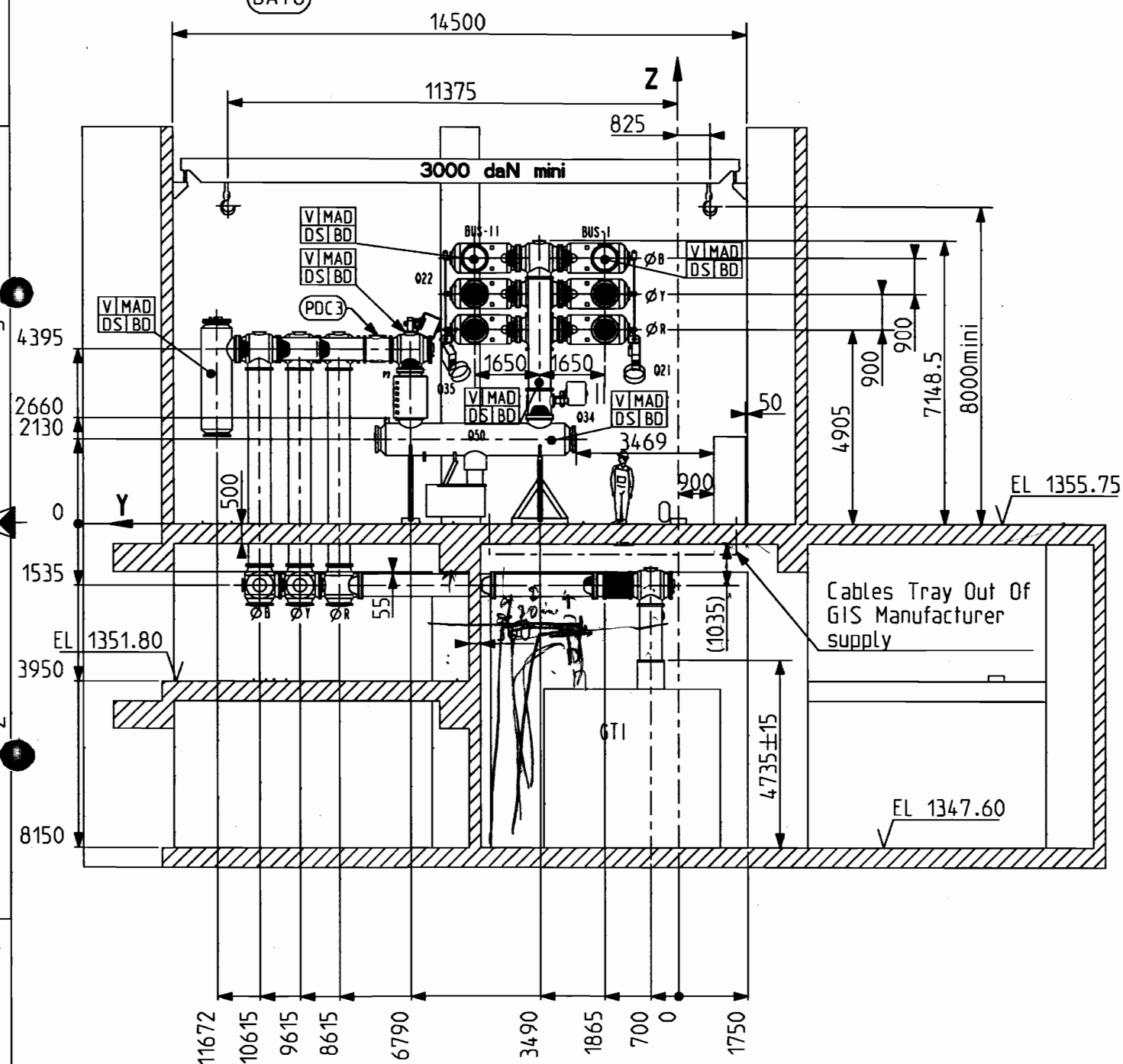
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COUPE/SECTION B-B
 ECHELLE/SCALE: 1:100
 See F207601 sheet 4
 PBT 11-GIS01GA001

GENERATOR-1

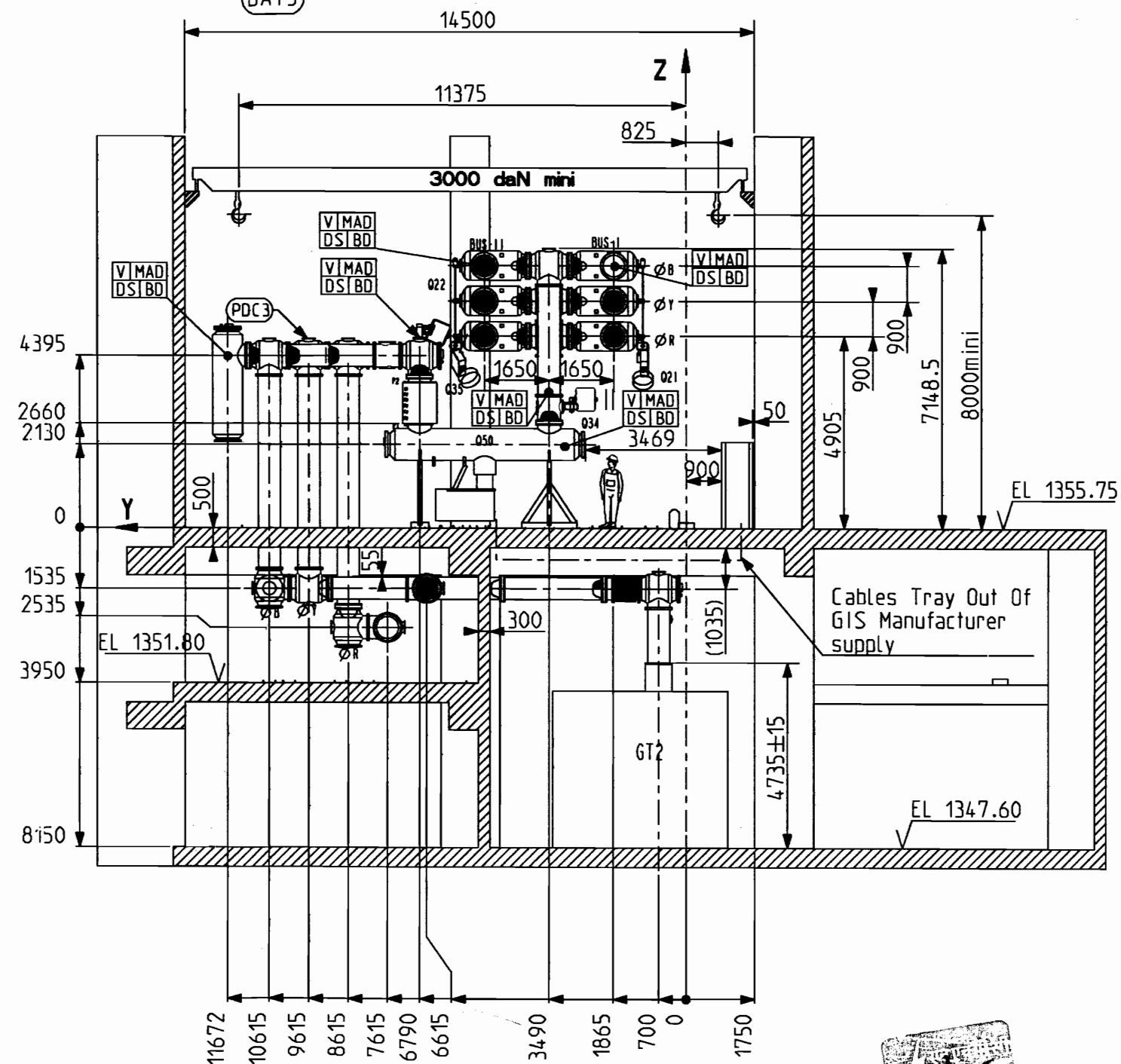
(BAY8)



COUPE/SECTION C-C
 ECHELLE/SCALE: 1:100
 See F207601 sheet 2
 PBT 11-GIS01GA001

GENERATOR-2

(BAY5)



ECHELLE : 1/100
 SCALE : 1/100

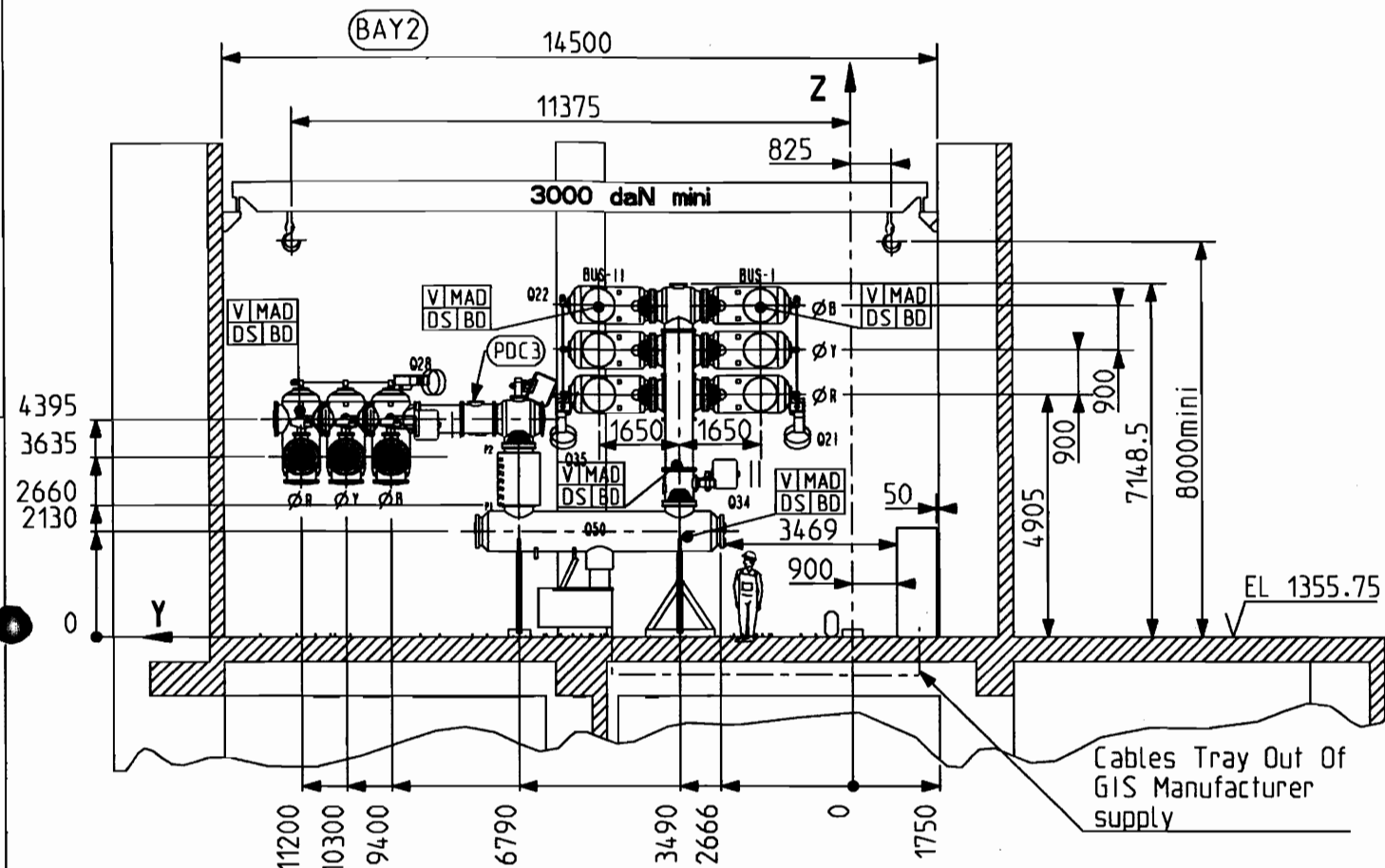
ALSTOM GRID

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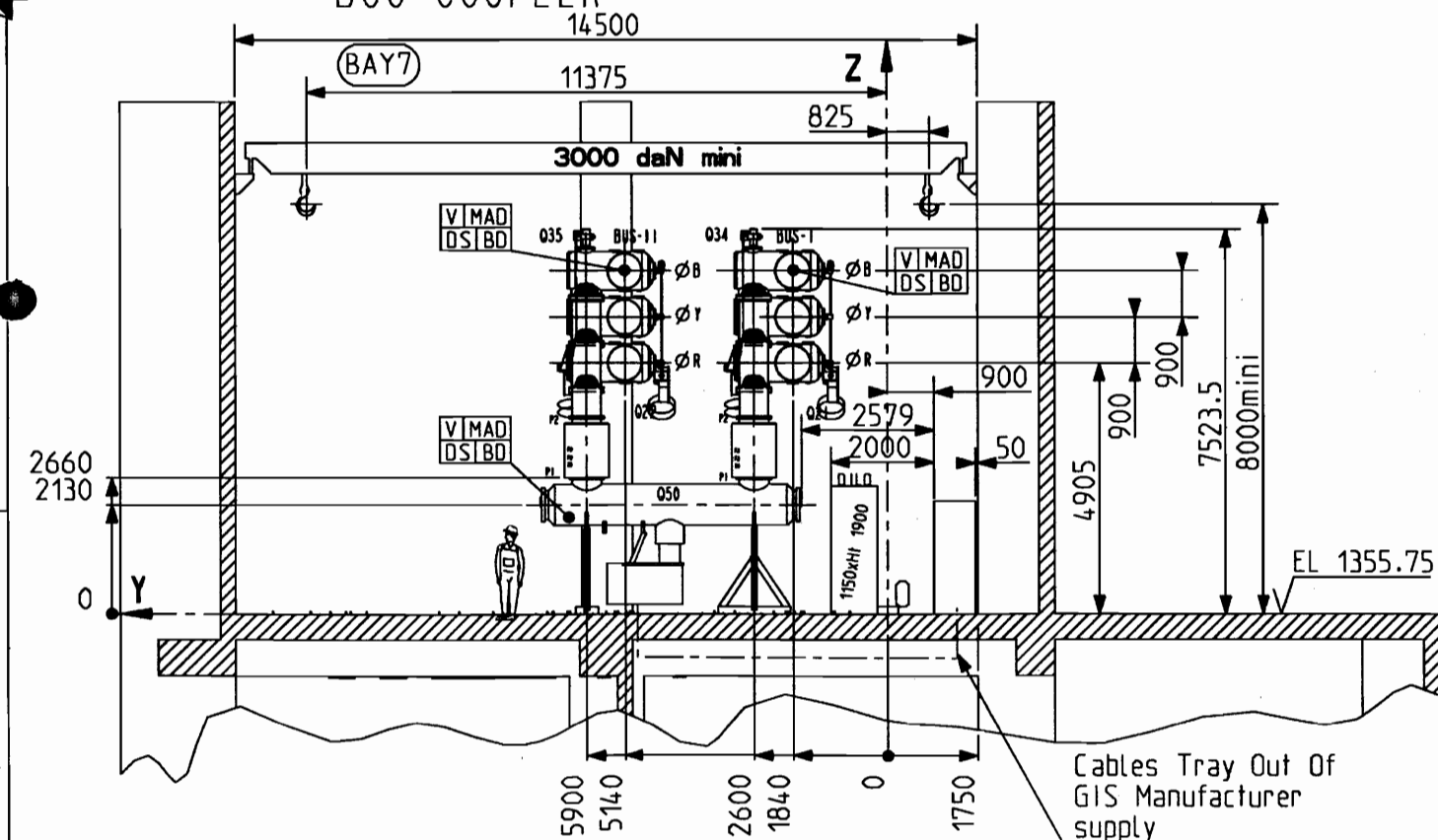
F206792

