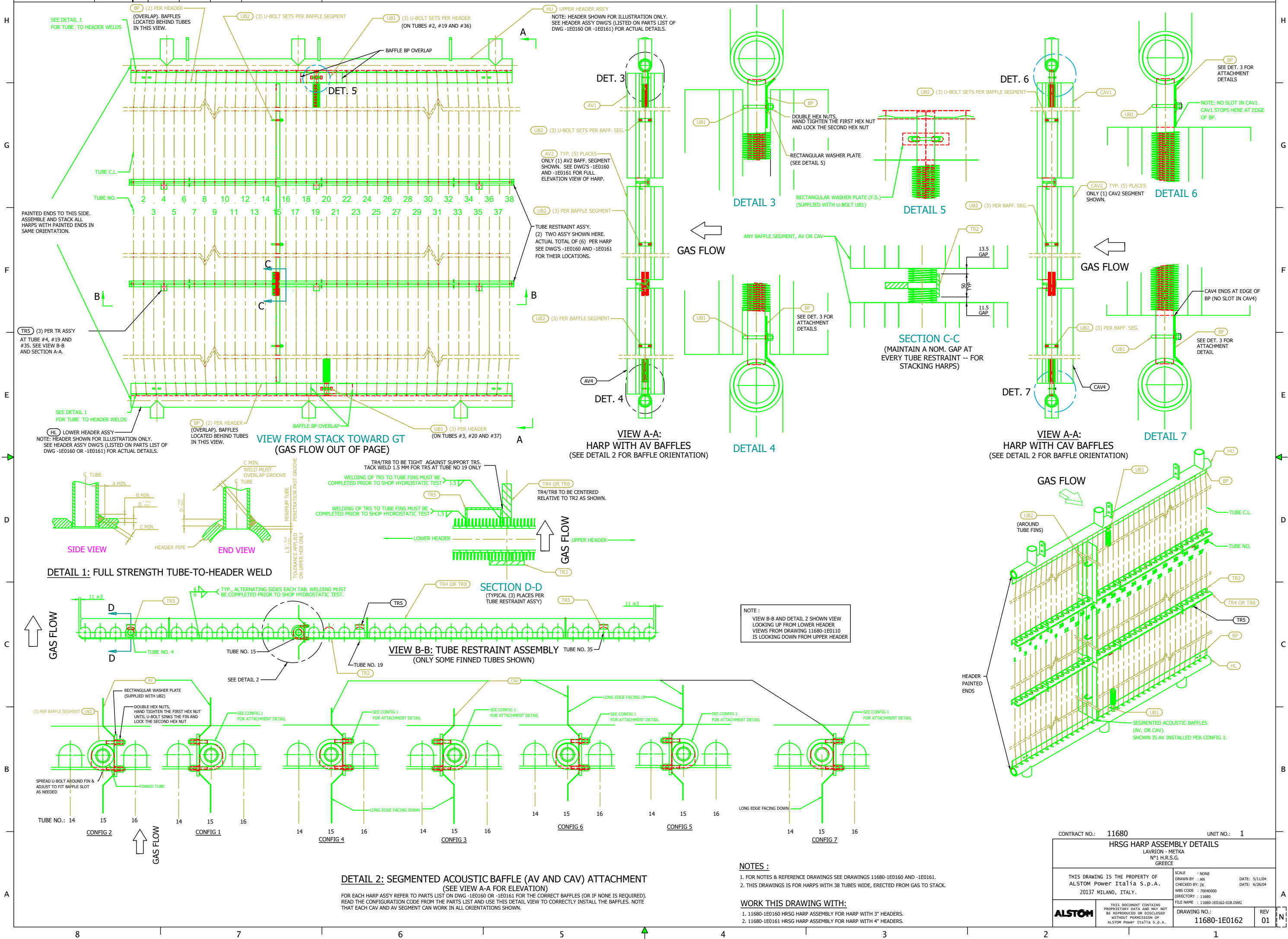
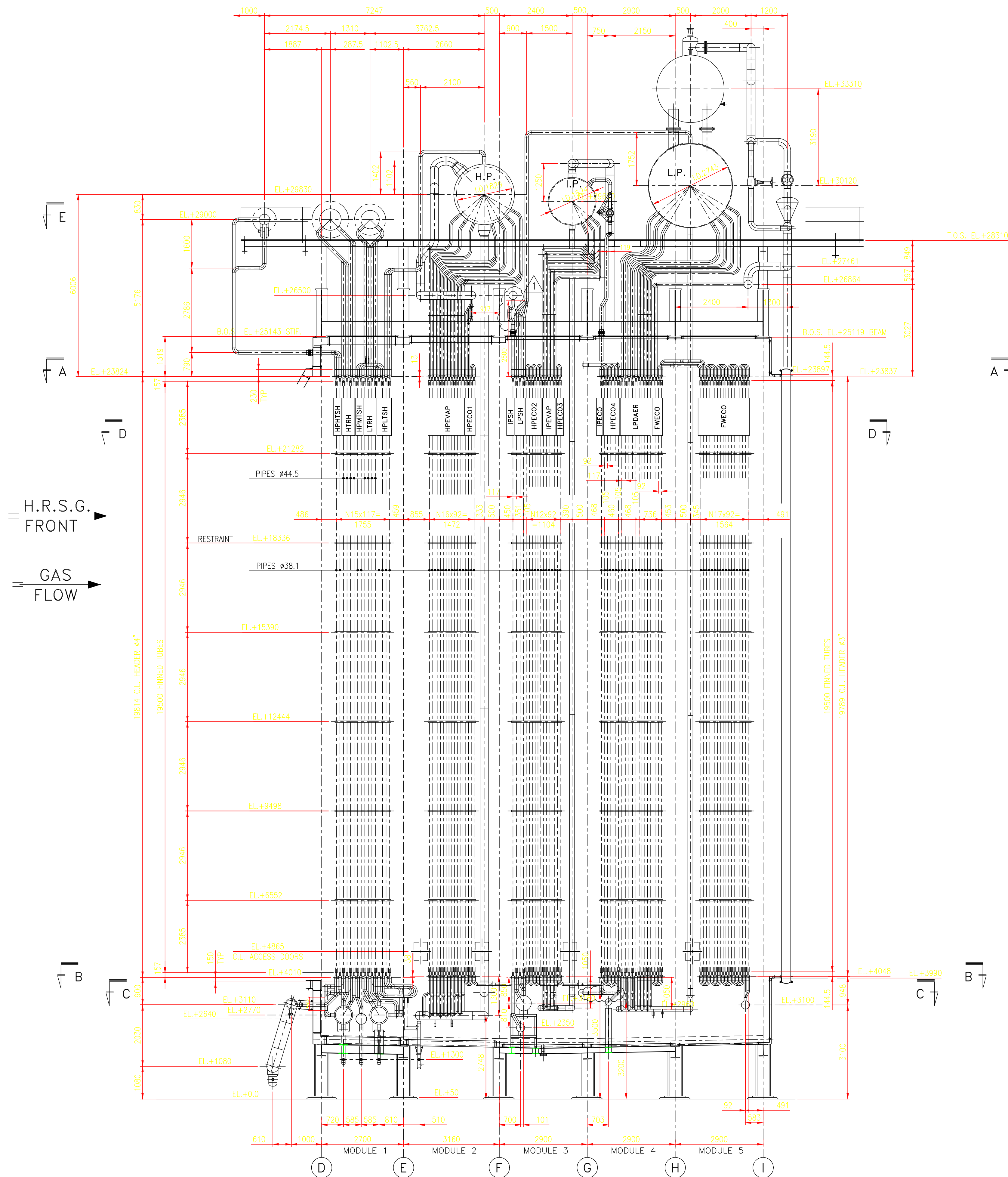






