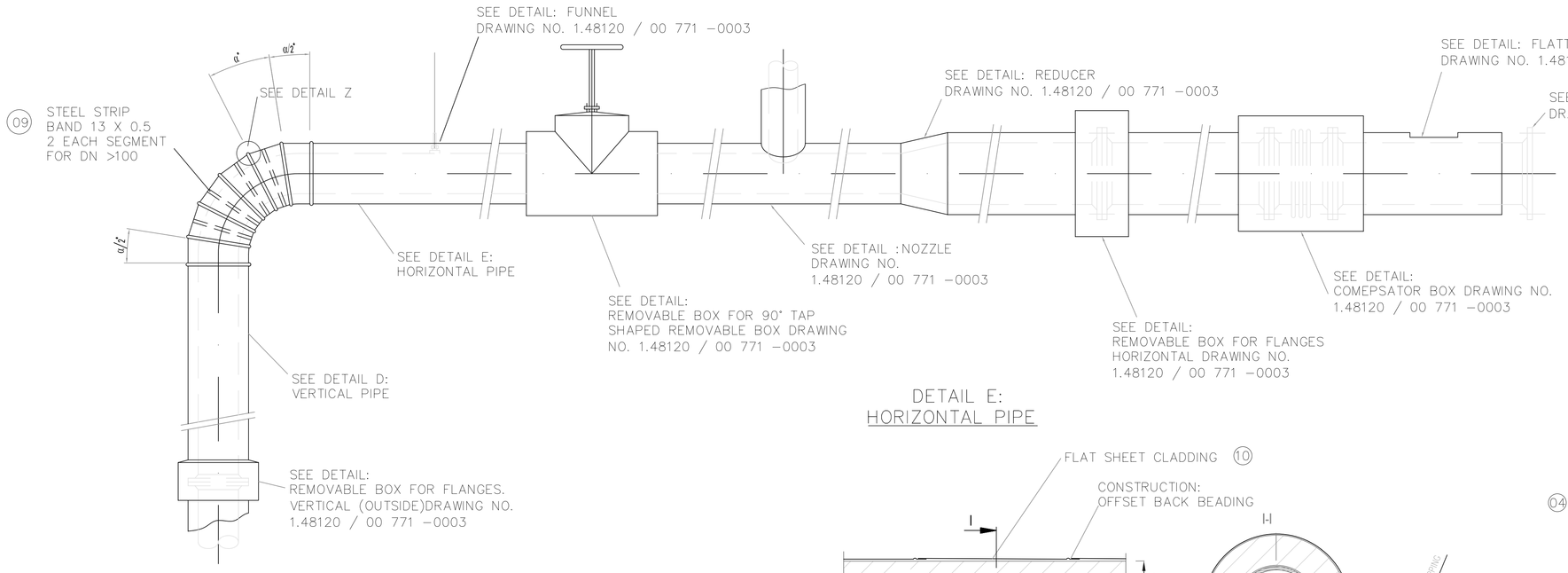
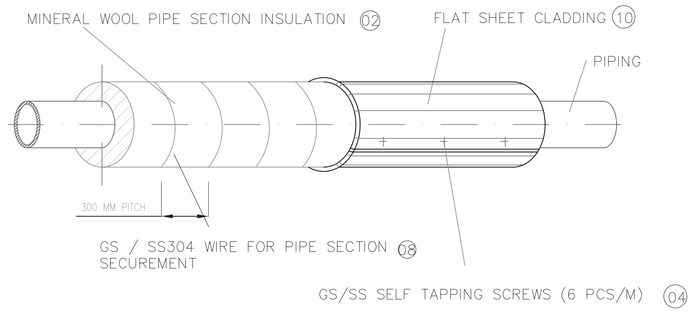


DETAIL H: FIXING OF MINERAL PIPE SECTION



NOTE :