REVISION
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PARBATI-III

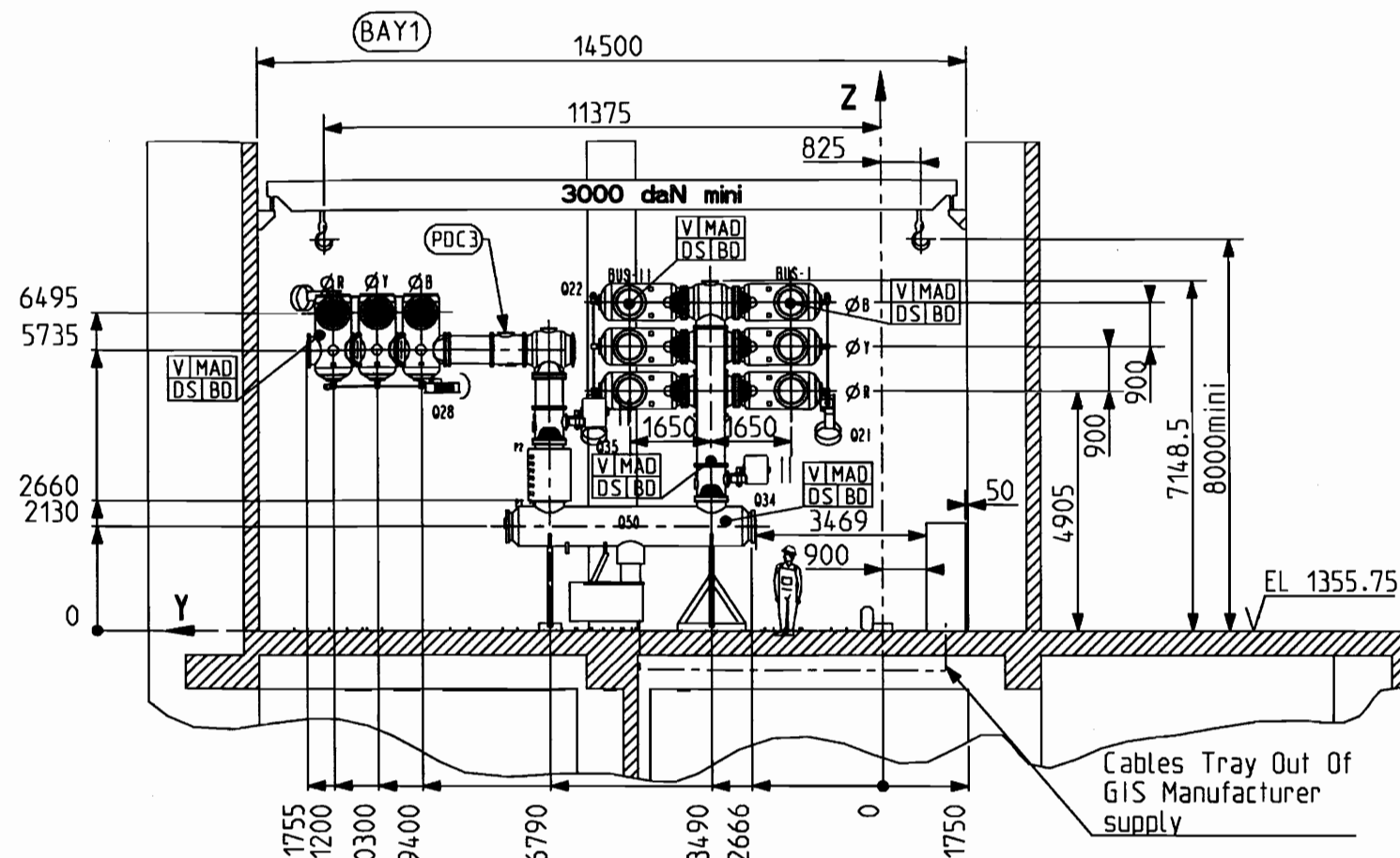


BUS COUPLER

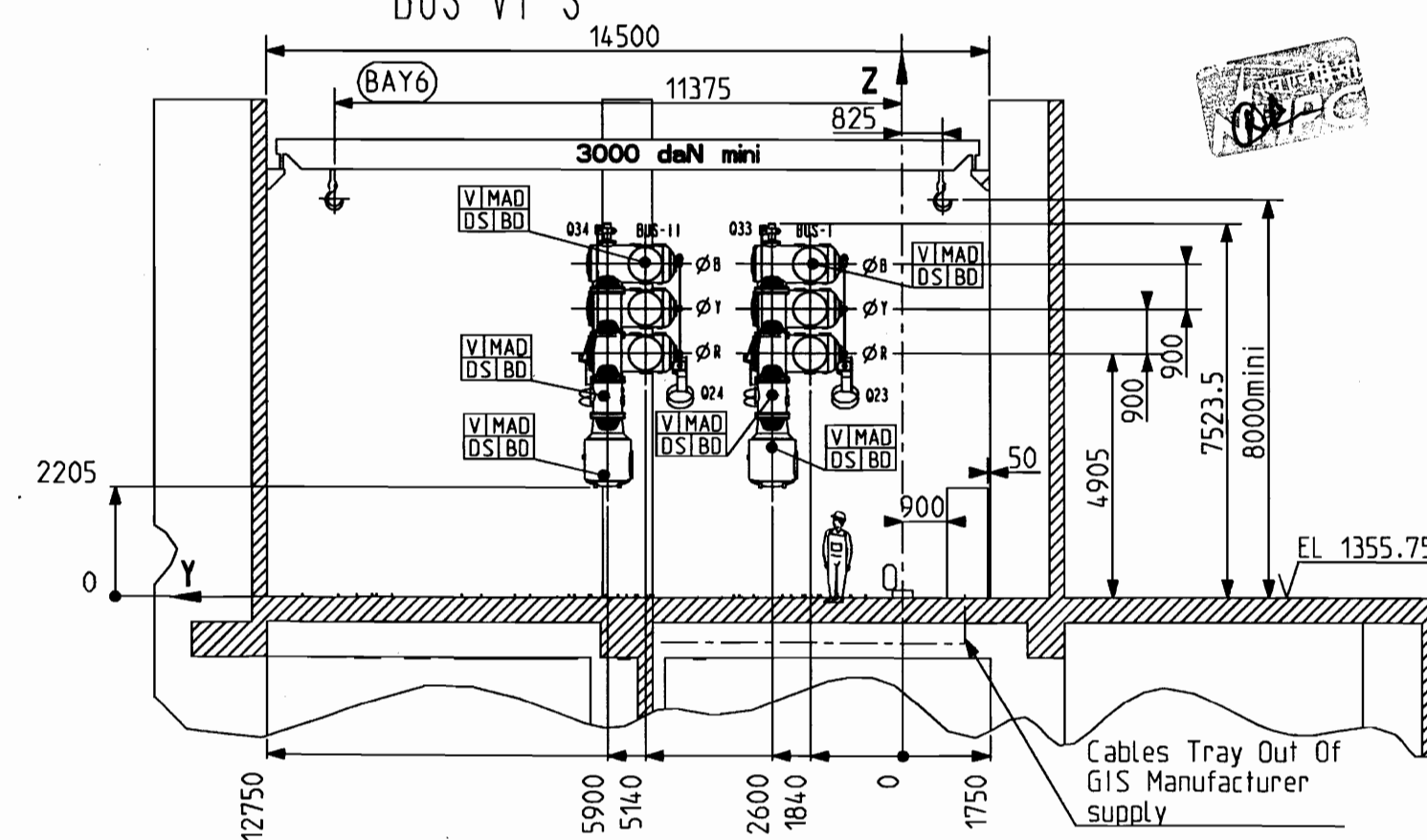


ECHELLE : 1/100
SCALE : 1/100

BANALA



BUS VT'S

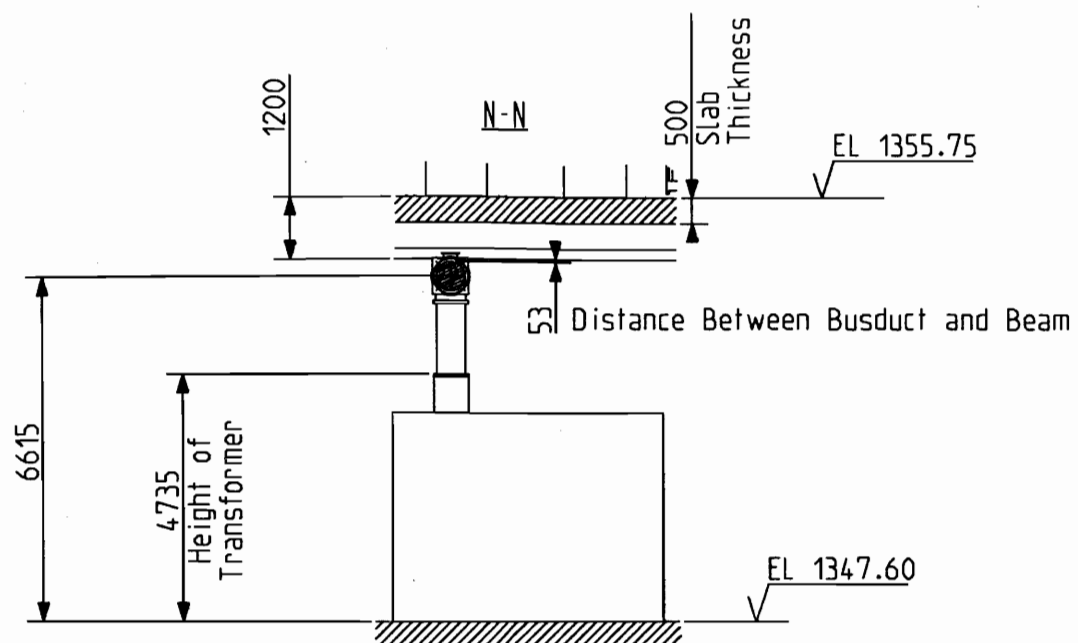


ALSTOM GRID

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F206792

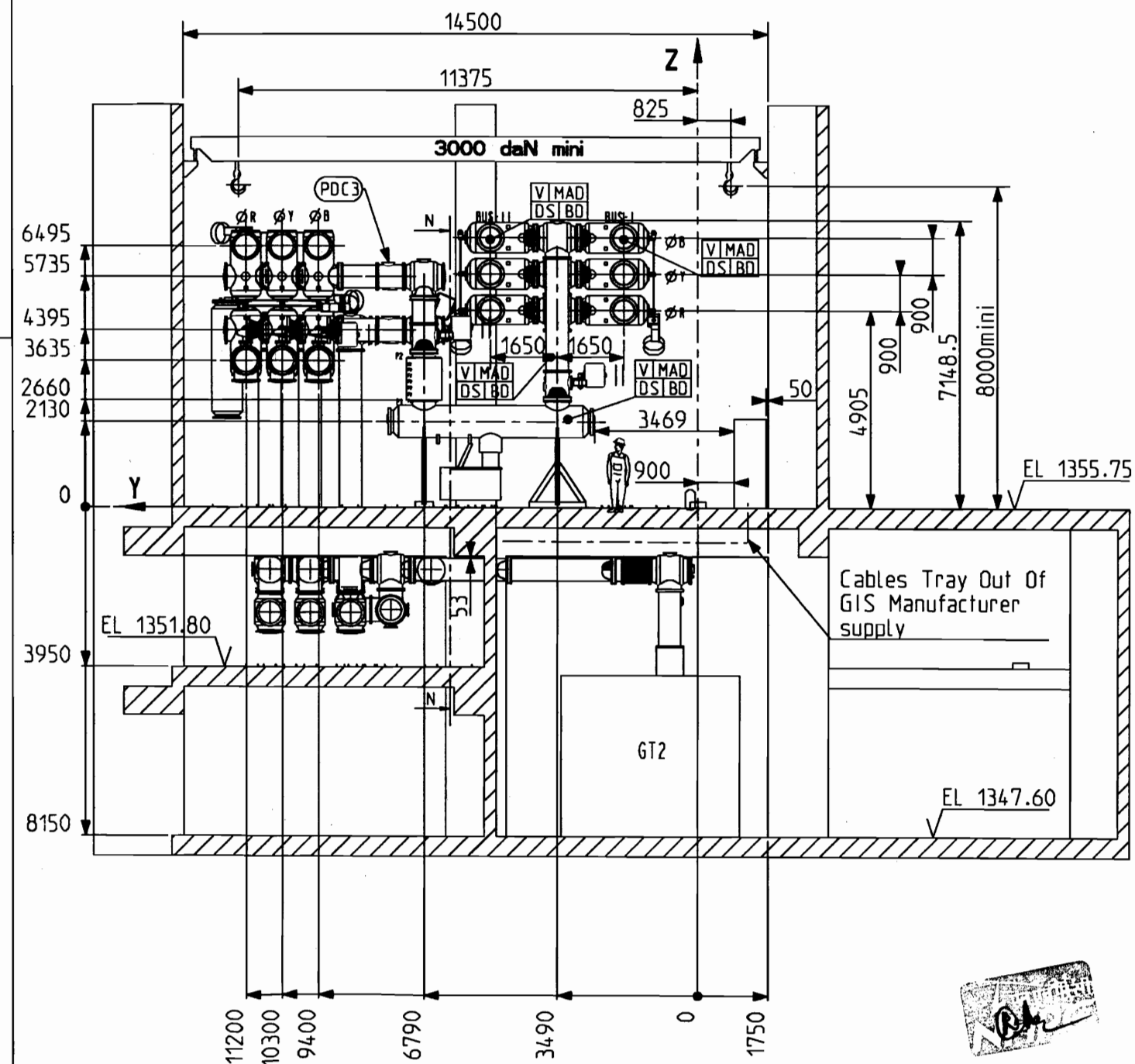
REVISION
S



H-H
Echelle/Scale 1:100
See F207601 sheet 3 & sheet 4
PBT11-GIS01GA001

GENERATOR-2

BAY 1 & 2 & partial section BAY 4



Echelle : 1/100
Scale : 1/100

ALSTOM GRID

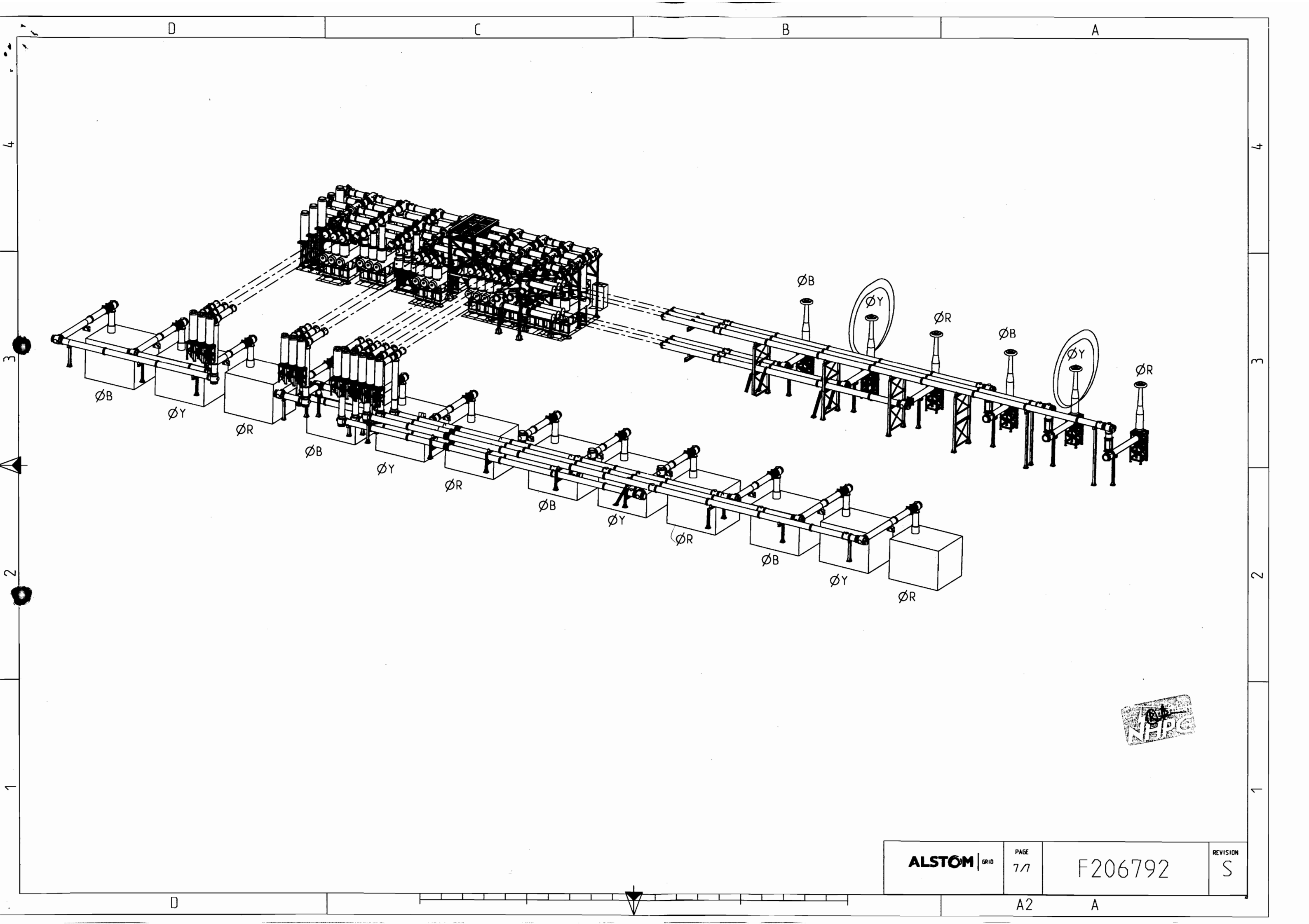
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REVISION
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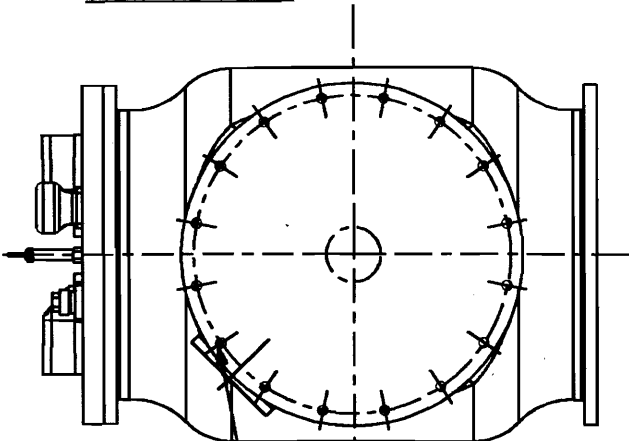
A2