NOTES:

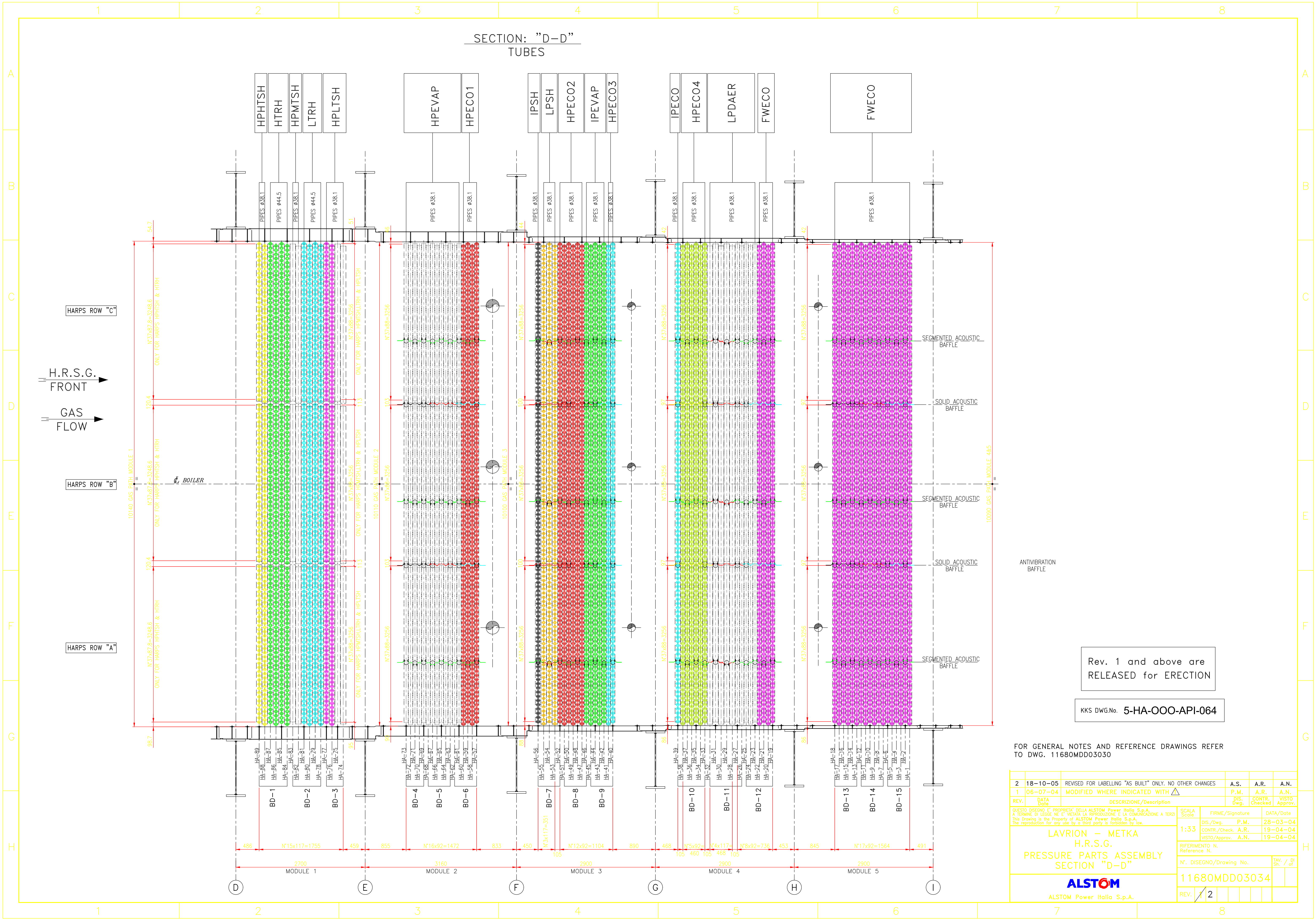
- 1- ARRANGEMENT SHOWN IS FOR (1) ONE UNIT, (1) ONE UNIT ON THIS CONTRACT.
- 2- ALL PIPE FITTINGS ARE LONG RADIUS UNLESS OTHERWISE NOTED.

REFERENCE DRAWINGS:

- 1.- HRSG GENERAL ARRANGEMENT - RIGHT SIDE ELEVATION ----- 11680 MDD03000
- 2.- HRSG PRESSURE PART ARRANGEMENT - SECTION "A-A" ----- 11680 MDD03031
- 3.- HRSG PRESSURE PART ARRANGEMENT - SECTION "B-B" ----- 11680 MDD03032
- 4.- HRSG PRESSURE PART ARRANGEMENT - SECTION "C-C" ----- 11680 MDD03033
- 5.- HRSG PRESSURE PART ARRANGEMENT - SECTION "D-D" ----- 11680 MDD03034
- 6.- HRSG PRESSURE PART ARRANGEMENT - SECTION "E-E" ----- 11680 MDD03035
- 7.- L.P. SECTION TECHNICAL DATA ----- 11680 MDD03040
- 8.- I.P. SECTION TECHNICAL DATA ----- 11680 MDD03041
- 9.- H.P. SECTION TECHNICAL DATA ----- 11680 MDD03042
- 10.- R.H. SECTION TECHNICAL DATA ----- 11680 MDD03043
- 11.- L.P. ECON SECTION TECHNICAL DATA ----- 11680 MDD03044

Rev. 1 and above are
RELEASED for ERECTION

2	18-10-05	REVISED FOR LABELLING "AS BUILT" ONLY. NO OTHER CHANGES	A.S.	A.R.	A.N.
1	26-07-04	MODIFIED WHERE INDICATED WITH	P.M.	A.R.	A.N.
REV.	DATA	DESCRIZIONE/Description	DIS.	CONTR.	VISTO
	Date		Dwg.	Checked	Approv.
QUESTO DISEGNO E' PROPRIETA' DELLA ALSTOM Power Italia S.p.A. A TERMINE DI LEGGE NE E' VIETATA LA RIPRODUZIONE E LA COMUNICAZIONE A TERZI This Drawing is the Property of ALSTOM Power Italia S.p.A. The reproduction for any use by a third party is forbidden by law.			SCALA Scale	FIRME/Signature	DATA/Date
H.R.S.G. PRESSURE PARTS ASSEMBLY LONGITUDINAL SECTION			1:75	DIS./Dwg. P.M.	28-03-04
				CONTR./Check. A.R.	19-04-04
				VISTO/Approv. A.N.	19-04-04
RIFERIMENTO N. Reference N.					
N°. DISEGNO/Drawing No.			TAV. / DI		
11680MDD03030					
REV. / 2					
ALSTOM ALSTOM Power Italia S.p.A.					
PUBLIC POWER CORPORATION			LAVRION V CC PP DMKT 11 21 302		
METKA			METKA DWG.No.		
			KKS DWG.No. 5-HA-MDA-API-030		



Rev. 1 and above are
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KKS DWG.No. 5-HA-000-API-064