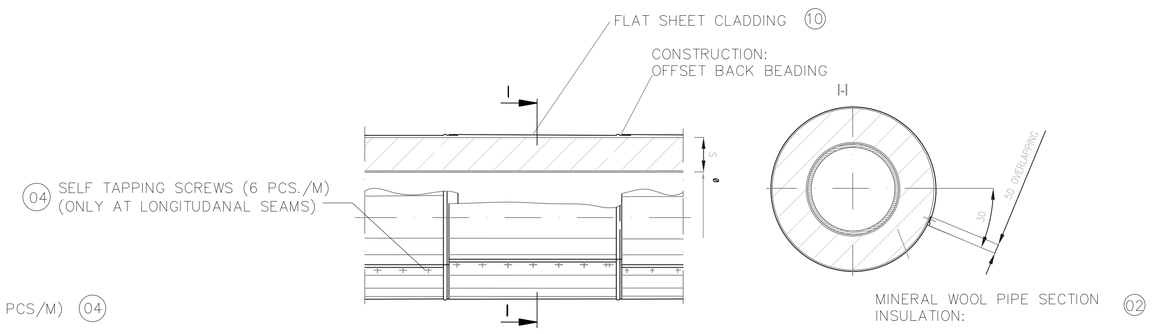
1- WHEN PIPE IS NOT MORE THAN 100MM, MINERAL WOOL PIPE SECTION SHALLBE USED AS INSULATION MATERIALS SECURED WITH SS WIRE. THE USED MATERIAL FOR INSULATION SHALL BE IN ACCORDANCE WITH OPERATION TEMPERATURE.

2- CONNECTION SHEET – SHEET GS/SS SELF TAPPING SCREW, DIA 4.8MM X 12MM

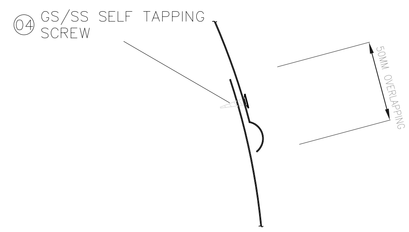
3- THE USED MATERIALS FOR THE SUPPORT CONSTRUCTION MUST BE IN ACCORDANCE WITH THE CORRESPONDING OPERATING TEMPERATURES.

4- TO AVOID ELECTRLYTIC CORROSION BETWEEN THE GALVANIZED FRAME AND THE ALUMINIUM CLADDING, SELF ADHESIVE HEAT BREAK TAPE IS TO BE PLACED ON RING CONSTRUCTION.

DETAIL E: HORIZONTAL PIPE

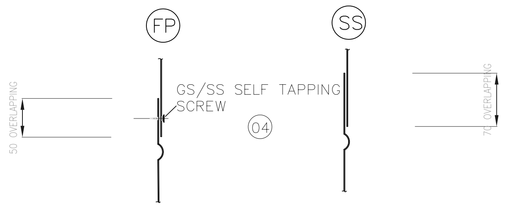


DETAIL B:



DETAIL X: FIXED OVERLAP (EVERY 950MM)

DETAIL Y: SLIDING OVERLAP (MAXIMUM EVERY 3800MM)