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VUE SUIVANT F
VIEW AS PER F

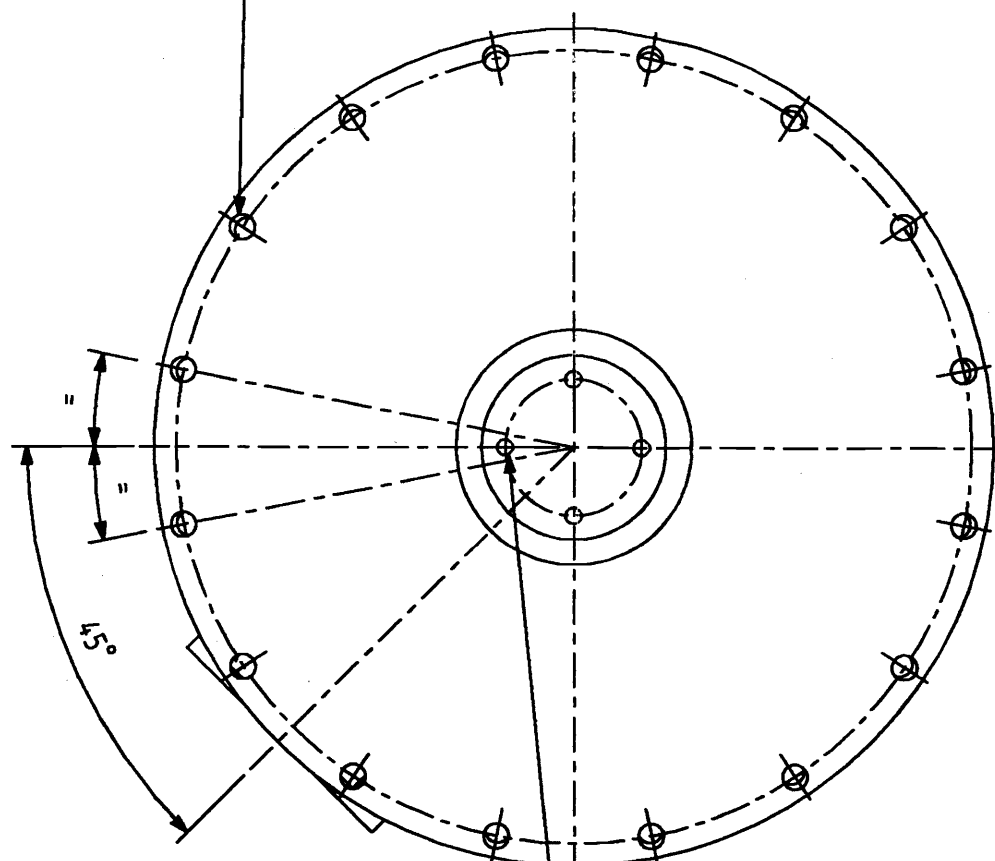
ECHELLE 0.100



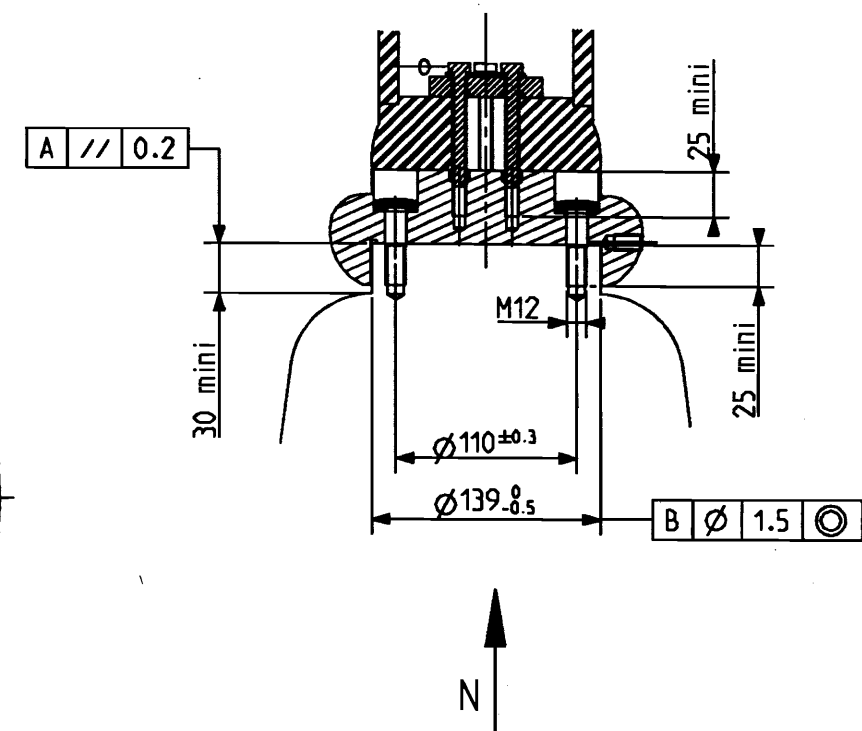
VUE SUIVANT N
VIEW AS PER N

ECHELLE 0.250

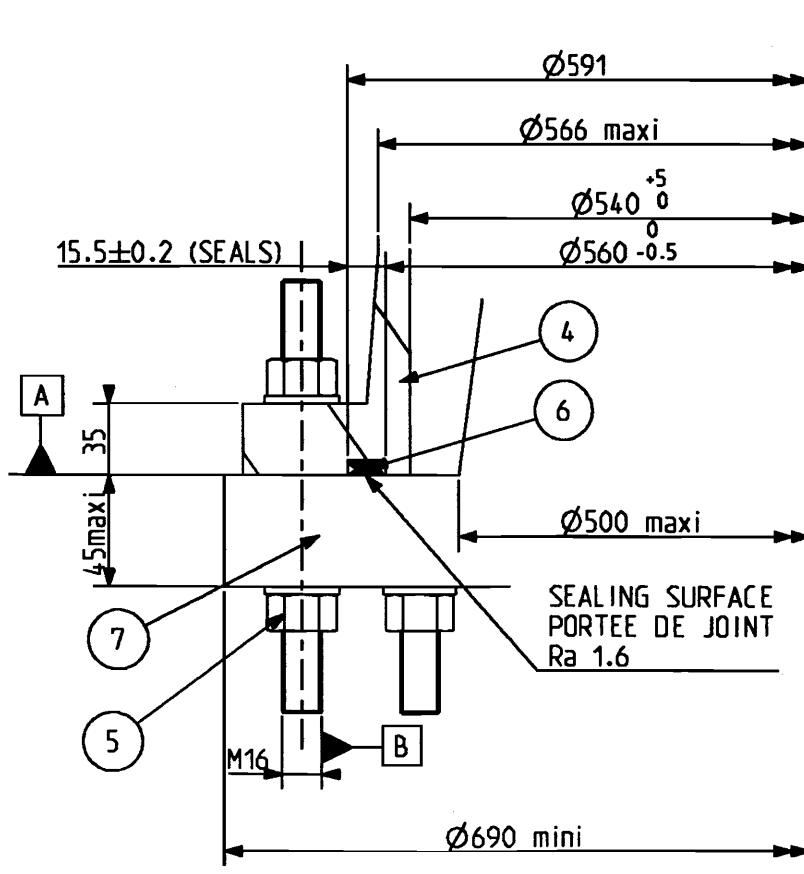
16 holes $\varnothing 20.25$ at $22^{\circ}50' \pm 0.5$ on $\varnothing 640$
16 trous $\varnothing 20.25$ à $22^{\circ}50' \pm 0.5$ sur $\varnothing 640$



DETAIL B
ECHELLE 0.330



DETAIL A
ECHELLE 0.500



ALSTOM GRID

PAGE
2/2

F207109

REVISION
1

A2

A

GIS T155

C

- Raccordement au circuit de terre

पृष्ठ क्र./SHT. No. 1 पृष्ठों की संख्या/NO. OF SHT. 15

APPROVE

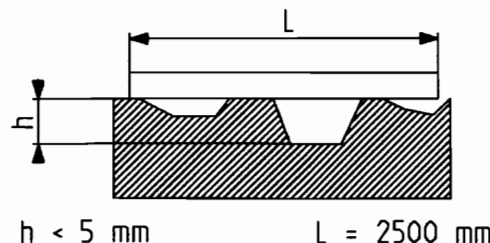
A

D

CIVIL WORKS EXECUTION TOLERANCES

TOLERANCE DE REALISATION DU GENIE-CIVIL

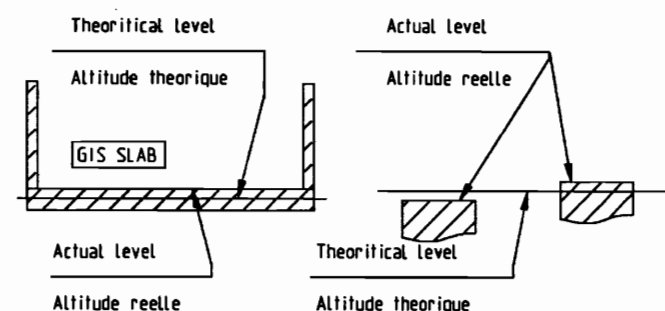
Flatness tolerance of GIS slab and outdoor foundations must not exceed 5mm under a 2000mm ruler.



La tolérance de planéité de la dalle du GIS et des massifs extérieurs ne doit pas excéder 5mm sous une règle de 2000mm.

The difference (h1) between the actual level and the theoretical level of the GIS slab must not exceed ± 20 mm.

The difference (h2) between the actual level and the theoretical level of the outdoor foundations must not exceed ± 20 mm (if applicable).



La différence (h1) entre l'altitude réelle et l'altitude théorique de la dalle GIS ne devra pas être supérieure à ± 20 mm.

La différence (h2) entre l'altitude réelle et l'altitude théorique des massifs extérieurs ne devra pas être supérieure à ± 20 mm (si applicable).

General tolerances ± 10 mm
Tolerances générales ± 20 mm

C

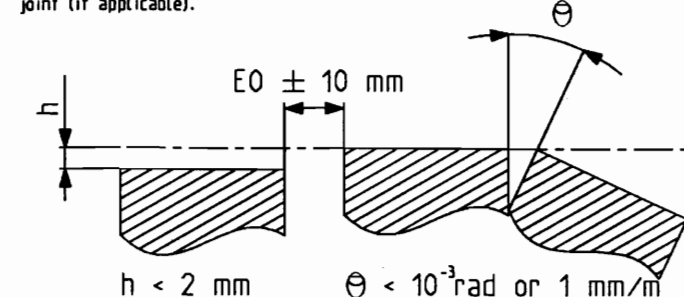
CIVIL WORKS MOVEMENTS

DEPLACEMENT DU GENIE-CIVIL

Maximum dynamic deflection of the GIS slab under circuit breaker operation = ± 1 mm.

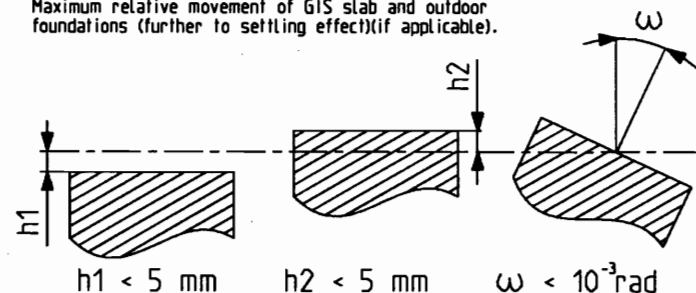
Fleche dynamique maximale de la dalle support du poste blindé lors de la manoeuvre des disjoncteurs = ± 1 mm

Maximum relative movement of two GIS slabs at expansion joint (if applicable).



Déplacement relatif maximal de deux dalles du GIS au niveau du joint de dilatation (si applicable).

Maximum relative movement of GIS slab and outdoor foundations (further to settling effect) (if applicable).



Déplacement relatif maximal de la dalle du GIS et des massifs extérieurs (sous l'effet d'un tassement) (si applicable).

B

CIRCUIT-BREAKER DYNAMIC LOADS

CHARGES DYNAMIQUES GENEREES PAR LE DISJONCTEUR

The circuit-breaker opening produces dynamic loads which are transmitted to the GIS slab.

The maximum dynamic load value P_d and the corresponding frequency F_e for a three-pole opening or closing is given in table A.

The equivalent static load can be calculated by means of the table B, according to the natural frequency of the GIS slab.

It must be added to the weight of the CB (refer to ● in "Static loads" table).

Table A / Tableau A

Peak value on each load point / Valeur de crête sur chaque point de charge	
P_d (kN)	20
Frequency / Fréquence	
F_e (Hz)	15

Table B / Tableau B

Natural frequency of GIS slab (Hz) Fréquence propre de la dalle GIS (Hz)	Equivalent static load per 3 pole CB (daN) Charge statique équivalente par disj. tripolaire (daN)
<13	6500
15	3250
20	2200
30	1700
40	1550
60	1300
>100	1300

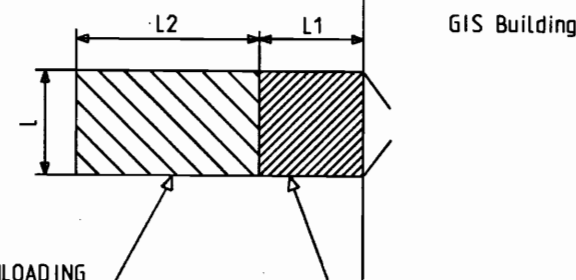
AREA RESERVED FOR UNLOADING

ZONE RESERVEE AU DECHARGEMENT

- FOR ALL DOORS
- POUR TOUTES LES PORTES

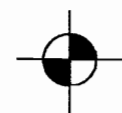
AREA RESERVED FOR TEMPORARY UNLOADING PLATFORM DURING GIS ERECTION
($L_2 \times l = 7 \text{ m} \times 4 \text{ m}$)
SAME LEVEL AS GIS ROOM FLOOR
MAX CAPACITY 6 TONS

ZONE RESERVEE POUR UNE PLATEFORME PROVISoire DE DECHARGEMENT DURING L'INSTALLATION DU GIS
($L_2 \times l = 7 \text{ m} \times 4 \text{ m}$)
NIVEAU IDENTIQUE AU SOL DU POSTE
CAPACITE MAXI 6 TONNES



AREA RESERVED FOR UNLOADING
($L_1 \times l = 4 \text{ m} \times 4 \text{ m}$)
SAME LEVEL AS GIS ROOM FLOOR
MAX CAPACITY 3 TONS

ZONE RESERVEE AU DECHARGEMENT
($L_1 \times l = 4 \text{ m} \times 4 \text{ m}$)
NIVEAU IDENTIQUE AU SOL DU POSTE BLINDE
CAPACITE MAXI 3 TONNES



PION DE REFERENCE

REFERENCE PIN

* OUT OF GIS SCOPE *

L'ENTREPRENEUR DE GENIE CIVIL FOURNIRA DES PIONS DE REFERENCE DONNANT LE "0" DES AXES DE REFERENCE DU POSTE.

SUR LA DALLE GIS, LES PIONS O, O', O'' ET O1, O1', O1'', O1''' DOIVENT ETRE :
- PLACE TEL QUE DEFINI SUR LA VUE GENERALE
- AU NIVEAU "0" DU GIS
- FIXE EN POSITION
- VISIBLE ET ACCESSIBLE.

CELA PEUT ETRE UNE VIS A TETE PLATE.

THE CIVIL WORKS CONTRACTOR SHOULD PROVIDE REFERENCE PINS GIVING THE "0" OF THE GIS REFERENCE AXIS.

IN THE GIS SLAB, THE PINS O, O', O'' AND O1, O1', O1'', O1''' MUST BE :
- LOCATED AS DEFINED ON THE OVERALL VIEW
- AT THE "00" LEVEL OF THE GIS
- FIXED IN POSITION
- VISIBLE AND ACCESSIBLE.

IT MAYBE AN ANCHOR BOLT WITH FLAT HEAD.

MINIMUM CONCRETE COMPRESSION STRENGTH
(INCLUDING FINITION CONCRETE)

VALEUR MINIMALE DE LA RESISTANCE A LA COMPRESSION DU BETON
(BETON DE FINITION COMPRIS)

$f_{cj28} = 25 \text{ MPa}$

TREATMENT OF FLOOR AND WALLS OF GIS ROOM

- FLOOR : ANTI-DUST COATING
- WALLS : PAINTING
(OUT OF GIS MANUFACTURER SUPPLY)

PEINTURE SUR SOL ET PAROIS DU BATIMENT

- AU SOL : REVETEMENT ANTI-POUSSIERE
- AU MUR : PEINTURE

(HORS DE FOURNITURE DU FABRICANT GIS)

ALSTOM

GRD

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A2

A

4
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2
1

D

C

B

A

Symb. charge Load symb.	Charge statique Static load (kN) daN	Charge dynamique (verticale) Dynamic load (vertical) (kN)	Dilatation des fluoducs Busducts expansion			Vent Wind		0.36g horizontale-0.18g Sismic load (0.36g horizontal & 0.18g) verticale)		
			Mx	My		Mx	My	Mx	My	
D 	400		1kNm	22kNm				1kNm	24kNm	
E 	8250		88kNm	158kNm				175kNm	1275kNm	
C 	1000		3kNm	1kNm				2kNm	1kNm	
K 	1250		47kNm					37kNm		
K1 	1300		4kNm	7kNm				15kNm	11kNm	
I1 	2650		31kNm	37kNm				21kNm	18kNm	
I2 	2920		21kNm	30kNm		1kNm	1kNm	27kNm	27kNm	
U 	3150		12kNm	20kNm		13kNm	14kNm	24kNm	44kNm	
U1 	3150		30kNm	26kNm		14kNm	12kNm	22kNm	46kNm	
F 	5700		85kNm	62kNm				73kNm	102kNm	
J1 	600							2kNm		
N 	825		2kNm			7kNm	3kNm	12kNm	4kNm	
B 	1100		1kNm	5kNm				2kNm	6kNm	
T 	1300		7kNm	8kNm		1kNm	3kNm	1kNm	4kNm	
O 	1300								10kNm	
M 	1400							6kNm	9kNm	
L 	400							5kNm		
J 	1000		2kNm					9kNm		
Z 	1400		9kNm			19kNm	7kNm	18kNm	8kNm	
CA 	1500		13kNm	11kNm		2kNm	1kNm	7kNm	12kNm	
P 	1000		9kNm	9kNm				18kNm	5kNm	
Y 	2450		4kNm	44kNm				17kNm	46kNm	
R 	3000		13kNm	118kNm		57kNm	12kNm	48kNm	36kNm	
S 	2650		3kNm					10kNm	3kNm	
Q 	2650		15kNm	15kNm		60	15	30kNm	15kNm	
G 	30kN	20kN								
H 	30kN	20kN								
A1 	600							1kNm	1kNm	
A2 	600							1kNm	1kNm	
A3 	500							1kNm	1kNm	

4
3
2
1

TABLEAU DES CHARGES
LOADS ARRAY

-VALUE FOR CHARGE WITHOUT SAFETY FACTOR APPLIED UNIFORMLY DISTRIBUTED
ON THE SLAB AT THE FIXATION POINTS
-VALEUR POUR COMBINAISON DE CHARGE SANS COEFFICIENT DE SECURITE
UNIFORMEMENT REPARTIES SUR LA DALLE AUX POINTS DE FIXATIONS