FOR GENERAL NOTES AND REFERENCE DRAWINGS REFER
TO DWG. 11680MDD03030

2	18-10-05	REVISED FOR LABELLING "AS BUILT" ONLY. NO OTHER CHANGES	A.S.	A.R.	A.N.
1	06-07-04	MODIFIED WHERE INDICATED WITH	P.M.	A.R.	A.N.
REV.	DATA	DESCRIPTION/Description	DIS.	CONTR.	VISTO
	Date		Dwg.	Checked	Approv.
QUESTO DISEGNO E' PROPRIETA' DELLA ALSTOM Power Italia S.p.A. A TERMINE DI LEGGE NE E' VIETATA LA RIPRODUZIONE E LA COMUNICAZIONE A TERZI This Drawing is the Property of ALSTOM Power Italia S.p.A. The reproduction for any use by a third party is forbidden by law.			SCALA Scale	FIRME/Signature	DATA/Date
LAVRION - METKA H.R.S.G. PRESSURE PARTS ASSEMBLY SECTION "D-D"			1:33	DIS./Dwg.	P.M.
				CONTR./Check.	A.R.
				VISTO/Approv.	A.N.
RIFERIMENTO N. Reference N.			28-03-04		
N°: DISEGNO/Drawing No.			19-04-04		
11680MDD03034			19-04-04		
REV. / 2			TAV. / DI Sh. / of		
ALSTOM ALSTOM Power Italia S.p.A.					

HIGH PRESSURE SECTION (BOILER PIPING) – SERIAL N. 98/HP

MARK	DESCRIPTION	QTY	MATERIAL	PED CATEGORY	SEE NOTE 3	NOMINAL SIZE (O.D./Sch.)	Actual Dimensions @e x Norm. Thk. (mm)	CORROSION ALLOWANCE	DESIGN Temp. °C	DATA Pres. bar/g	N. DRAWINGS 11680-XXXXXX
HW3/5HAC35-BR001	HP Feedwater from check valve to isolation valve	1	SA 106 Gr.B	2	BEP	8"/160	219.1x23.01	1.6	334	175.5	11680MDD05303
HW4/5HAC35-BR003	HP Feedwater from isolation valve to HPECON4 Manifold	1	SA 106 Gr.B	2	BEP	8"/160	219.1x23.01	1.6	334	142	
HW5	HPECON4 Inlet Manifold	1	SA 106 Gr.B	4	BP	8"/140	219.1x20.62	0.0	334	135	11680MDD02442
HW6	Links to HPECON4	9	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	135	
HW7	HPECON4 Internal Links	45	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	135	11680MDD02436/2442
HW8	Links to HPECON3	9	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	135	
HW9	HPECON3 Internal Links	9	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	133	11680MDD02436/2442
HW10	Links to HPECON2	9	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	135	
HW11	HPECON2 Internal Links	27	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	135	11680MDD05305
HW12	Links to HPECON1	9	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	135	
HW13	HPECON1 Internal Links	21	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	133	11680MDD05305
HW14	Links to HPECON1 Outlet Manifold	12	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	334	133	
HW15	HPECON1 Outlet Manifold	1	SA 106 Gr.B	4	BP	10"/160	273x28.58	0.0	334	133	11680MDD05315
HW16/5HAC37-BR001	Line to HP DRUM	1	SA 106 Gr.B	2	BP	10"/120	273x21.44	0.0	334	133	
HW18/5HAG11-BR001	Spray Line HP DSH Downstream Stop Valve	1	SA 335 P91	1	BEP	2 3/4"/160	73x9.52	1.6	548	124	11680MDD04361
HE1/5HAD31-BR001	HP Downcomers	3	SA 106 Gr.B	2	BP	10"/100	273x18.26	0.0	341	126	11680MDD02422
5HAD31-BR002											
5HAD31-BR003											
HE2											
HE3+HE6	HP Manifolds	3	SA 106 Gr.B	4	BP	10"/160	273x28.58	0.0	341	126	11680MDD02610
HE7;HE10/5HAD32BR001+069	HP Circulators	81	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	341	126	
5HAC37-BR001	HP Risers	69	SA 106 Gr.B	1	BP	3"/80	88.9x7.62	0.0	341	124	11680MDD02610
HC	Pegging Steam from HP DRUM to IP DRUM	1	SA 106 Gr.B	2	BEP	6"/120	168.3x14.27	1.6	346	124	11680MDD005304
HS1/5HAE34-BR001+018	Hydraulic Column	1	SA 106 Gr.B	2	BEP	6"/120	168.3x14.27	1.6	328	124	11680MDD02663
HS3	Sat steam links to HPLTSH	18	SA 106 Gr.B	1	BP	4"/80	114.3x8.56	0.0	346	124	11680MDD02635
HS4	HPLTSH internal links	18	SA 335 P22	1	BP	4"/80	114.3x8.56	0.0	435	124	11680MDD02436/2446
HS5	Links to HPMTSH	18	SA 335 P22	1	BP	4"/80	114.3x13.49	0.0	500	124	
HS6	Links to HPMTSH outlet manifold	24	SA 335 P91	1	BP	4"/160	114.3x8.56	0.0	565	124	11680MDD04302
HS7	HPMTSH outlet manifold	1	SA 335 P91	4	BP	14"/160	355.6x35.71	0.0	565	124	
HS8/5HAH34-BR001	Desuperheater line	1	SA 335 P91	3	BP	16"/100	406.4x26.19	0.0	548	124	11680MDD04500
HS9/5HAH34-BR002	HPSH Desuperheater	1	SA 335 P91	3	BP	16"/100	406.4x26.19	0.0	548	124	
HS10	HPHTSH inlet manifold (ext)	1	SA 335 P91	4	BP	14"/140	355.6x31.75	0.0	542	124	11680MDD04304
HS11	Links to HPHTSH	24	SA 335 P91	1	BP	4"/80	114.3x8.56	0.0	565	124	
HS12	Links to HPHTSH outlet manifold	24	SA 335 P91	1	BP	4"/160	114.3x13.49	0.0	602	124	11680MDD04301
HS13/SLBA30-BR001	HPHTSH outlet manifold (ext)	1	SA 335 P91	4	BP	14"/160	355.6x35.71	0.0	571	124	
HS14/SLBA31-BR001	Main Steam from valve to B.L.	1	SA 335 P91	3	NBEP	14"/140	355.6x31.75	1.6	571	124	11680MDD04320



Rev. 1 and above are
RELEASED for ERECTION

NOTES:

- Boiler Non boiler

REHEATER SECTION (BOILER PROPER) – SERIAL N. 98/RH

MARK	DESCRIPTION	QTY	MATERIAL	PED CATEGORY	NOMINAL SIZE (o.d./Sch.)	Actual Dimensions Øe x Nom. Thk. (mm)	CORROSION ALLOWANCE	DESIGN DATA Temp. °C Pres. bar g	N. DRAWINGS 11680-XXXXXX
RS18 (HU78–HU81)	TOP HEADER	12	SA 335 P91	4	4”/80	114.3x8.56	0.0	550 31	11680–1AU007/8
RS19 (HL78–HL81)	BOTTOM HEADER	12	SA 335 P22	4	4”/160	114.3x13.49	0.0	550 31	11680–1AL007/8
R1	HARPS TUBES	456	SA 213 T22	4	–/–	44.5x2.4	0.0	550 31	11680–1E0161
RS16 (HU84–HU87)	TOP HEADER	12	SA 335 P91	4	4”/160	114.3x13.49	0.0	601 31	11680–1AU003/4
RS17 (HL84–HL87)	BOTTOM HEADER	12	SA 335 P91	4	4”/80	114.3x8.56	0.0	550 31	11680–1AL003/4
R2	HARPS TUBES	456	SA 213 T91	4	–/–	44.5x2.4	0.0	601 31	11680–1E0161