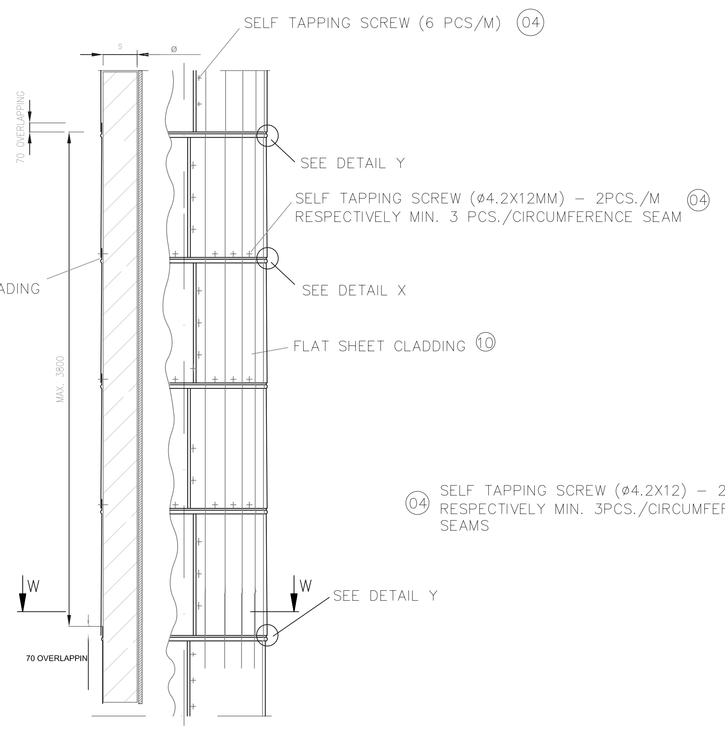


OPENING α OF ELBOW SEGMENT

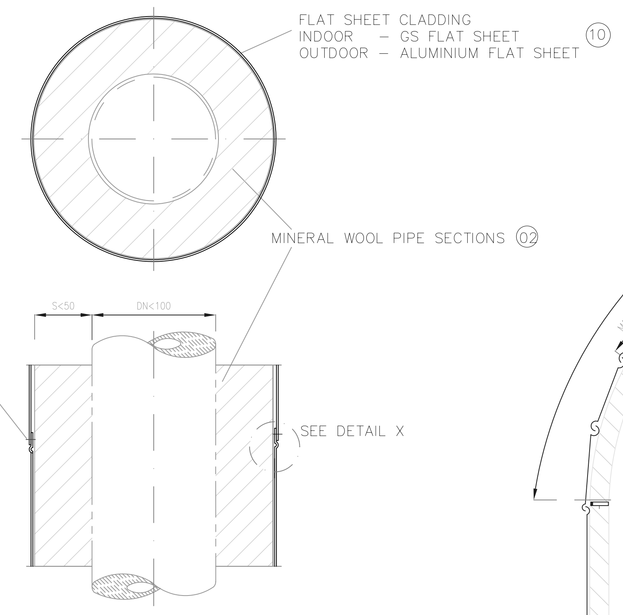
SEGMENTS	1	2	3	4	5	6	7
ANGLE α	45°	30°	22°30'	18°	15°	~13°	11°15'

CIRCUMFERENCE OF CASING	THICKNESS OF COVER		OVERLAP	
MM	AL. STEEL	GS. STEEL	LONGITUDINAL SEAM (MM)	LONGITUDINAL SEAM (MM)
UP TO 400	0,6	0,5	30	50
400 UP TO 800	0,8	0,6	40	50
800 UP TO (2000 AL)/ (1200 GS)	1,0	0,7	50	50
ABOVE (2000 AL) / (1200 GS)	1,2	1,0	50	50