D



A2

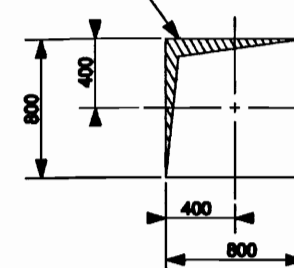
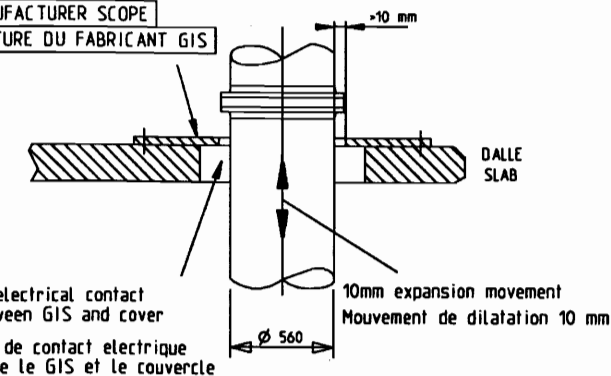
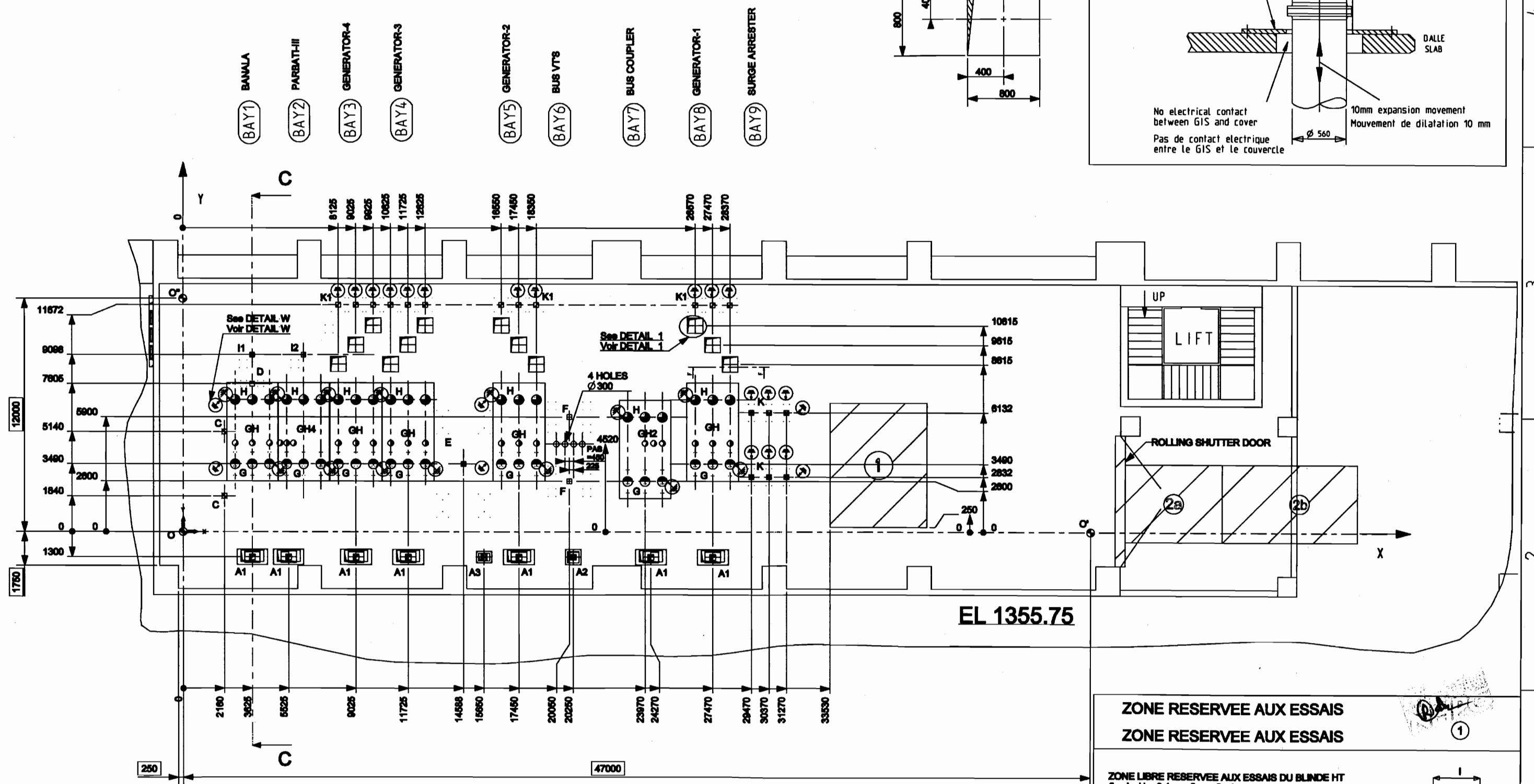
A

D

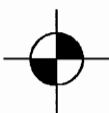
C

B

A

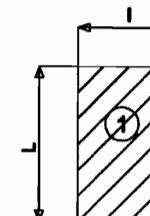
SEE Closing Arrangement
VOIR Principe d'obturation solDETAIL 1
Echelle 1:30CLOSING ARRANGEMENT
PRINCIPE D'OBTURATION SOLOUT OF GIS MANUFACTURER SCOPE
HORS DE FOURNITURE DU FABRICANT GISNo electrical contact
between GIS and cover
Pas de contact électrique
entre le GIS et le couvercle
10mm expansion movement
Mouvement de dilatation 10 mm

SECTION C-C	see folio 10	DETAIL GH	see folio 11
DETAIL A1	see folio 10	DETAIL GH2	see folio 11
DETAIL A2	see folio 10	DETAIL GH4	see folio 11
DETAIL A3	see folio 10	DETAIL H	see folio 11
DETAIL C	see folio 11	DETAIL I1	see folio 12
DETAIL D	see folio 12	DETAIL I2	see folio 12
DETAIL E	see folio 12	DETAIL K	see folio 12
DETAIL F	see folio 12	DETAIL K1	see folio 13
DETAIL G	see folio 11	DETAIL W	see folio 15



See sheet 2

ECHELLE 1:140

ZONE RESERVEE AUX ESSAIS
ZONE RESERVEE AUX ESSAISZONE LIBRE RESERVEE AUX ESSAIS DU BLINDE HT
(L x l x H = 6.4 m x 6 m x 6 m)
NIVEAU IDENTIQUE AU SOL DU POSTE BLINDE
CAPACITE MAXI 4 T/m²ZONE LIBRE RESERVEE AUX ESSAIS DU BLINDE HT
(L x l x H = 6.4 m x 6 m x 6 m)
NIVEAU IDENTIQUE AU SOL DU POSTE BLINDE
CAPACITE MAXI 4 T/m²

ALSTOM | GRID

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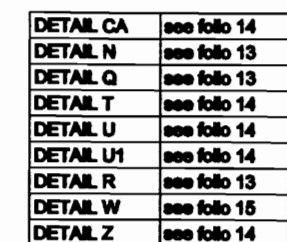
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REVISION
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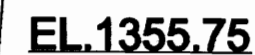
A2

A

ELLE : 1 / 140
LE : 1 / 140



See sheet 2

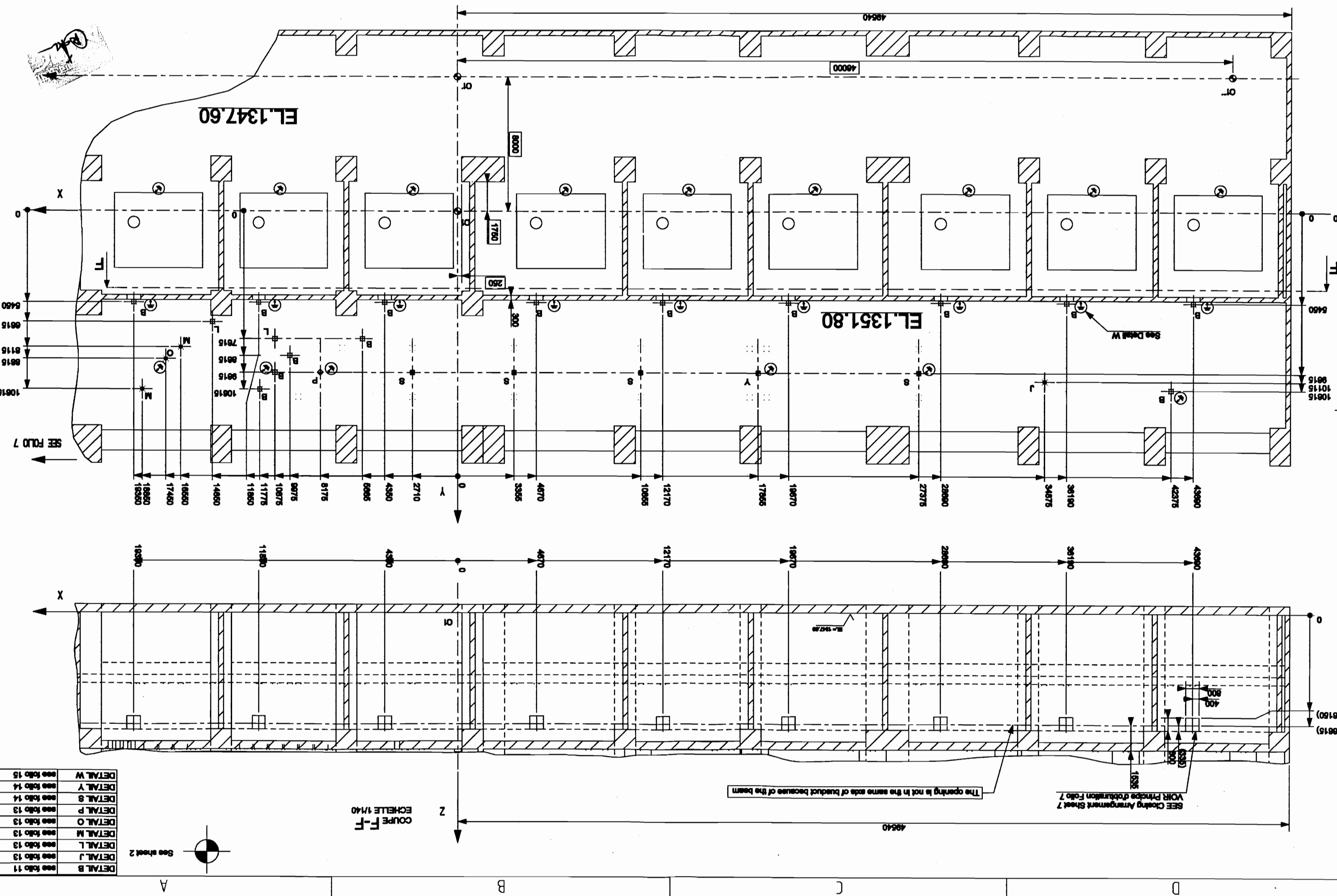


GRID	PAGE
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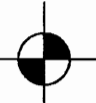
REVISION

1



DETAIL B	see folio 11
DETAIL J	see folio 13
DETAIL L	see folio 13
DETAIL M	see folio 13
DETAIL O	see folio 13
DETAIL P	see folio 13
DETAIL S	see folio 14
DETAIL Y	see folio 14
DETAIL W	see folio 15

See sheet 2

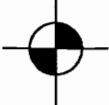


COUPE F-F
ECHELLE 1/140

The opening is not in the same side of duct because of the beam

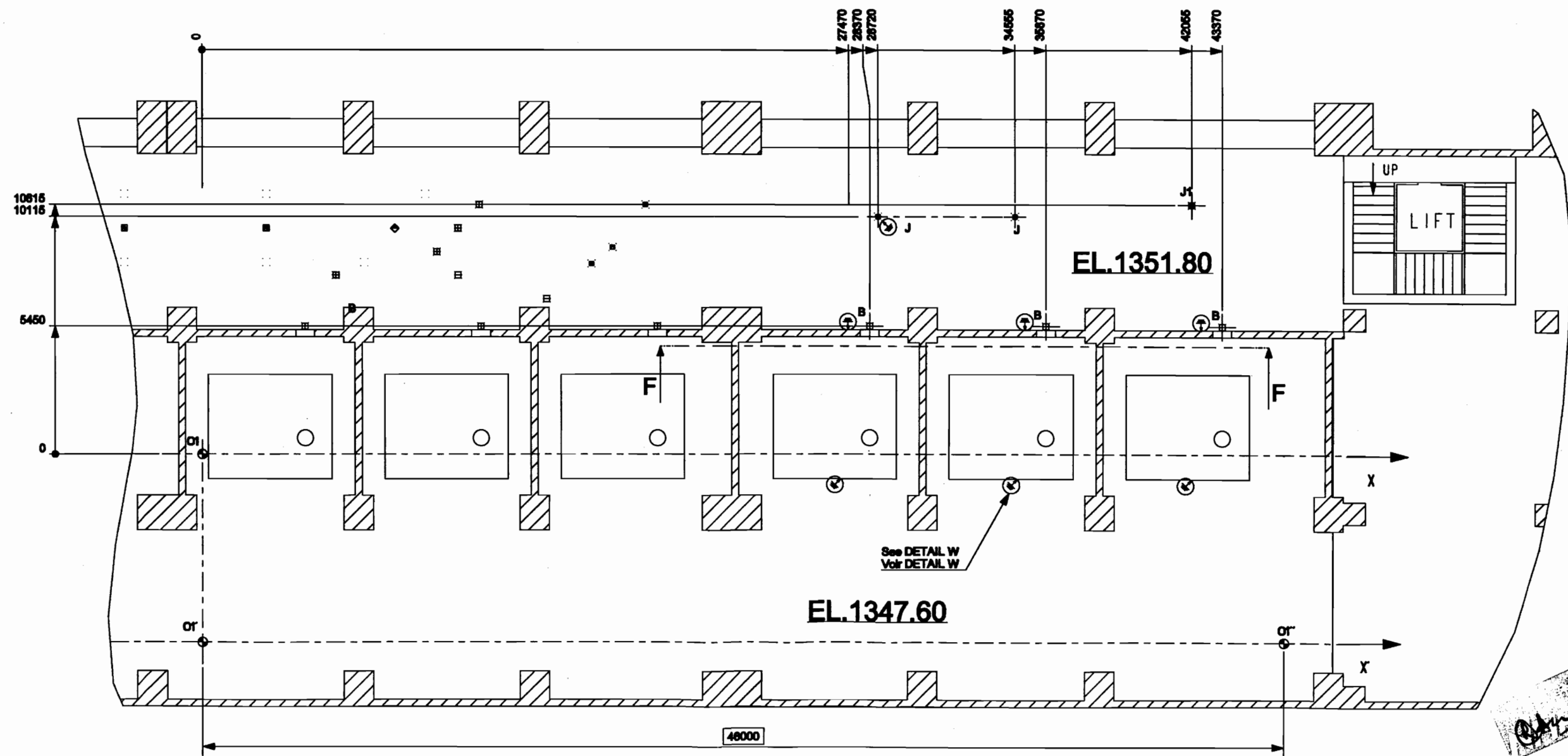
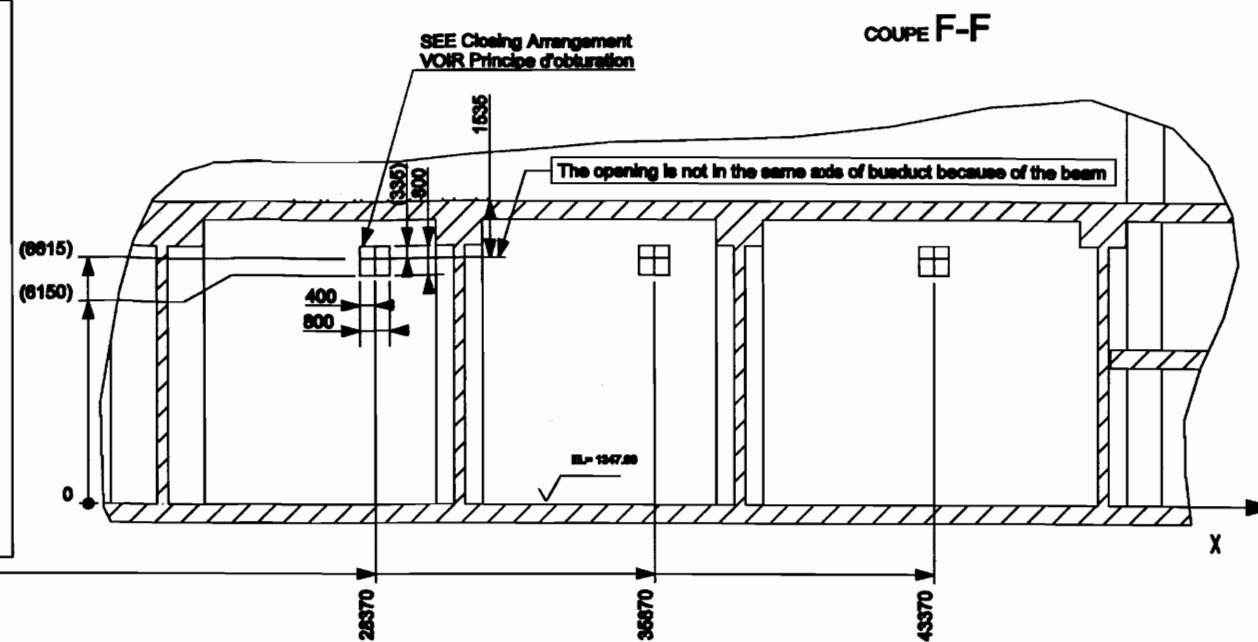
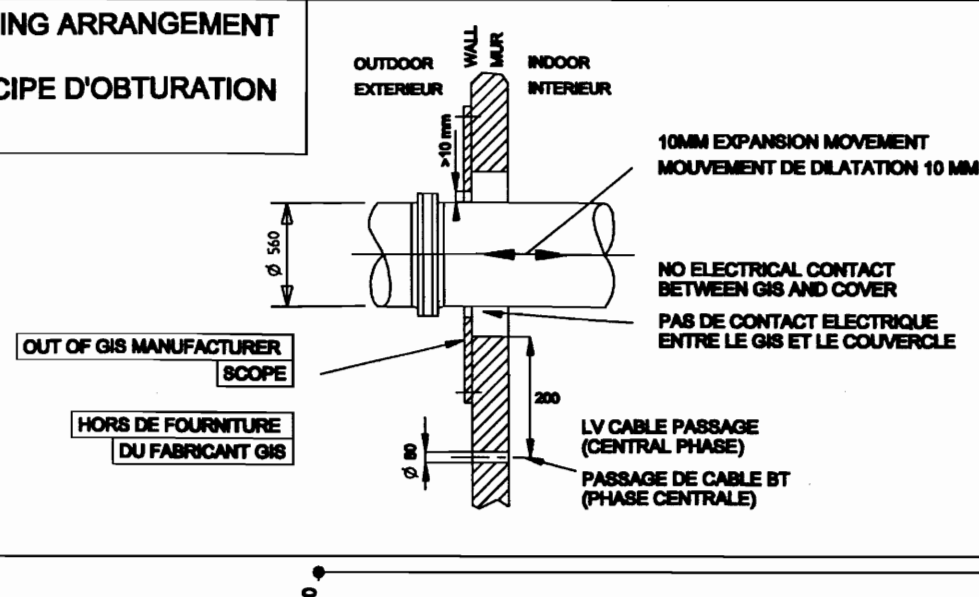
SEE Closing Arrangement Sheet 7
VORR Principle of obstruction Sheet 7

DETAIL B	see folio 11
DETAIL J	see folio 13
DETAIL J1	see folio 13
DETAIL W	see folio 15



See sheet 2

CLOSING ARRANGEMENT PRINCIPE D'OBTURATION



ECHELLE : 1/140
SCALE : 1/140

ALSTOM

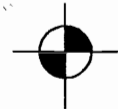
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REVISION
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A2

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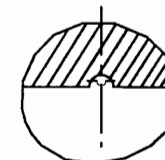


See sheet 2

COUPE/SECTION N-N
ECHELLE/SCALE 7:1000

SEE DETAIL C3
VOIR DETAIL C3

DETAIL C3
CAPACITY 1T
OUT OF AREVA T&D SUPPLY
MAIN CONTRACTOR SUPPLY



4

4

3

3

2

2

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ECHELLE : 1/140
SCALE : 1/140