REHEATER SECTION (BOILER PIPING) – SERIAL N. 98/RH

MARK	DESCRIPTION	QTY	MATERIAL	PED CATEGORY	SEE NOTE 3	NOMINAL SIZE (o.d./Sch.)	Actual Dimensions Øe x Nom. Thk. (mm)	CORROSION ALLOWANCE	DESIGN DATA Temp. °C Pres. bar g	N. DRAWINGS 11680-XXXXXX
IS8/5HAH21–BR003	Ipsh steam line downstream valve	1	SA 106 Gr.B	3	NBEP	10”/STD	273x9.27	1.6	375 31	11680MDD04352
RS1/5HAH25–BR001	RH Cold Line	1	SA 106 Gr.B	3	NBEP	24”/30	609.6x14.27	1.6	375 31	11680MDD04352
RS3	RH Inlet External Manifold	1	SA 106 Gr.B	4	BP	24”/40	609.6x17.48	0.0	375 31	11680MDD04357
RS4	Connection Links to LTRH Tubes	48	SA 335 P22	1	BP	4”/STD	114.3x6.02	0.0	550 31	11680MDD04321
RS5	Connection Links to LTRH Outlet Manifold	60	SA 335 P22	1	BP	4”/STD	114.3x6.02	0.0	550 31	11680MDD04321
RS6	LTRH Outlet Manifold	1	SA 335 P91	4	BP	24”/60	609.6x24.61	0.0	550 31	11680MDD04321
RS7/5HAJ21–BR001	Line to RH Desuperheater	1	SA 335 P91	3	BP	28”/–	711.2x18.50 MIN.THK.	0.0	532 31	11680MDD04505
RS8/5HAJ23–BR001	Line from RH Desuperheater	1	SA 335 P91	3	BP	28”/–	711.2x18.50 MIN.THK.	0.0	532 31	11680MDD04505
IW7/5HAF11–BR001	Spray line rh–dsh downstream stop valve	1	SA 335 P22	1	BEP	2”/80	60.3x5.54	1.6	532 31	11680MDD04323
RS9	HTRH Inlet Manifold	1	SA 335 P91	4	BP	24”/60	609.6x24.61	0.0	550 31	11680MDD04323
RS11	Connection Links to HTRH Tubes	60	SA 335 P91	1	BP	4”/STD	114.3x6.02	0.0	550 31	11680MDD04323
RS12	Connection Links to HTRH Outlet Manifold	48	SA 335 P91	1	BP	4”/STD	114.3x6.02	0.0	601 31	11680MDD04324
RS14	RH Superheated Steam Manifold	1	SA 335 P91	4	BP	28”/–	711.2x18.50 MIN.THK.	0.0	571 31	11680MDD04324
RS15/5HAJ26–BR001	RH Superheated Steam Line	1	SA 335 P91	3	NBEP	28”/–	711.2x18.50 MIN.THK.	1.6	571 31	11680MDD04350

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KKS DWG.No. 5-HA-MHP-API-043

NOTES:

1. UNLESS OTHERWISE NOTED ON THE RELEVANT DRAWINGS:
– THE THICKNESS OF PLATES, FORGING AND TUBES ON THIS DWG. IS THE MINIMUM THICKNESS.
– THE THICKNESS OF PIPES, AND BUTTWELD FITTINGS ON THIS DWG. IS THE NOMINAL THK. AND HAS A TOLERANCE ± 12.5%
2. THE DESIGN PRESSURES INCLUDE WATER HEAD AND PRESSURE DROP
3. CODE JURISDICTIONAL LIMITS FROM ASME I, FIG. PG-58.3.1:
– B.P.: BOILER PROPER PIPING
– B.E.P.: BOILER EXTERNAL PIPING
– N.B.E.P.: NON BOILER EXTERNAL PIPING
4. CODE APPLICABLE TO B.E.P. AND N.B.E.P.: ASME B 31.1, Ed. 2001 + ADD.2002
5. SEE DOC. 11680BTL03305 AND DWG. 11680BTD03301 FOR THE LINES NOT INCLUDED OR NOT SHOWN IN THIS DRAWING

DESIGN AND TECHNICAL DATA OF THE REHEATER SECTION

RH STAMPING PRESSURE –PS	31 bar g	450 psi g
RH TESTING PRESSURE	47 bar g	682 psi g
MAXIMUM DESIGN TEMPERATURE –TS	601 °C	1114 °F
MINIMUM DESIGN TEMPERATURE	21 °C	70 °F
FLUID	STEAM	
HEATING SURFACE	18592 mq	200124 sq. ft.
STEAMING CAPACITY AT M.C.R.	87.2kg/s	692072 lb/h
STEAM OUTLET TEMPERATURE	566 °C	1051 °F
STEAM OUTLET PRESSURE AT B.L.	21 bar g	305 psi g
INLET FLOW FROM COLD RH	76.5 kg/s	607150 lb/h
INLET FLOW FROM COLD IP SH	10.3 kg/s	81747 lb/h
DESIGN CODE	ASME SECT.I/ED.2001 + ADD.2003 & DIRECTIVE 97/23/EC (P.E.D)	
NOTIFIED BODY	BUREAU VERITAS (1370)	
MODULE	G	
BUILT YEAR	2004	
API SERIAL NUMBER	98/RH	