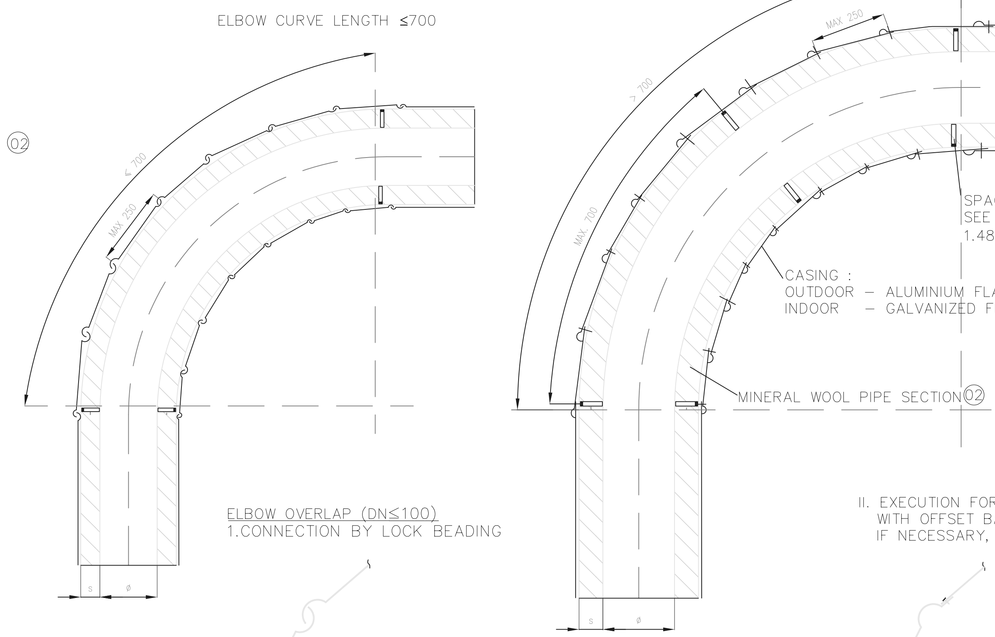
DETAIL D: VERTICAL PIPE DN<100



TUBE INSULATION DN ≤100 AND S <50

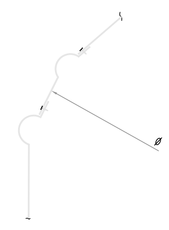


DETAIL Z:



ELBOW OVERLAP (DN≤100)
1.CONNECTION BY LOCK BEADING

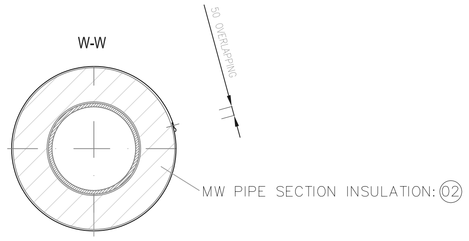
II. EXECUTION FOR HIGHER DIAMETERS
WITH OFFSET BACK BEADING
IF NECESSARY, WITH SLIDING SEAM

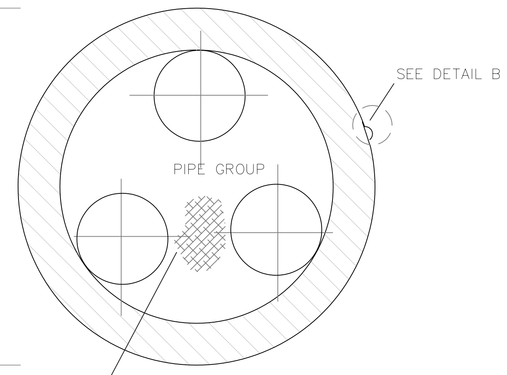


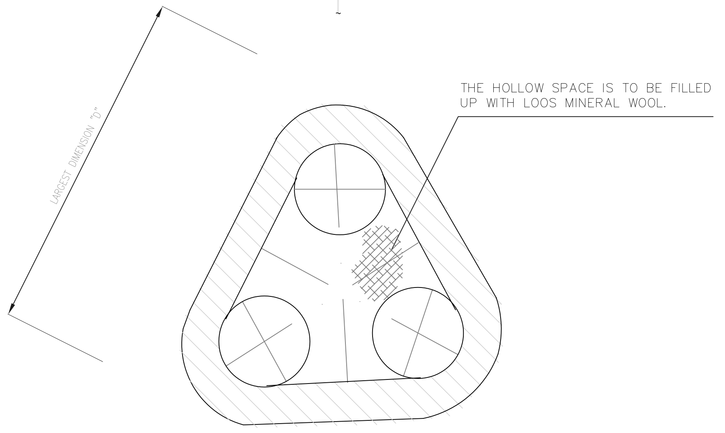
QUANTITY OF DISTANCES PER RIGHT INSULATION THICKNESS															
DN	40	50	60	80	100	120	140	160	180	200	220	240	260	280	300
65	–	–	3	3	3	3	3	4	4	4	5	5	5	5	6
80	–	–	3	3	3	3	3	4	4	4	5	5	5	6	6
100	–	–	3	3	3	3	4	4	4	5	5	5	5	6	6
125	3	3	3	3	3	3	4	4	4	5	5	5	6	6	6
150	3	3	3	3	3	4	4	4	5	5	5	6	6	6	7
200	3	3	3	3	4	4	4	5	5	5	6	6	6	7	7
250	3	3	4	4	4	5	5	5	5	6	6	6	7	7	7
300	4	4	4	4	5	5	5	6	6	6	6	7	7	7	8
350	4	4	4	5	5	5	5	6	6	6	7	7	7	8	8
400	4	4	5	5	5	6	6	6	6	7	7	7	8	8	8
450	5	5	5	5	6	6	6	7	7	7	7	8	8	8	9
500	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9
600	6	6	6	6	7	7	7	8	8	8	9	9	9	10	10
700	7	7	7	7	8	8	8	9	9	9	9	10	10	10	11
>700	DISTANCE MAX. 400MM ON OUTSIDE RING														