ALSTOM

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A2

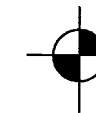
A

D

C

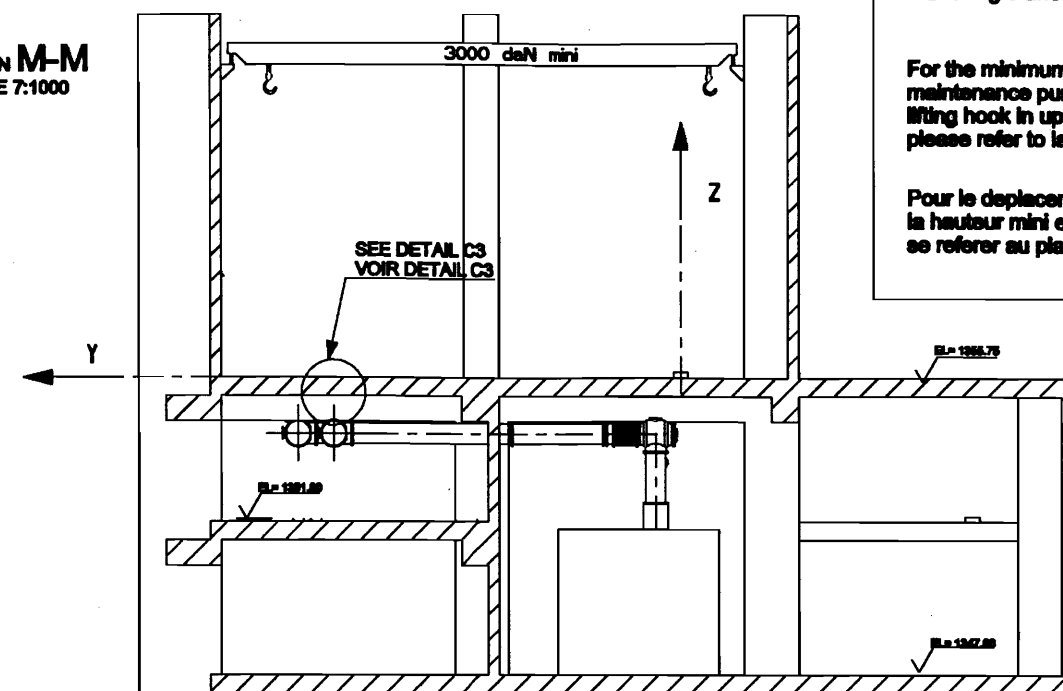
B

A



See sheet 2

COUPE/SECTION M-M
ECHILLE/SCALE 7:1000



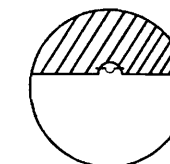
Travelling crane / Pont Roulant

For the minimum requirements regarding the travelling crane for GIS erection and maintenance purposes, as maximum load to be lifted, the minimum height of the lifting hook in upper position, and the minimum travels (lengthways and to the sides), please refer to layout drawing N° PBTII-GIS01GA003 / F206792

Pour le déplacement et la maintenance du pont roulant, la charge maximum, la hauteur mini en position haute et le déplacement mini se referer au plan d'implantation PBTII-GIS01GA003 / F206792

DETAIL C3
CAPACITY 1T

OUT OF AREVA T&D SUPPLY
MAIN CONTRACTOR SUPPLY



M

M

EL.1351.60

SEE DETAIL C3

EL.1347.60

COUPE/SECTION L-L
ECHILLE/SCALE 7:1000

10815
9815
7080
4285
0

ECHILLE : 1/140
SCALE : 1/140

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REVISION
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A2

A

D

C

B

A

DETAIL X see folio 15

COUPE C-C

DETAIL A1

DETAIL A2

DETAIL A3

VIEW E

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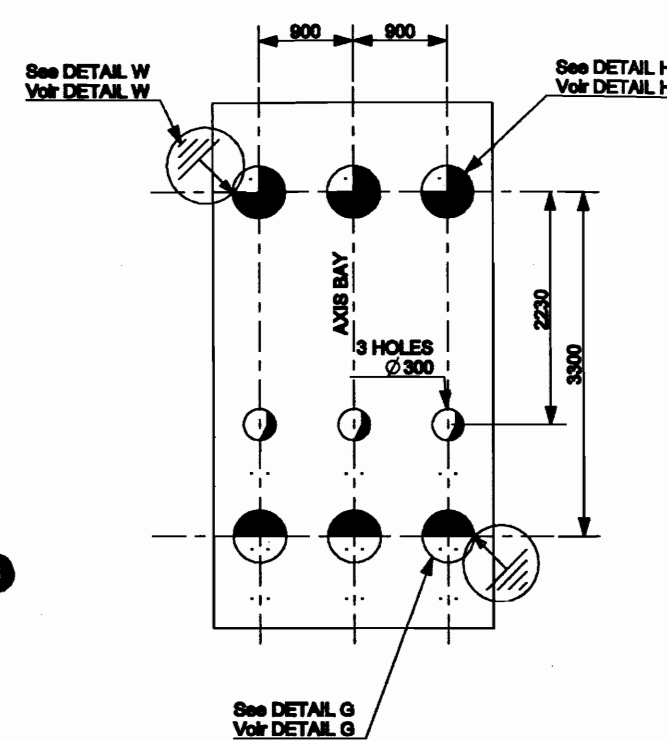
REVISION
0

A2

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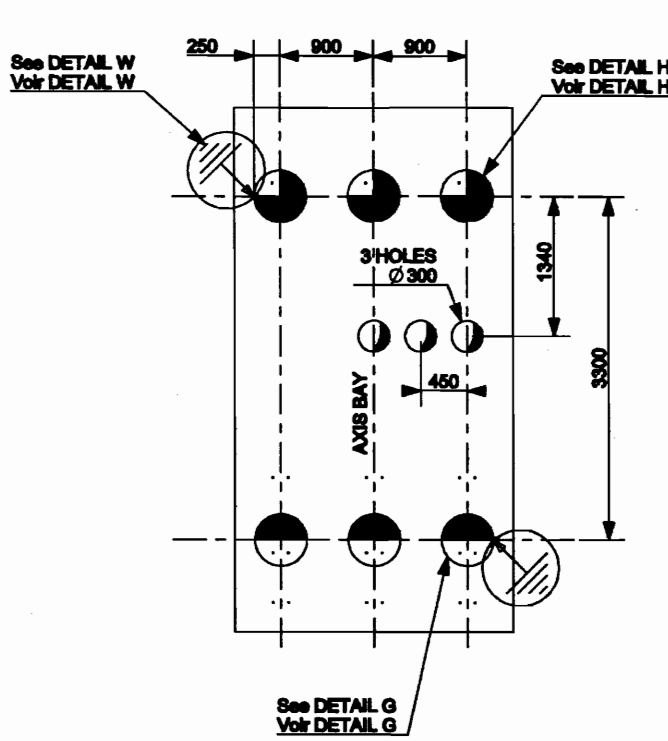
DETAIL GH