Boiler Non boiler

2 22-09-05 REVISED FOR LABELLING "AS BUILT" ONLY. NO OTHER CHANGES

1 12-10-04 REVISED AND COMPLETED

REV. DATA DESCRIZIONE/Description

SCALA Scale

FIRME/Signature

DATA/Date

DIS./Dwg. C.F. 29-04-04

CONTR./Check. A.R. 29-04-04

VISTO/Approv. A.N. 30-04-04

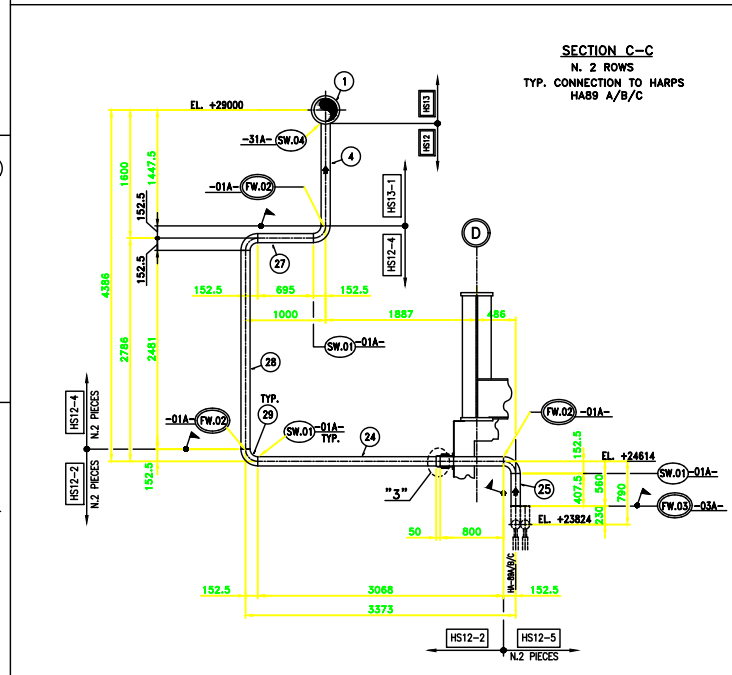
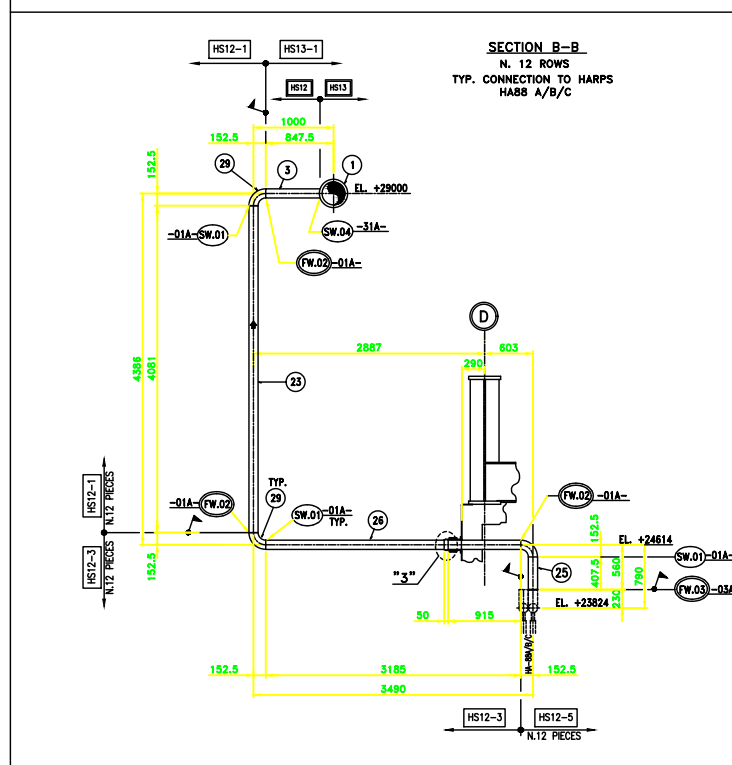
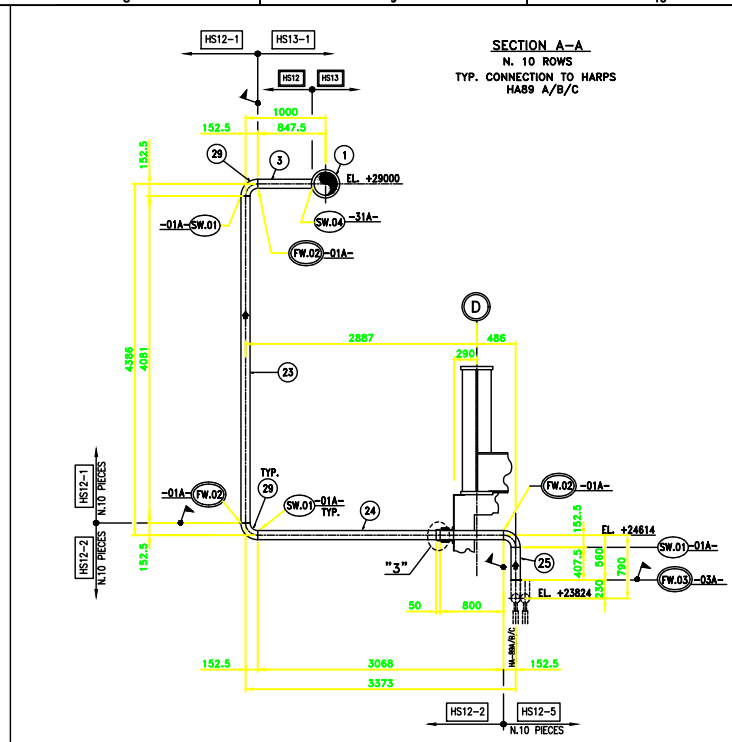
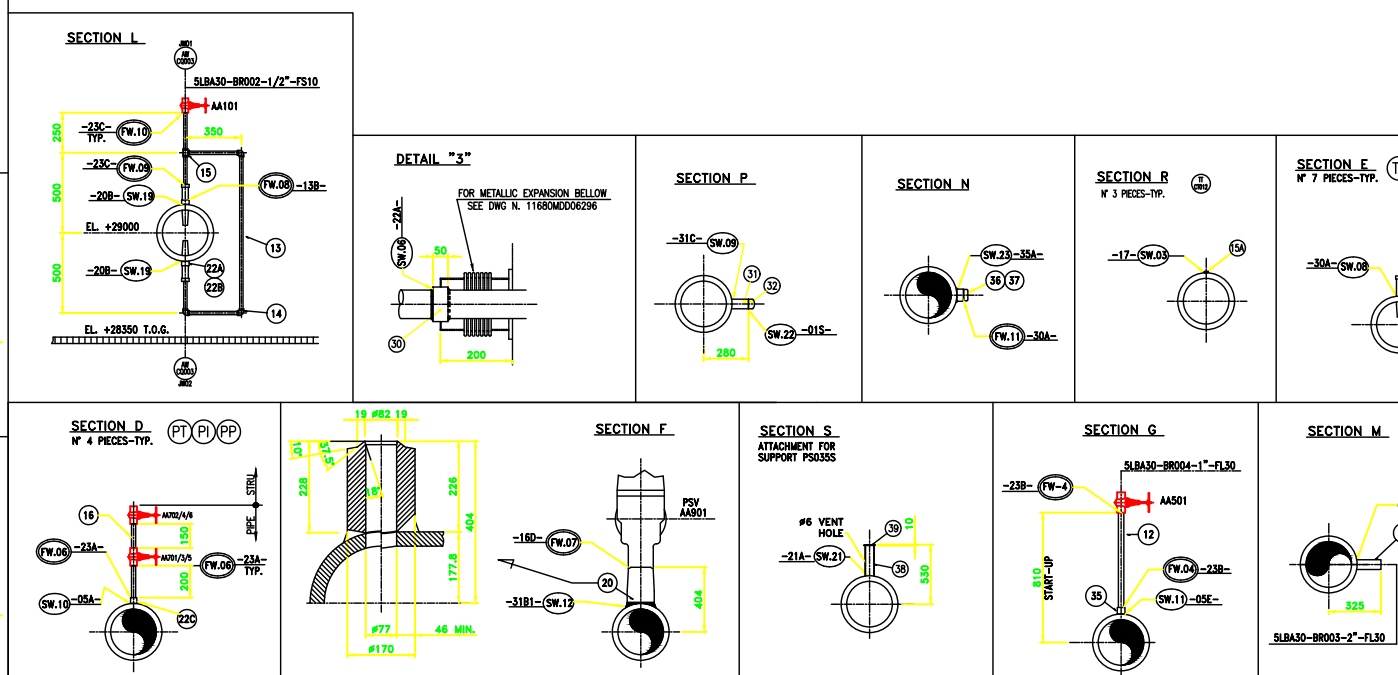