DETAIL : PIPE INSULATION OF TUBES GROUPED IN ROWS

VERTICAL INSULATION WITH CONVECTION BARRIER
(ALUMINIUM FOIL) ALL 3.0M, MAX. 5.0M







D≤300 MM, 0.8MM THICK GS SHEET STRAPPED AT 500 MM PITCH
WITH 13MMX0.5MM WIDE SS BANDS D≥500MM, 1 MM THICK
GS SHEET STRAPPED AT 500MM PITCH WITH 19MMX0.5MM SS BANDS

1. MINERAL WOOL BLANKET WITH HEX GS/SS WIRE MESH
2. MINERAL WOOL PIPE SECTIONS
3. GS/SS SELF DRILLING SCREW DIA 4.8MM X 19
4. GS/SS SELF TAPPING SCREW DIA 4.2MM X 12
5. GS/SS RIVET DIA 4.8MM X 12MM
6. GS/CS FLAT BAR 40 X 3MM
7. FLAT BAR 40 X 3MM
   MATERIAL QUALITY:
   <300°C : S235JR
   301-480°C : P235GH
   481-500°C : P295GH OR SS304
   501-530°C : 16Mo3 OR SS304
   531-570°C : 13CrMo4-5 OR SS304
8. GS/SS STICHING WIRE
9. SS STEEL STRIP BAND 13 X 0.5MM
10. FLAT CLADDING
    INDOOR : GS FLAT SHEET
    OUTDOOR : ALUMINIUM FLAT SHEET
    THICKNESS ACCORDING TO THE TABLE
11. HEAT BREAK TAPE 40 X 3MM
12. GLASS CLOTH
13. COVER PLATE
14. CONCRETE DOWEL AND SCREW DIA 4.8MM X 50MM LONG.
15. BOLT M10 X 25
    MATERIAL QUANTITY:
    <300°C : S235JR
    301-480°C : P235GH
    481-500°C : P295GH OR SS304
    501-530°C : 16MO3 OR SS304
    531-570°C : 13CRMO4-5 OR SS304

LEGEND

S = INSULATION THICK
FP= FIX POINT
SP= SLIDING POINT
SS= SLIDING SEAM
Δ = REVISION NUMBER
X = SCREW LENGTH
+20MM

DRAWINGS VALID FOR UNIT –1 AND UNIT–2

Rev.	Revision Date	Created by	Checked by	Approved by	Description	Status
0	01.05.09	RVP	IC	PRS	FIRST ISSUE	

Project (Проект): Maritza East I Power Station
ТЕЦ Марица Изток 1

Company (Възложител) :

Space for stamp of Municipality of Galabovo
Място за печат на Община Гълъбово

Space for further stamps
Място за допълнителни печати

Area for Stamp of EQE Control OOD (ICS)
Място за печат на EQE Control OOD (Незав. надзор)

ASpace for stamp of authorized Bulgarian Designer
Място за печат на лицензиран български проектант

Main Contractor / Главен изпълнител: ALSTOM Power Generation AG / Power Boiler GmbH

Partner of Main Contractor / Партньор на главния изпълнител

Resp. dept, /Отговорен отдел	Created by / Изготвил	Checked by / Проверил	Approved by / Одобрил	Format / Формат
INSULTEC-ENGG	RVP	IC	PRS	A0

Scale / Мащаб		Class, no, (e.g. KKS) / Класифик. №	for Company Review & Approval: / За одобряване от Възложителя:
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INSULTEC	C625-MANUAL – 013	148120/00 771-0002

Title, Subtitle / Заглавие, подзаглавие: GENERAL DETAILS
HEAT INSULATION
SPECIAL PIPE & PIPE<DN 100

Project Doc. Number / № на проектния документ: MTZ/12/B/-----00771/ES/002

Rev. / Рев.	Date / Дата	Lang. / Език	Sheet / Страница
0	01.05.2009	ENG	1 / 1

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