SCALE 1:50
Echelle 1:50



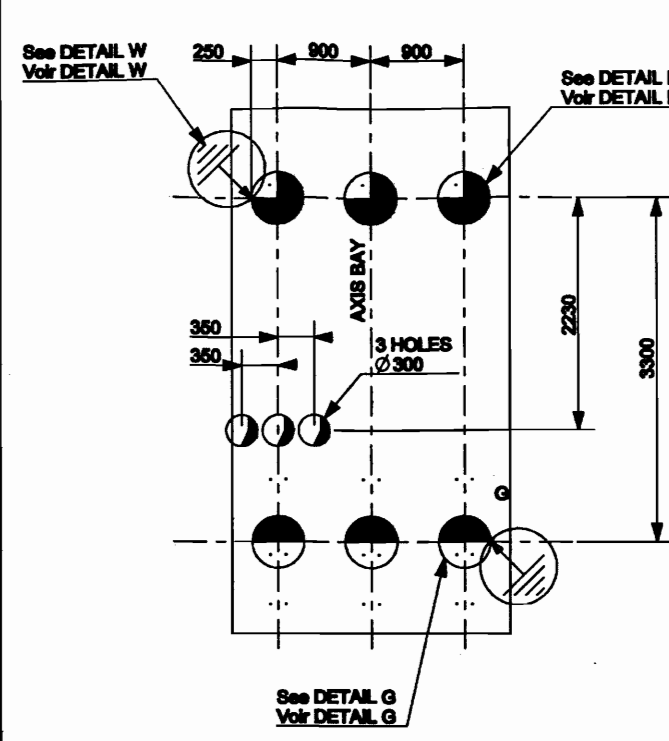
DETAIL GH2

SCALE 1:50
Echelle 1:50



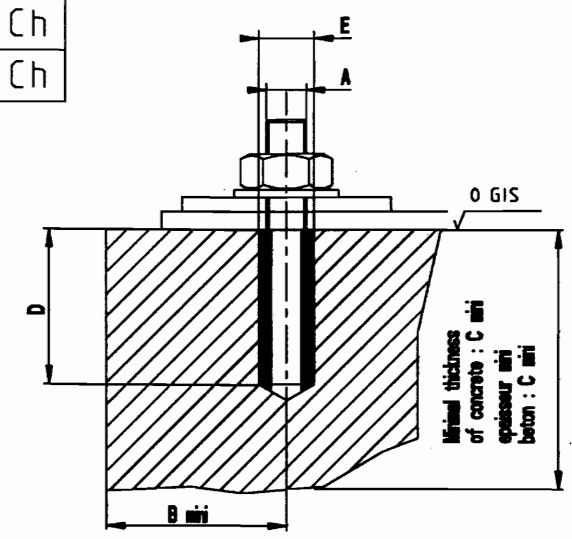
DETAIL GH4

SCALE 1:50
Echelle 1:50



DETAIL Ch

DETAIL Ch



A	B	C	D	E
M 12	110	140	115	Ø14
M 16	140	170	130	Ø18
M 20	180	220	170	Ø24
M 24	210	270	215	Ø28
M 30	270	340	280	Ø35

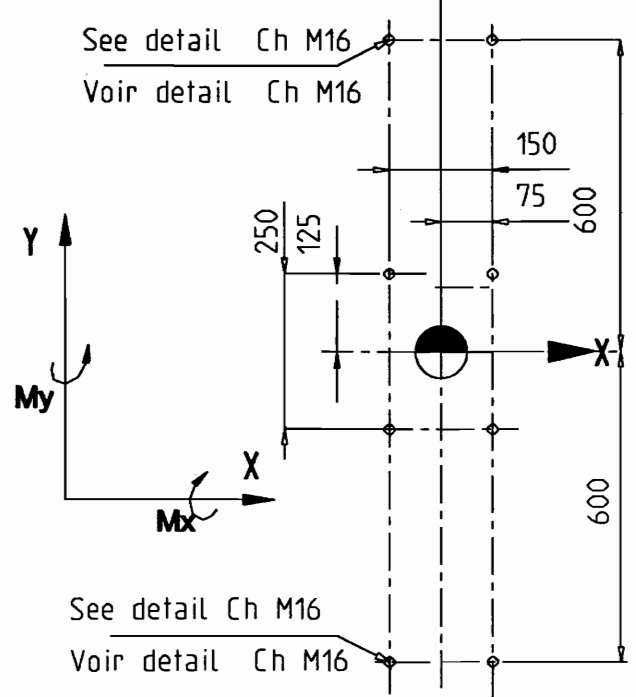
CHEMICAL STUDS
CHEVILLE A MORTIER DE SYNTHESE

detail G-H : Pt de charge "DISJONTEUR"
detail G-H : "CIRCUIT BREAKER" load point

DETAIL V	see folio 16
DETAIL W	see folio 16

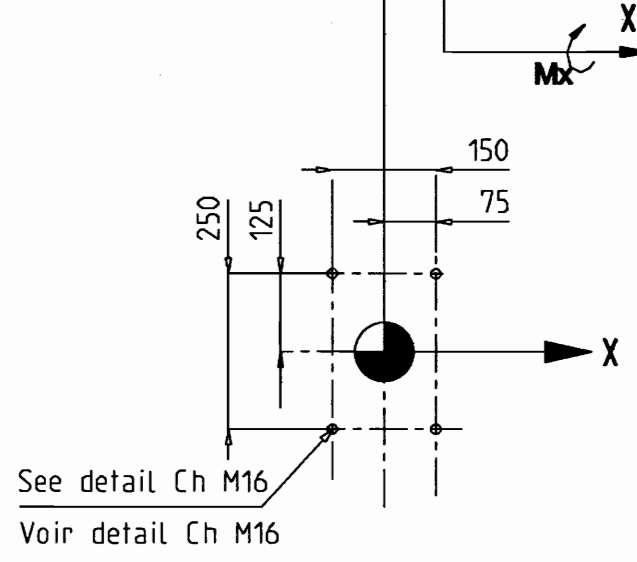
DETAIL G

Scale: 1/10
Echelle: 1/10



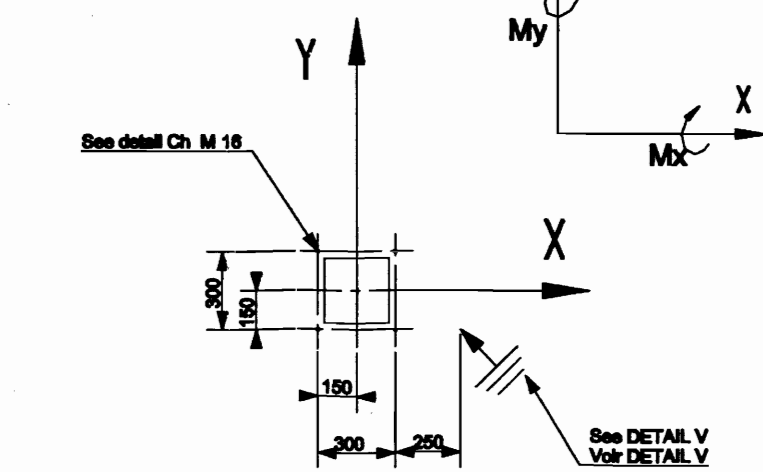
DETAIL H

Scale: 1/10
Echelle: 1/10



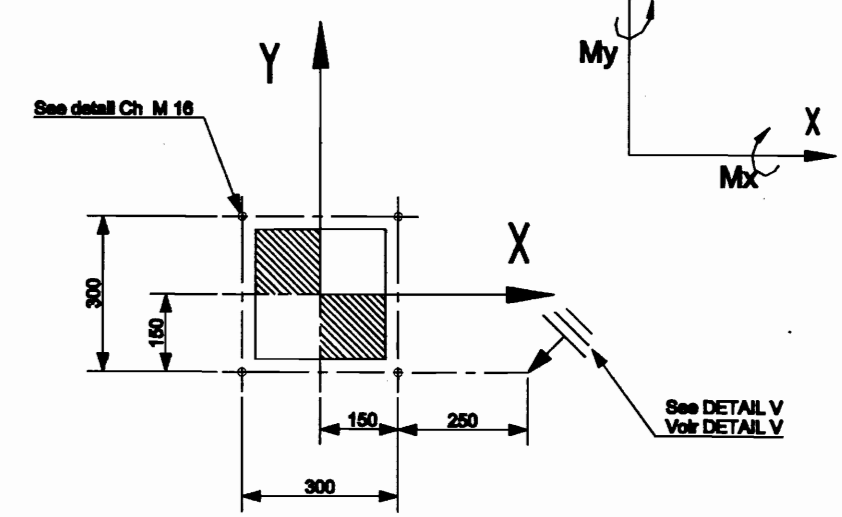
DETAIL B

SCALE 1:20
Echelle 1:20



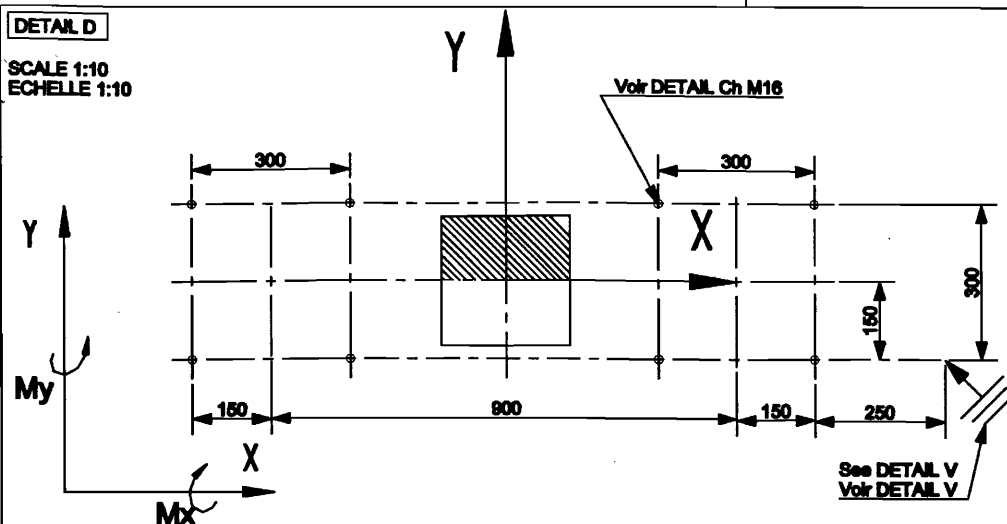
DETAIL C

SCALE 1:10
Echelle 1:10



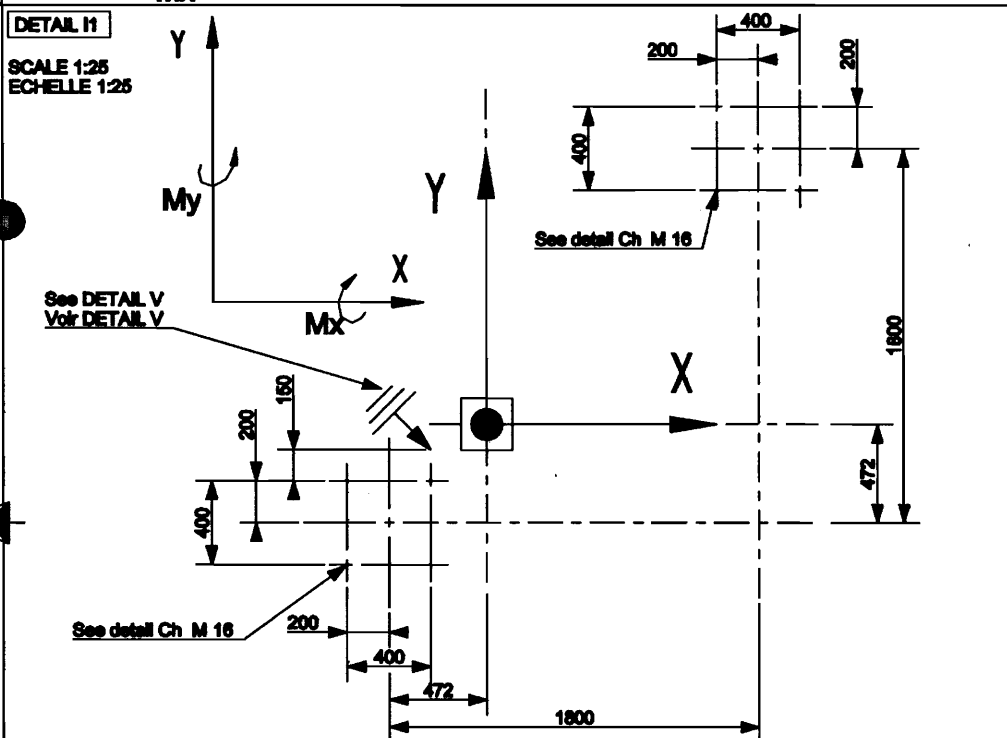
DETAIL D

SCALE 1:10
ECHELLE 1:10



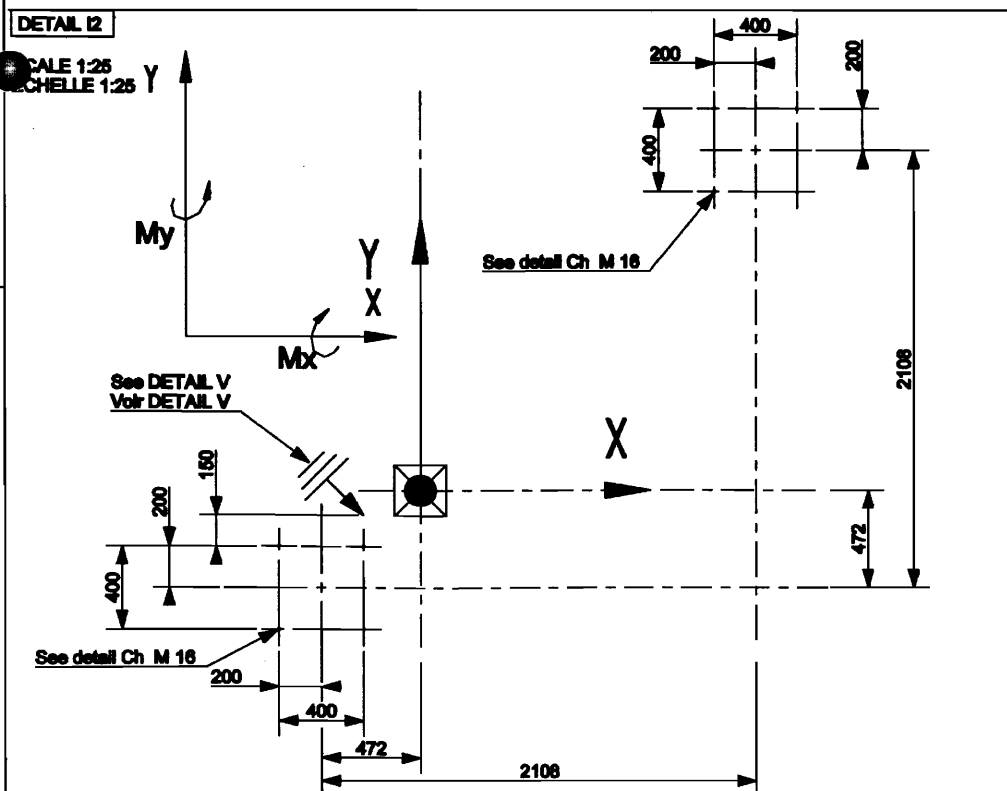
DETAIL H

SCALE 1:25
ECHELLE 1:25



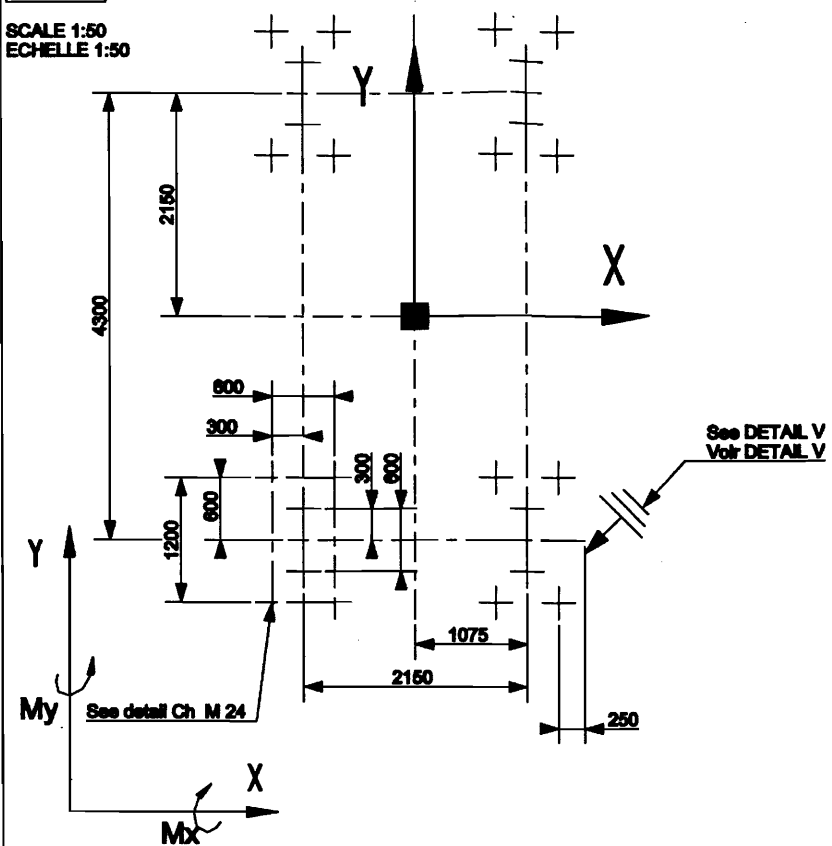
DETAIL I2

SCALE 1:25
ECHELLE 1:25



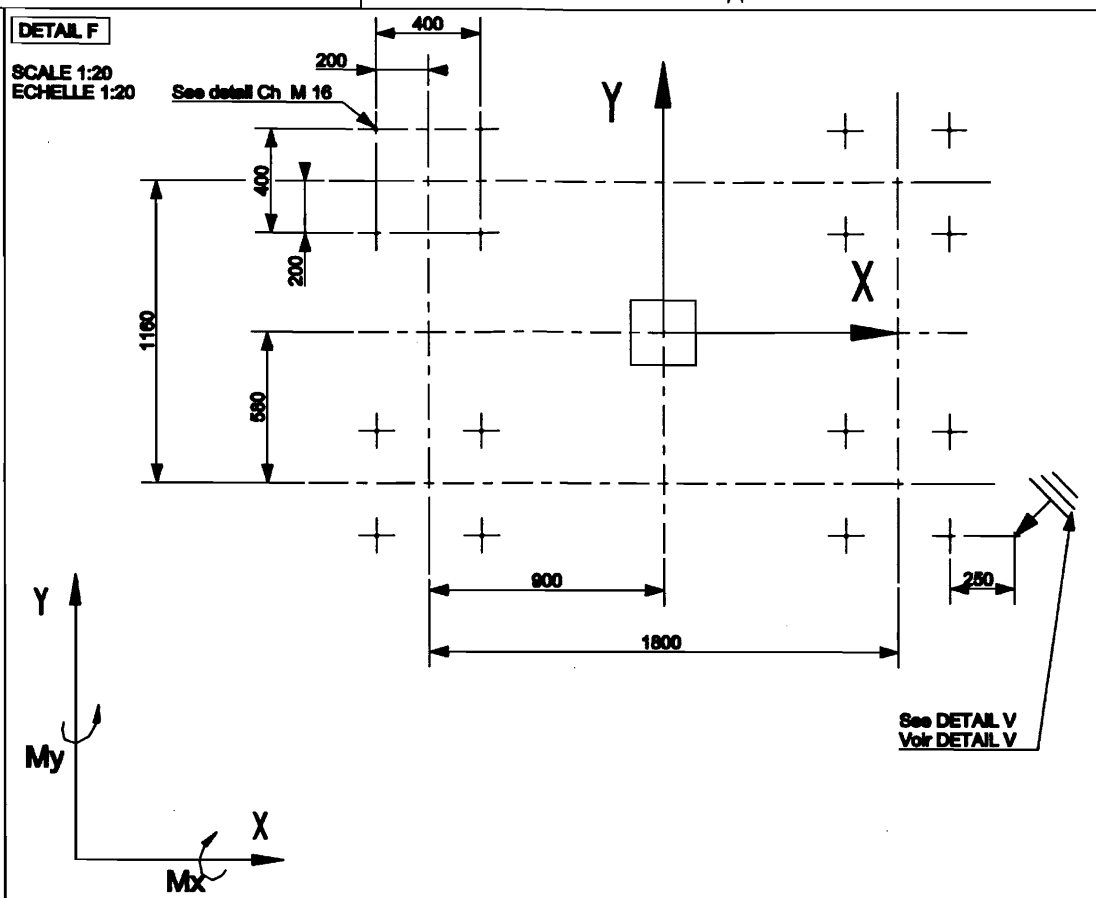
DETAIL E

SCALE 1:50
ECHELLE 1:50



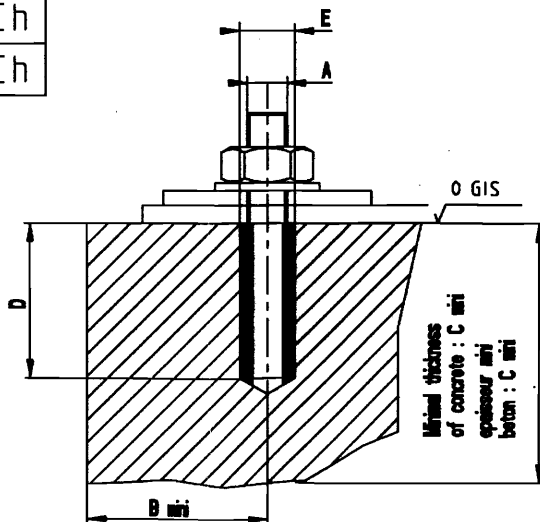
DETAIL F

SCALE 1:20
ECHELLE 1:20



DETAIL V see folio 15

DETAIL Ch
DETAIL Ch

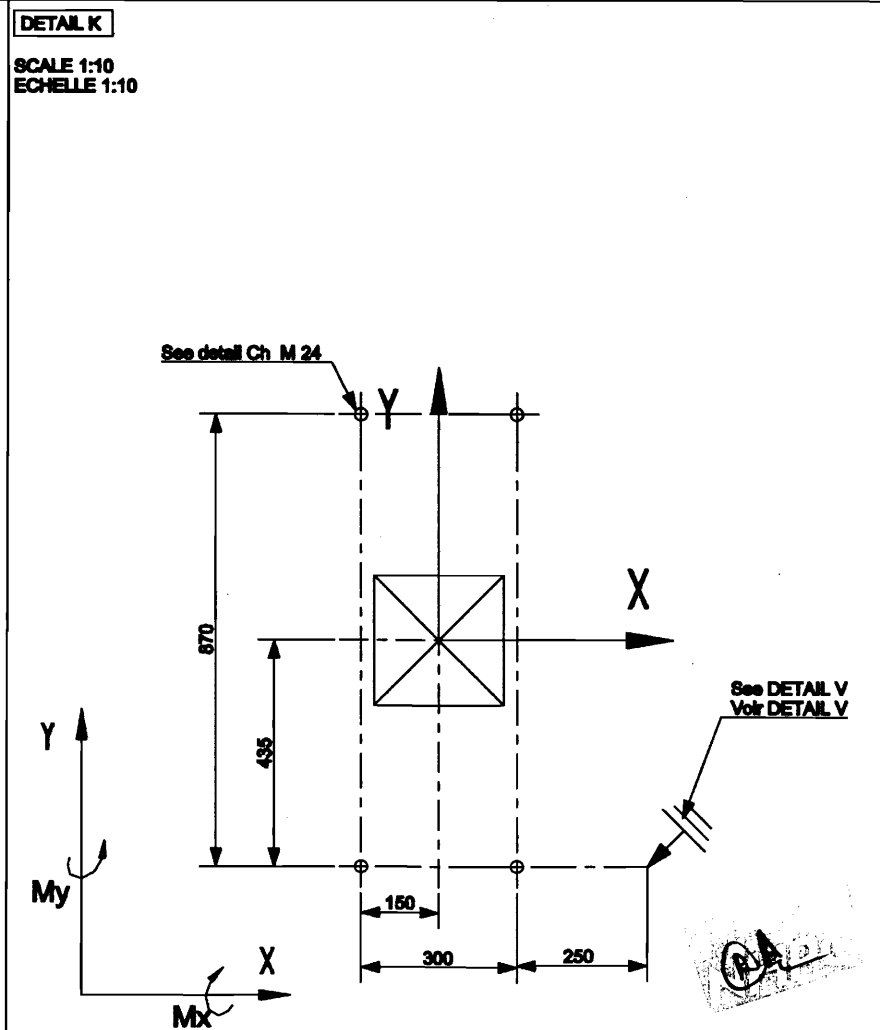


A	B	C	D	E
M 12	110	140	115	Ø14
M 16	140	170	130	Ø18
M 20	180	220	170	Ø24
M 24	210	270	215	Ø28
M 30	270	340	280	Ø35

CHEMICAL STUDS
CHEVILLE A MORTIER DE SYNTHESE

DETAIL K

SCALE 1:10
ECHELLE 1:10



ALSTOM

GRID

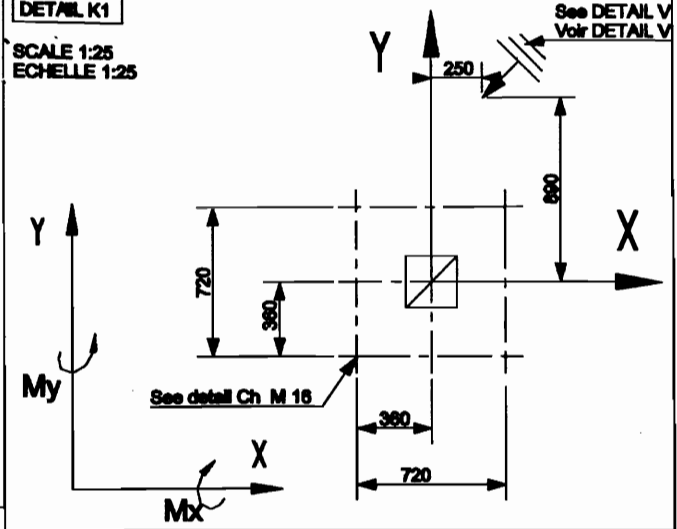
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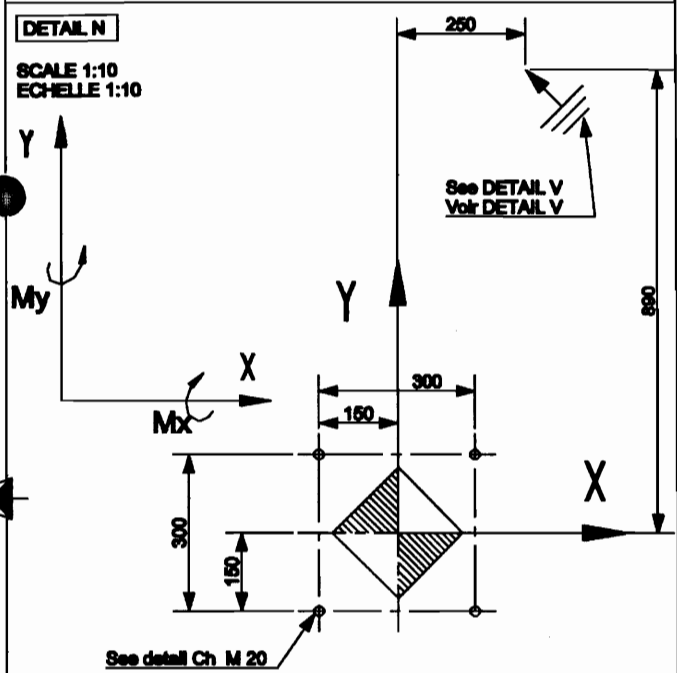
DETAIL K1