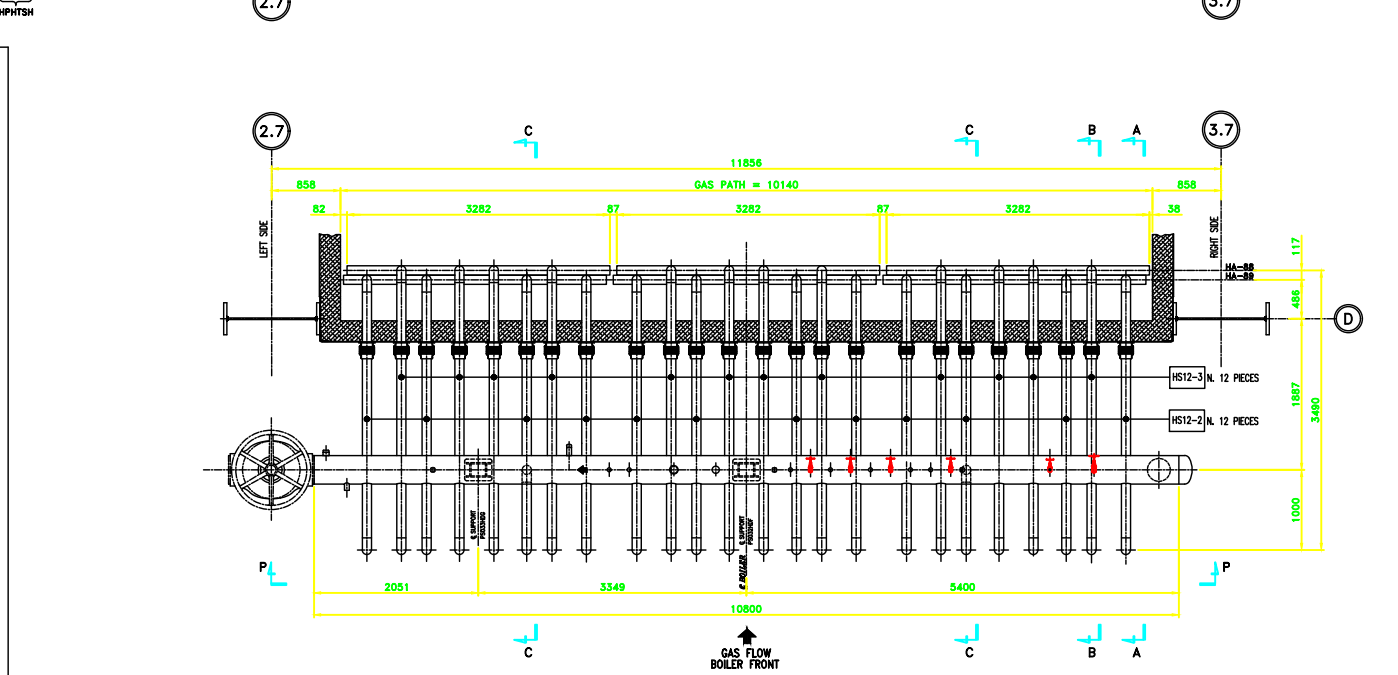
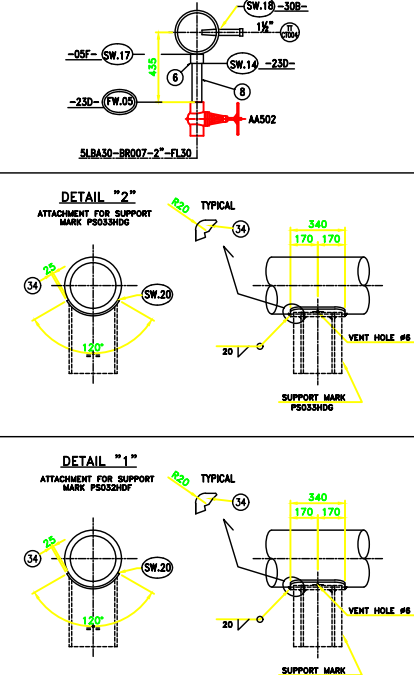
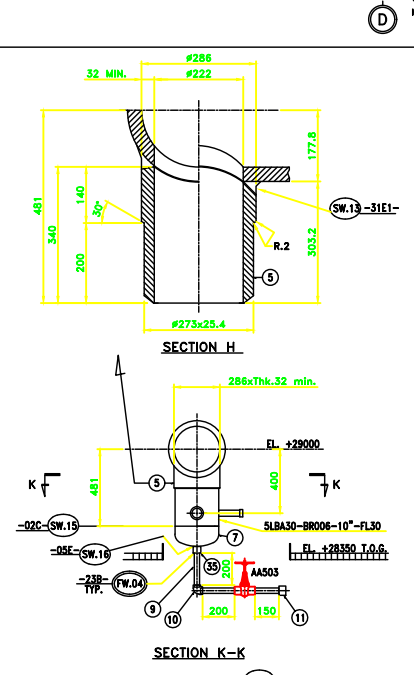
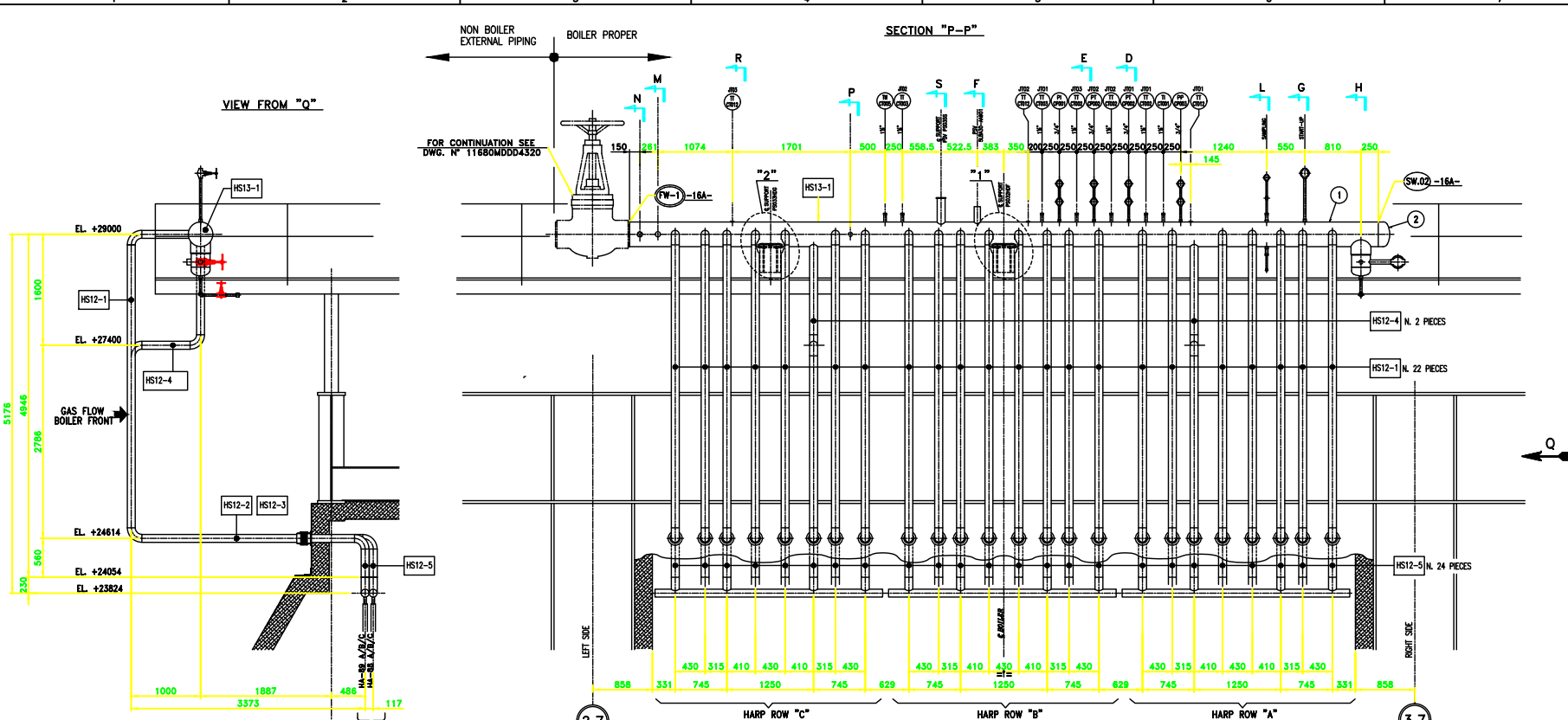
QUESTO DISEGNO E' PROPRIETA' DELLA ALSTOM Power Italia S.p.A. A TERMINE DI LEGGE NE E' VIETATA LA RIPRODUZIONE E LA COMUNICAZIONE A TERZI. This Drawing is the Property of ALSTOM Power Italia S.p.A. The reproduction for any use by a third party is forbidden by law.

LAVRION – METKA
N.1 H.R.S.G.
REHEATER PRESSURE SECTION
TECHNICAL DATA

11680MDD03043

ALSTOM
ALSTOM Power Italia S.p.A.

REV. 2



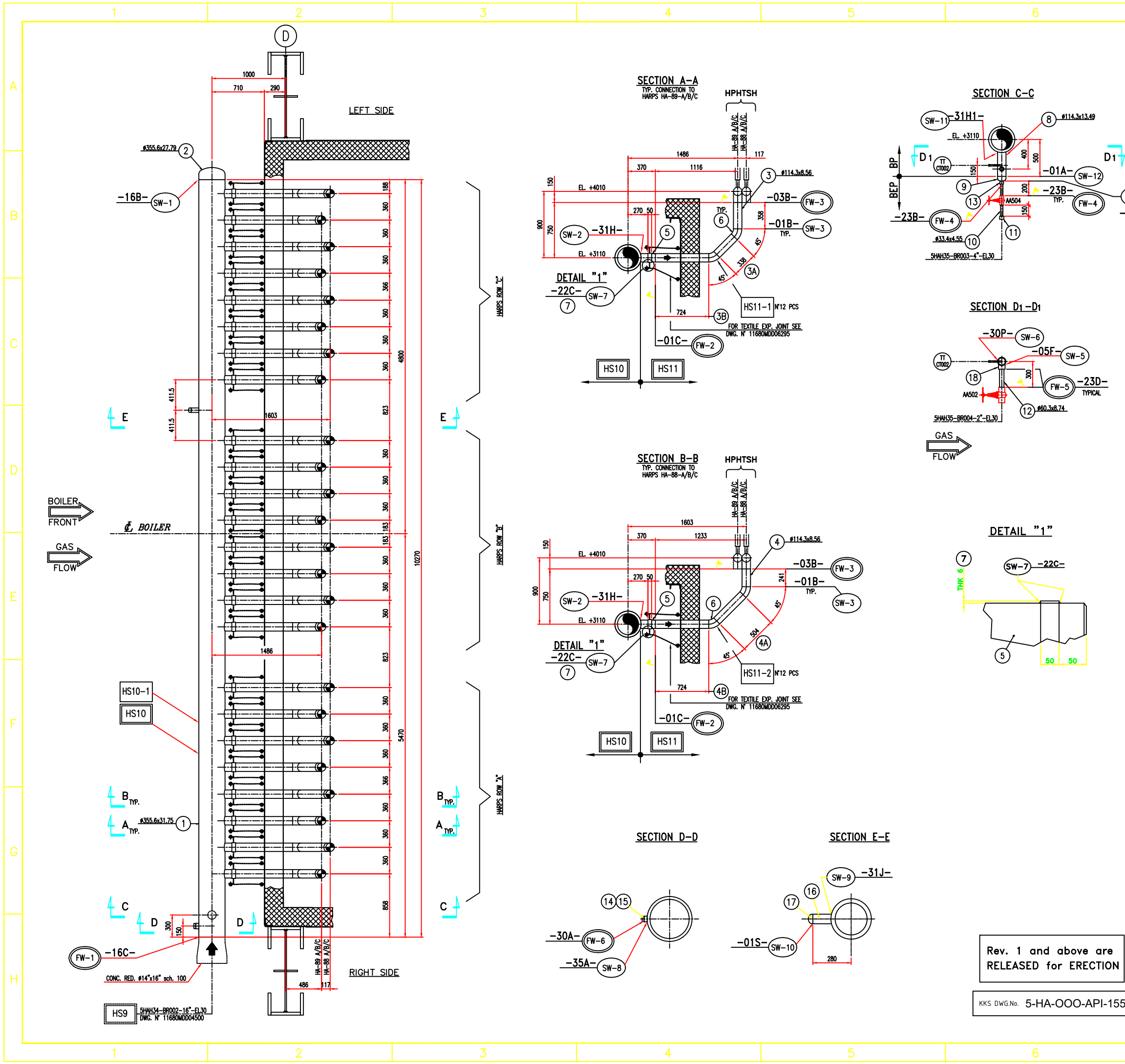
SHOP FABRICATED MATERIAL									
ITEM	COMPONENT DESCRIPTION	QTY	O.D. (mm)	THK (mm)	LENGTH (mm)	ASME MATERIAL	WEIGHT (kg)		
1	PIPE	1	835.6	25.71	10800	SA 335 Gr.P91	3040	HS13	HS13-1
2	CAP	1	835.6	27.79		SA 234 Gr.WP91	43		
3	PIPE	22	811.43	13.49	673	SA 335 Gr.P91	501		
4	PIPE	2	811.43	13.49	1213	SA 335 Gr.P91	85.8		
5	FORGING NOZZLE	1	226	32	340	SA 182 Gr.F91	68		
6	HALF COUPLING SW	1	#2	6000		SA 182 Gr.F91	2.9		
7	CAP	1	8273	25.4		SA 234 Gr.WP91	20		
8	PIPE	1	860.3	8.74	300	SA 335 Gr.P91	4.3		
15A	PLATE	3	50	3	50	SA 387 Gr.91	54		
20	FORGING NOZZLE	1	8189	46		SA 182 Gr.F91	28		
21	PIPE	1	860.3	8.74	150	SA 335 Gr.P91	1.6	HS12	HS12-1
22A	HALF COUPLING NPT	2	#1 1/2	6000		SA 182 Gr.F91	1.2		
22B	ROUND HEAD FLG	2	#1 1/2	6000		NPT-M	0.3		
22C	HALF COUPLING SW	4	#3/4	6000		SA 182 Gr.F91	1.8		
31	PIPE	1	860.3	8.74	105	SA 335 Gr.P91	1.1		
32	CAP-SW	1	860.3	8.74		SA 234 Gr.WP91	0.5		
34	PLATE	2	400	25	340	SA 387 Gr.91	54		
35	HALF COUPLING SW	2	#1	6000		SA 182 Gr.F91	1.7		
36	HALF COUPLING NPT	1	#1 1/2	6000		SA 182 Gr.F91	1.7		
37	ROUND HEAD FLG	1	#1 1/2	6000		NPT-M	0.25		
38	PIPE	1	811.43	13.49	350	SA 335 Gr.P91	11	HS12	HS12-2
39	PLATE	1	140	10	140	S 275 JR	2		
23	PIPE	22	811.43	13.49	4081	SA 335 Gr.P91	3010		
29	ELBOW 90° BW LR	22	811.43	13.49		SA 234 Gr.WP91	185.2		
24	PIPE	12	811.43	13.49	3068	SA 335 Gr.P91	1234		
29	ELBOW 90° BW LR	12	811.43	13.49		SA 234 Gr.WP91	101		
30	PLATE	12	50	6	380	SA 387 Gr.91	10.7		
26	PIPE	12	811.43	13.49	3185	SA 335 Gr.P91	1281		
29	ELBOW 90° BW LR	12	811.43	13.49		SA 234 Gr.WP91	101		
30	PLATE	12	50	6	380	SA 387 Gr.91	10.7		
27	PIPE	2	811.43	13.49	695	SA 335 Gr.P91	46	HS12	HS12-3
28	PIPE	2	811.43	13.49	2481	SA 335 Gr.P91	166		
29	ELBOW 90° BW LR	2	811.43	13.49		SA 234 Gr.WP91	33.7		
25	PIPE	24	811.43	13.49	408	SA 335 Gr.P91	328		
29	ELBOW 90° BW LR	24	811.43	13.49		SA 234 Gr.WP91	202		
							TOTAL WEIGHT 10550		