SCALE 1:25
ECHELLE 1:25



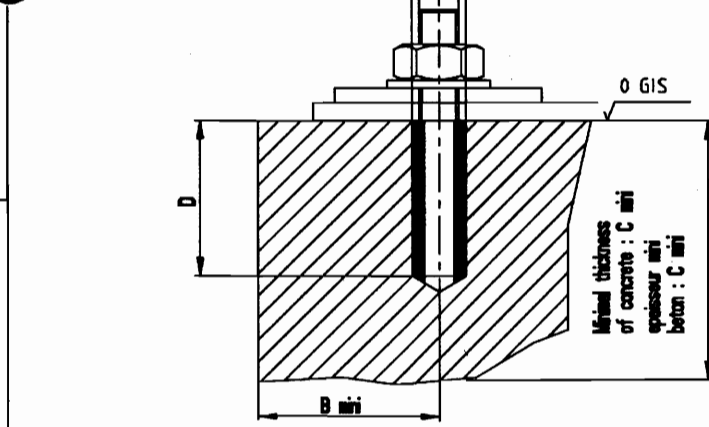
DETAIL N

SCALE 1:10
ECHELLE 1:10



DETAIL Ch

DETAIL Ch

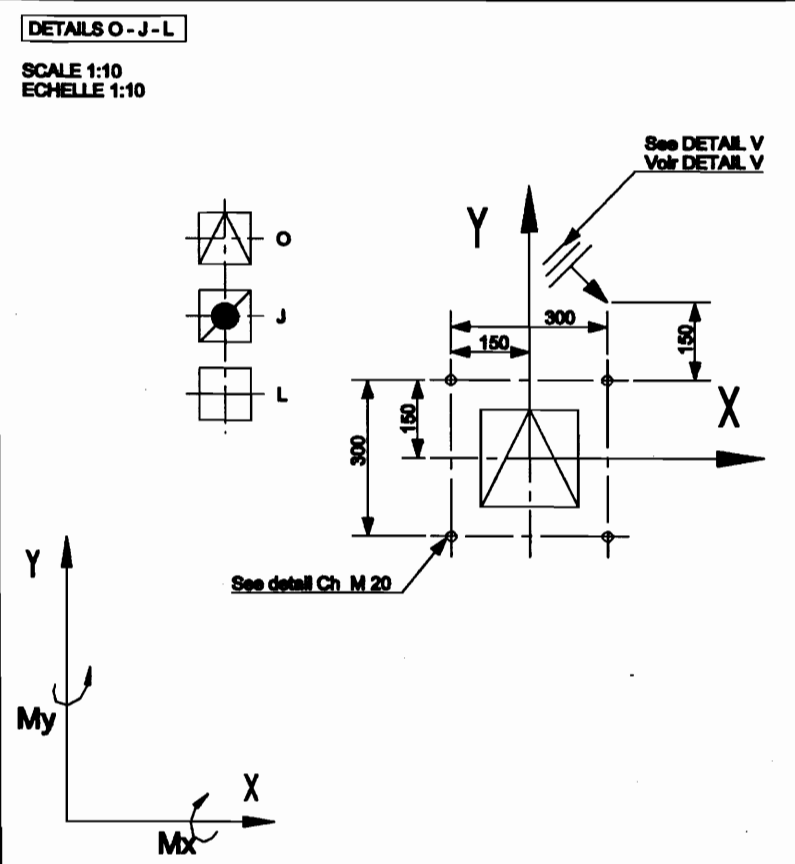


A	B	C	D	E
M 12	110	140	115	Ø14
M 16	140	170	130	Ø18
M 20	180	220	170	Ø24
M 24	210	270	215	Ø28
M 30	270	340	280	Ø35

CHEMICAL STUDS
CHEVILLE A MORTIER DE SYNTHÈSE

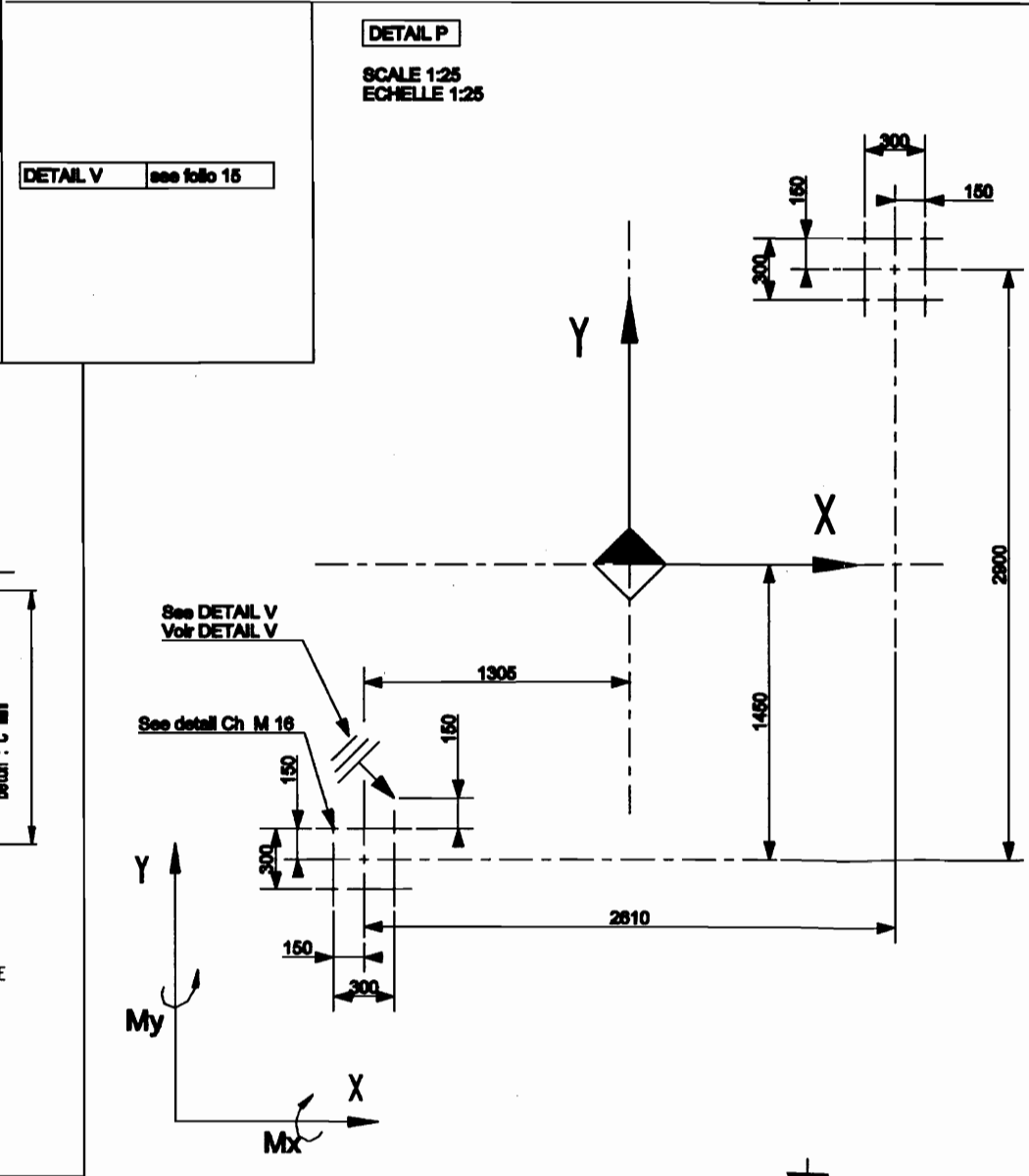
DETAILS O-J-L

SCALE 1:10
ECHELLE 1:10



DETAIL P

SCALE 1:25
ECHELLE 1:25

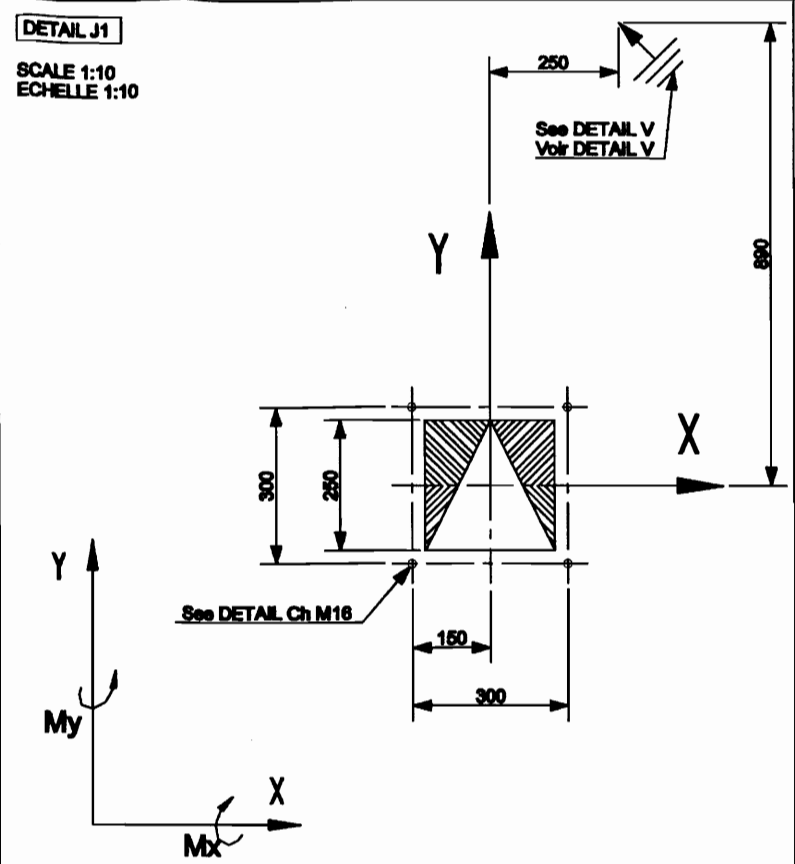


DETAIL V

see folio 15

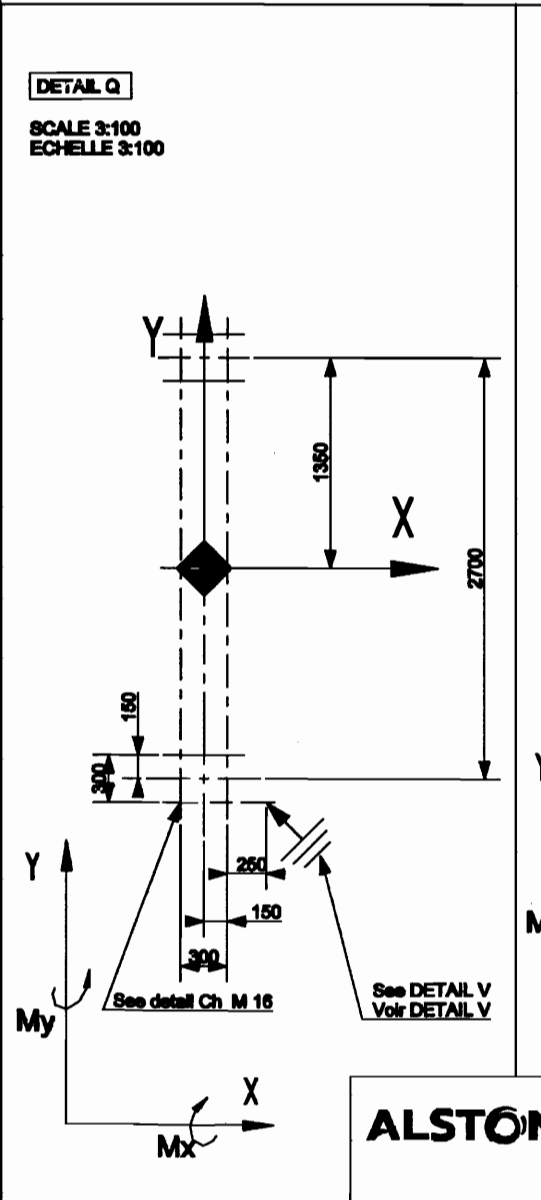
DETAIL J1

SCALE 1:10
ECHELLE 1:10



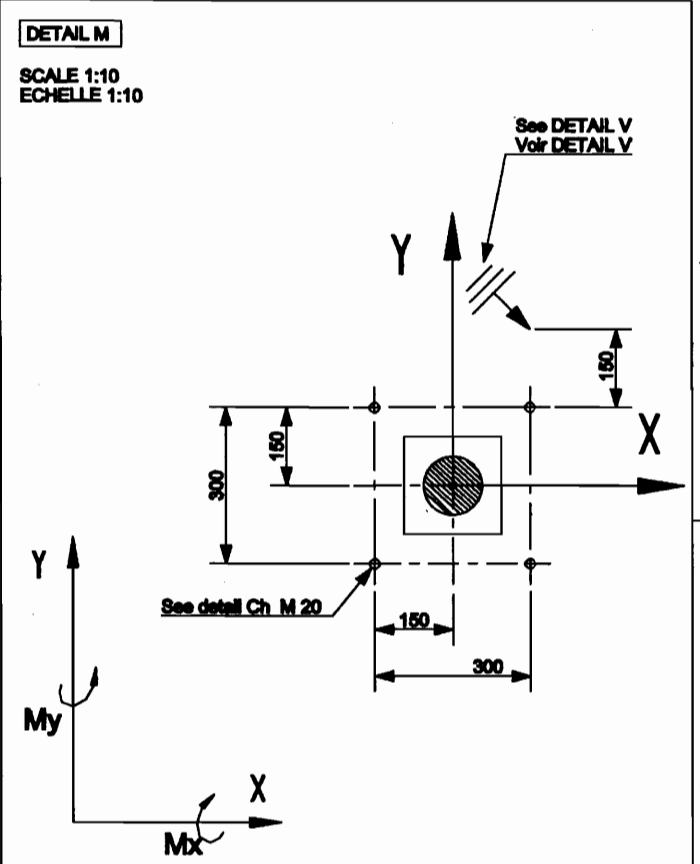
DETAIL Q

SCALE 3:100
ECHELLE 3:100



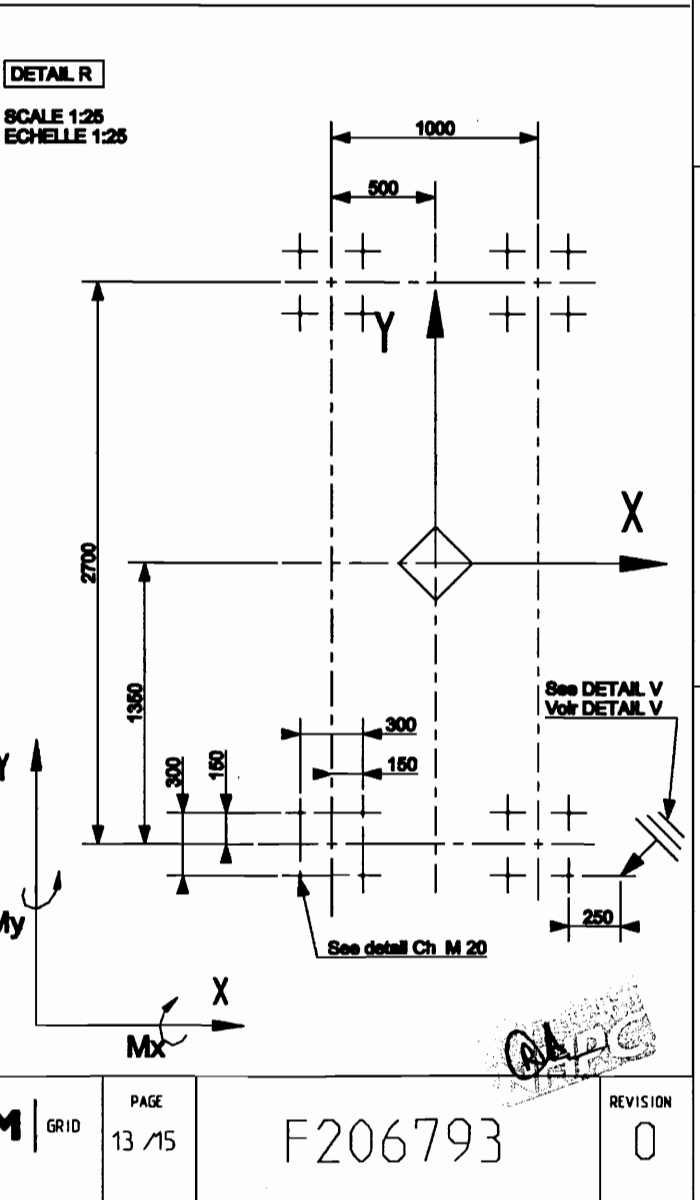
DETAIL M

SCALE 1:10
ECHELLE 1:10



DETAIL R

SCALE 1:25
ECHELLE 1:25



ALSTOM

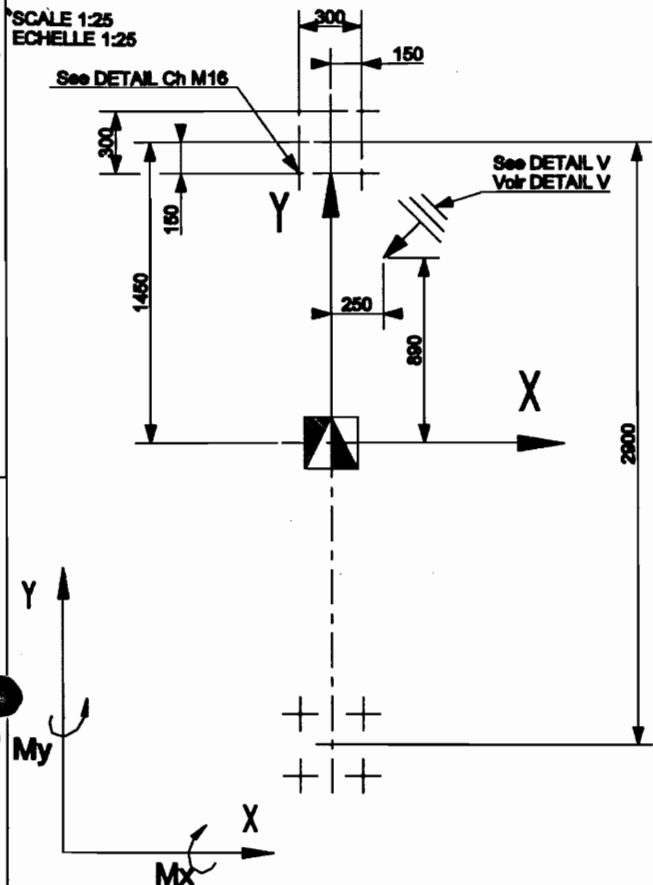
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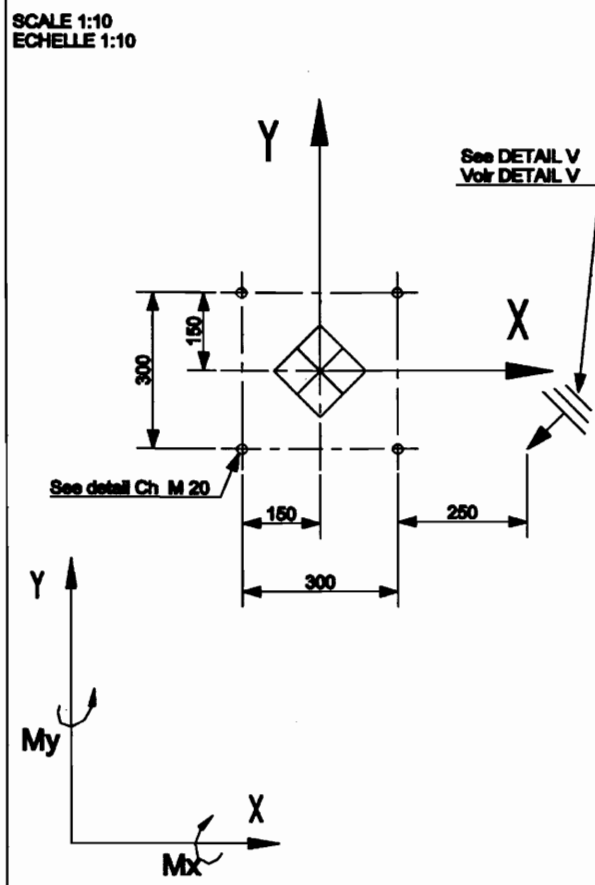
DETAIL S

SCALE 1:25
ECHELLE 1:25



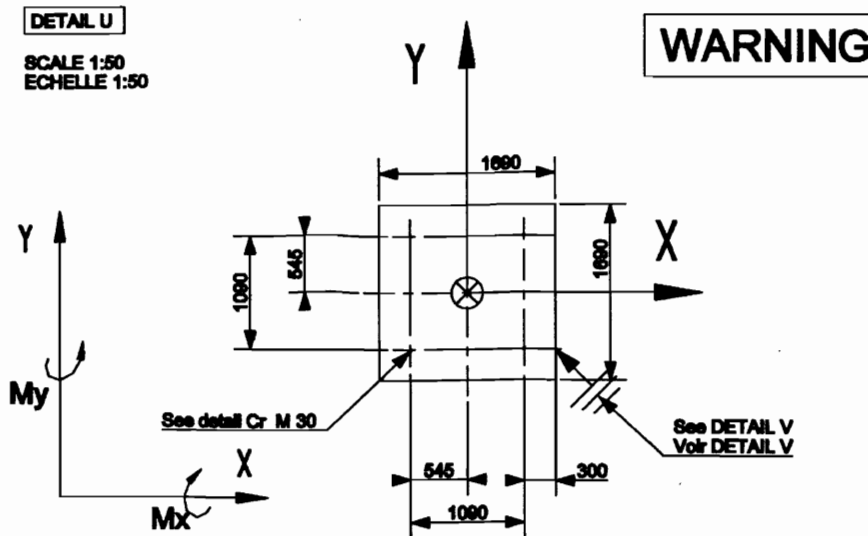
DETAIL T

SCALE 1:10
ECHELLE 1:10



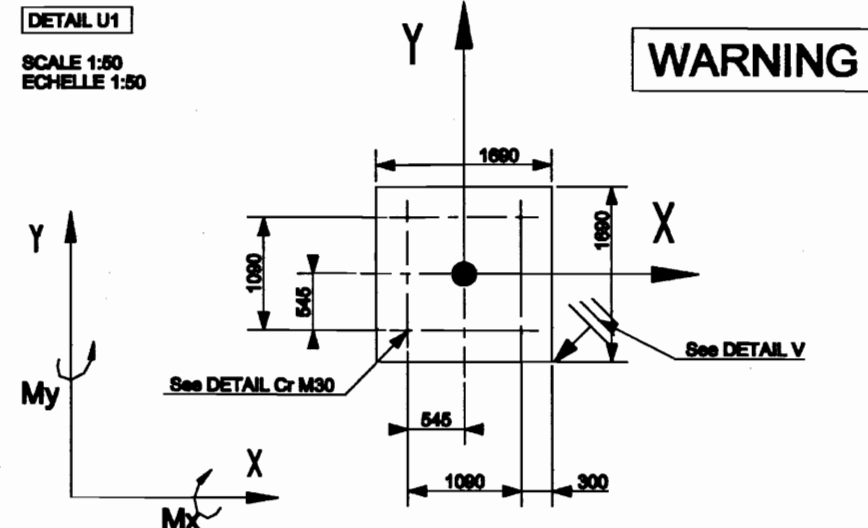
DETAIL U

SCALE 1:50
ECHELLE 1:50



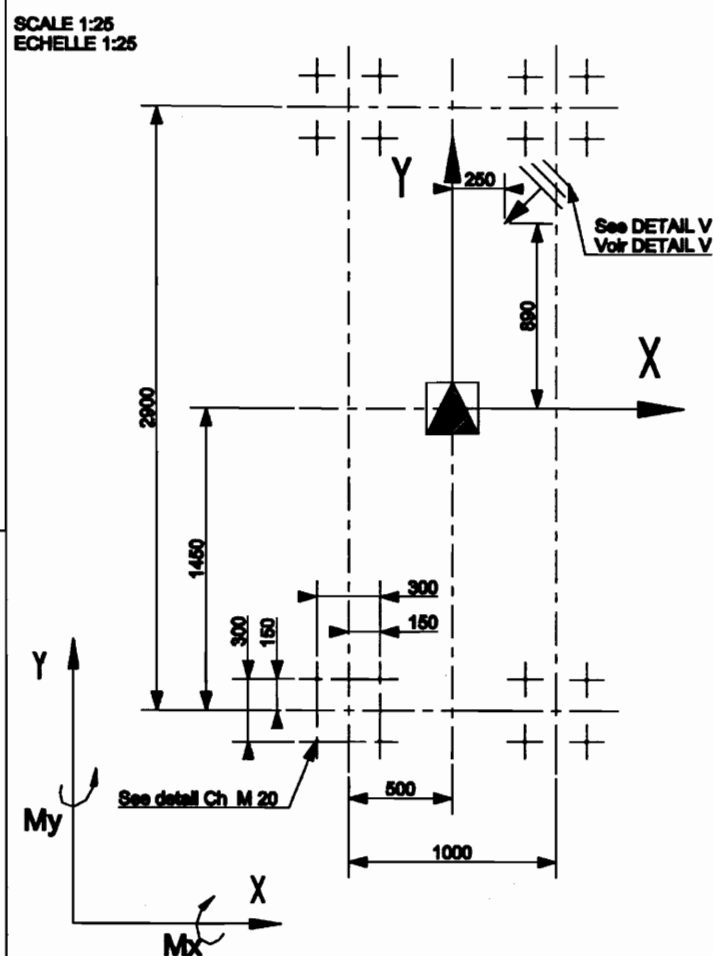
DETAIL U1

SCALE 1:50
ECHELLE 1:50



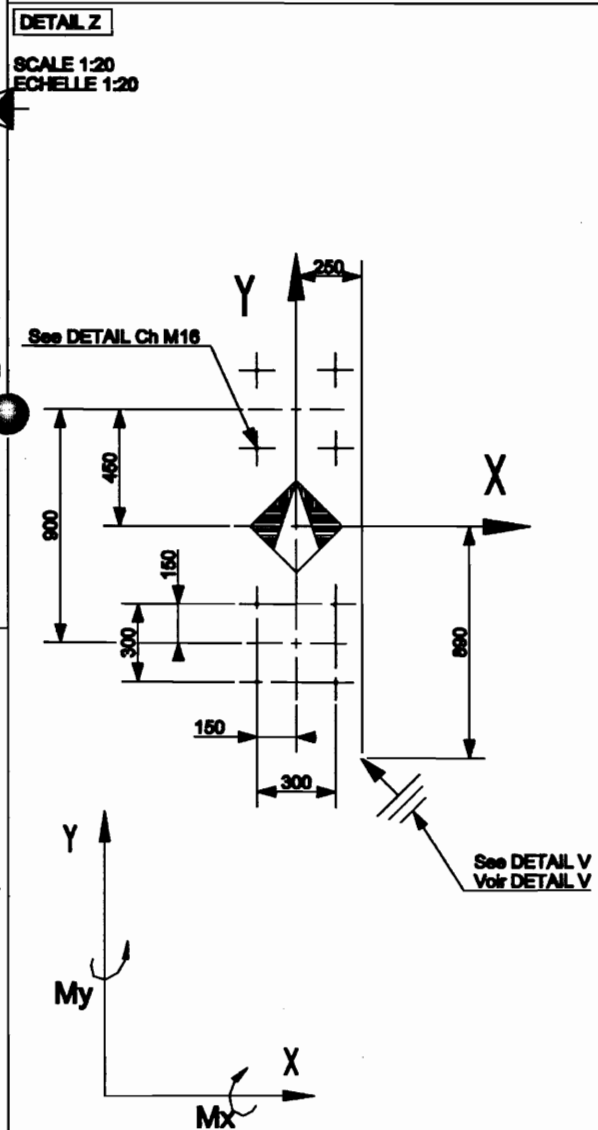
DETAIL Y

SCALE 1:25
ECHELLE 1:25



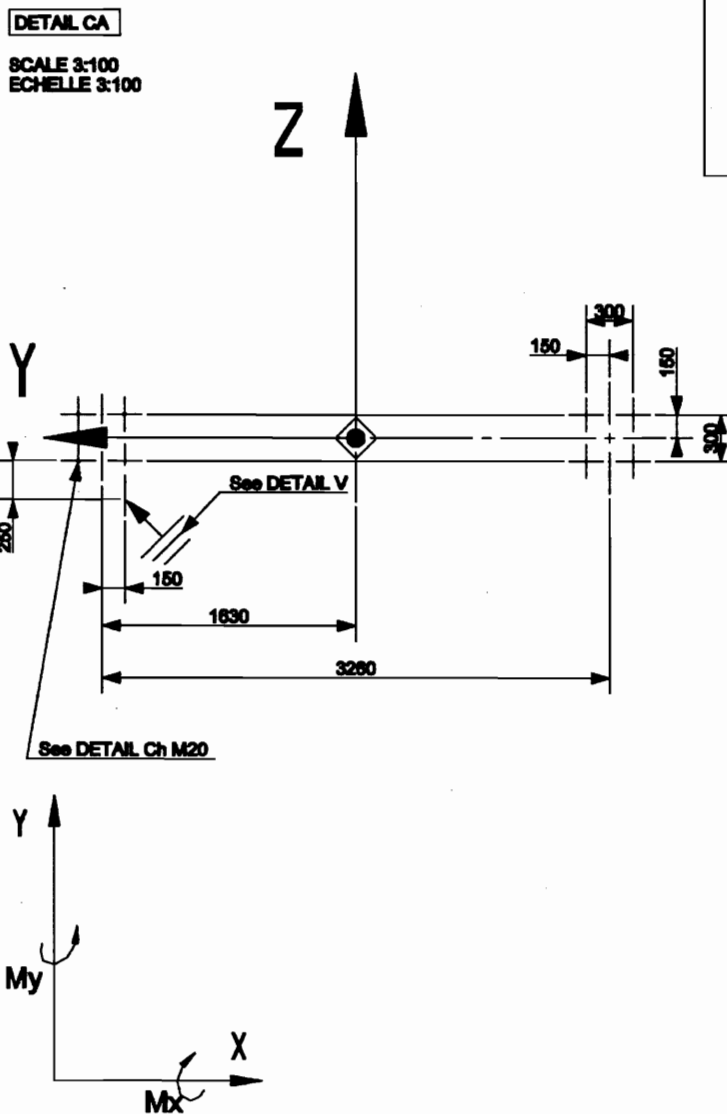
DETAIL Z

SCALE 1:20
ECHELLE 1:20

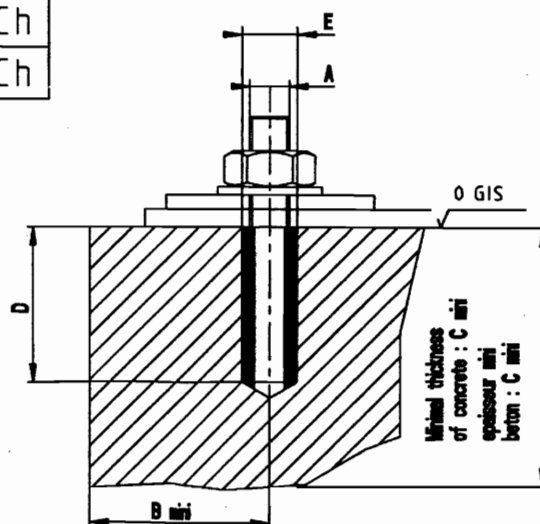


DETAIL CA

SCALE 3:100
ECHELLE 3:100



DETAIL Ch
DETAIL Ch



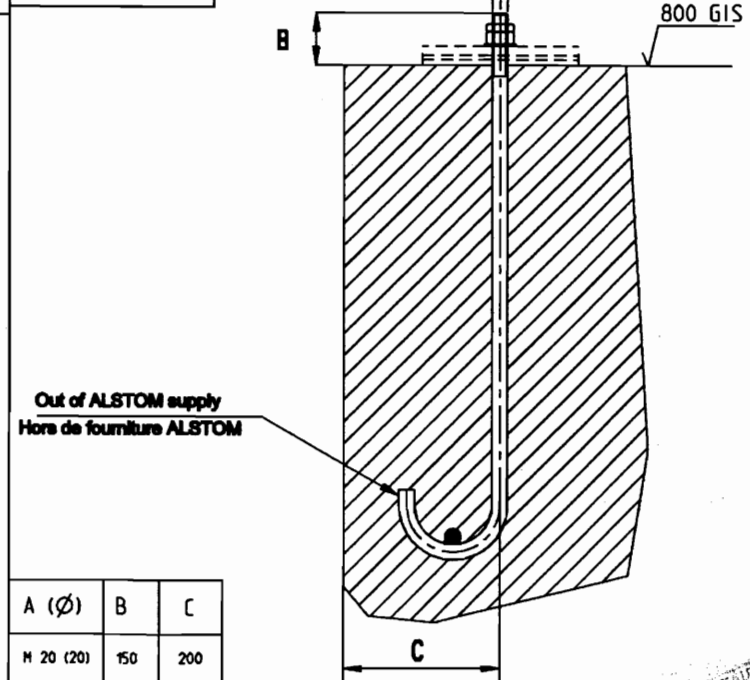
A	B	C	D	E
M 12	110	140	115	Ø14
M 16	140	170	130	Ø18
M 20	180	220	170	Ø24
M 24	210	270	215	Ø28
M 30	270	340	280	Ø35

CHEMICAL STUDS
CHEVILLE A MORTIER DE SYNTHESE

DETAIL V see folio 15

DETAIL Cr
DETAIL Cr

WARNING



A (Ø)	B	C
M 20 (20)	150	200
M 24 (24)	160	240
M 27 (20)	170	270
M 30 (30)	170	300

(*) HORS DE FOURNITURE DU FABRICANT GIS
(*) OUT OF GIS MANUFACTURER SCOPE

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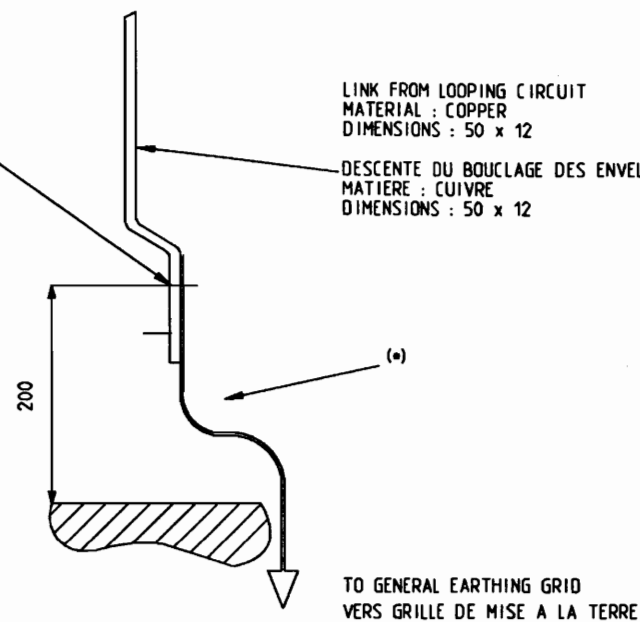
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DETAIL W

EARTHING CONNECTION OF GIS ENCLOSURES
(WITH SHORT-CIRCUIT CURRENT CARRYING CAPABILITY)
CONNEXION DE MISE A LA TERRE DES ENVELOPPES
(AVEC TENUE AU COURANT DE COURT-CIRCUIT)

(*) fastening set
(*) fixation

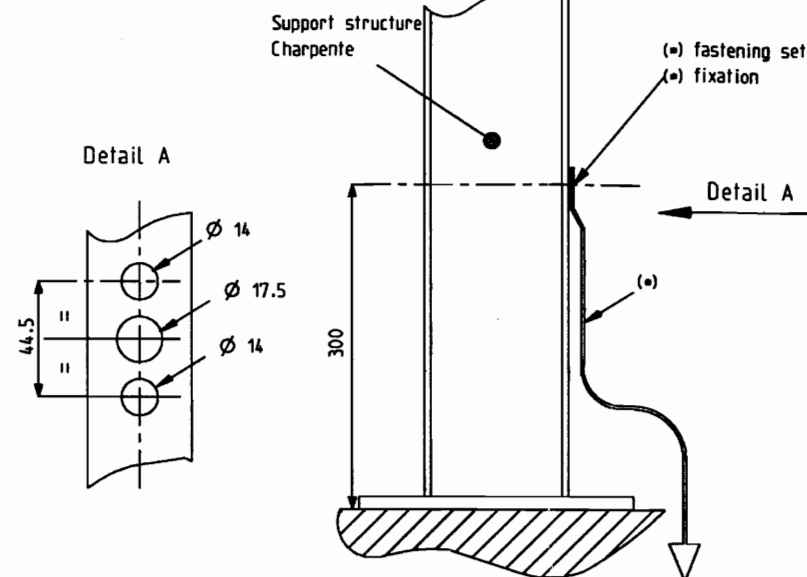
LINK FROM LOOPING CIRCUIT
MATERIAL : COPPER
DIMENSIONS : 50 x 12
DESCENTE DU BOUCLAGE DES ENVELOPPES
MATIERE : CUIVRE
DIMENSIONS : 50 x 12



(*) OUT OF GIS MANUFACTURER SCOPE
(*) HORS DE FOURNITURE DU FABRICANT GIS

DETAIL V

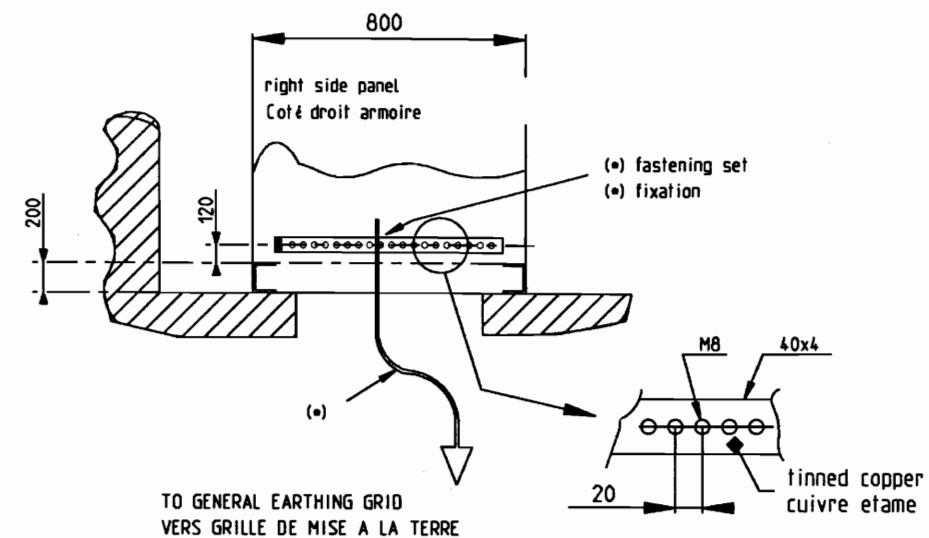
EARTHING CONNECTION OF SUPPORT STRUCTURES
CONNEXION DE MISE A LA TERRE DES CHARPENTES SUPPORTS



(*) OUT OF GIS MANUFACTURER SCOPE
(*) HORS DE FOURNITURE DU FABRICANT GIS

DETAIL X

EARTHING CONNECTION OF LOCAL
CONTROL CUBICLES
CONNEXION DE MISE A LA TERRE
DES ARMOIRES LOCALES



(*) OUT OF GIS MANUFACTURER SCOPE
(*) HORS DE FOURNITURE DU FABRICANT GIS

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