SITE FABRICATED MATERIAL									
LINE No.	ITEM	COMPONENT DESCRIPTION	QTY	O.D. (mm)	THK (mm)	LENGTH (mm)	ASME MATERIAL	WEIGHT (kg)	
9	PIPE	1	833.4	4.55	700	SA 335 Gr.P91	2.2	SLBA30-BR001 14" - FL30	
10	ELBOW 90° SW	1	#1	6000		SA 182 Gr.F91	0.5		
11	PLUG SW	1	#1	6000		SA 182 Gr.F91	0.3		
12	PIPE	1	833.4	4.55	635	SA 335 Gr.P91	2		
13	PIPE	1	821.3	3.73	2500	SA 312 Gr.F316	4		
14	ELBOW 90° SW	3	#1 1/2	6000		SA 182 Gr.F316	0.75		
15	TEE SW	1	#1 1/2	6000		SA 182 Gr.F316	0.34		
16	PIPE	1	826.7	3.91	2000	SA 335 Gr.P91	4		
							TOTAL WEIGHT 14		

REFERENCE DRAWING		REFERENCE DOCUMENTS	
DESCRIPTION	N. DRAWINGS	DESCRIPTION	N. DOCUMENTS
WATER AND STEAM HP SECTION P&ID DIAGRAM	11680MD03302	SHOP WELDING TABLE	11680MDW02600
PRESSURE PARTS ASSEMBLY LONGITUDINAL AND SECTION	11680MD03030	FIELD WELDING TABLE	11680MDW03800
WELDING DETAIL TO SHOP	11680MD04311	ERECTION LIST	11680MDDE2600
WELDING DETAIL TO FIELD	11680MD04312		
PRESSURE SECTION TECHNICAL DATA	11680MD03042		

- NOTES:**
- 1) ASME CODE SECTION I, ED.2001 + ADD.2003 AND DIRECTIVE 97/23/EC (P.E.D.)
 - 2) ALL DIMENSIONS ARE IN mm, UNLESS WHERE OTHERWISE INDICATED
 - 3) TO SHOW IDENTIFICATION COMPONENTS ACCORDING TO ANALYSIS LETTER N° 11680BTX16060
 - 4) 1 DENOTE ITEM NUMBER
 - 5) xx 10 DENOTE ERECTION MARK NUMBER
 - 6) SHOWS FIELD WELDS
 - 7) DENOTES SHOP WELDING NUMBER
 - 8) DENOTES FIELD WELDING NUMBER
 - 9) ALL TOLERANCES, EXCEPT WHERE OTHERWISE INDICATED, ARE ACCORDING TO UNI EN 22768-1/M
 - 10) PIPE MATERIAL PROCUREMENT AND FABRICATION SHALL BE IN FULL ACCORDANCE TO API MPR. 11680MDR02600
 - 11) -05- DENOTE DETAIL OF WELD ACCORDING DWG. 11680MD04311 AND DWG. 11680MD04312
 - 12) THE SHOWN PIPING BELONG TO BOILER PROPER

Rev. 1 and above are RELEASED for ERECTION			
KKS DWGNO: 5-HA-000-API-153			
4	22-09-05	REVISED FOR LABELLING 'AS BUILT' ONLY. NO OTHER CHANGES	A.S.
1	18-10-04	REVISED WHERE INDICATED	A.S.
2	18-10-04	MODIFIED WHERE INDICATED WITH	A.S.
1	01-10-04	REVISED WHERE INDICATED	A.S.
REV.	DATE	DESCRIPTION/REVISION	DESIGNER/DATE
1	11-25	CONTR./CHECK. A.S.	22-09-04
2	11-25	CONTR./CHECK. A.S.	22-09-04
3	11-25	CONTR./CHECK. A.S.	22-09-04
LAVIRON - METKA H.R.S.G. MANIFOLD HS13 AND LINKS HS12 ASSEMBLY AND DETAILS			
ALSTOM			
ALSTOM Power Italia S.p.A.			
11680MD04301			
REV. 1/1			



SHOP FABRICATED MATERIAL									
IDENTIF. COMPON. (NOTE 3)	ERECTION MARK NUMBER	ITEM	COMPONENT DESCRIPTION	Q.TY	O.D. DIM. (mm)	THK (mm)	LENGHT (mm)	ASME MATERIAL	WEIGHT (Kg)
HS10	HS10-1 N.1 PIECE	1	PIPE	1	Ø355.6	31.75	10270	SA 335 Gr.P91	2801.6
		2	CAP	1	Ø355.6	27.79		SA 234 Gr.WP91	43
		5	PIPE	24	Ø114.3	8.56	197	SA 335 Gr.P91	258.3
		7	FLAT BAR	24	50	6	378	SA 387 Gr.91 C12	21.6
		8	PIPE	1	Ø114.3	13.49	326	SA 335 Gr.P91	5.4
		9	CAP	1	Ø114.3	13.49		SA 234 Gr.WP91	1.6
		13	HALF COUPLING	1	Ø1"	6000#	—	SA 182 Gr.F91	0.3
		14	HALF COUPLING NPTF	1	Ø1½"	6000#	—	SA 182 Gr.F91	1.7
		15	ROUND HEAD PLUG	1	Ø1½"		NPT—M	SA 182 Gr.F91	0.25
		16	PIPE	1	Ø60.3	8.74	102	SA 335 Gr.P91	1.1
		17	CAP—BW	1	Ø60.3	8.74		SA 234 Gr.WP91	0.4
		18	HALF COUPLING	1	Ø2"	6000#	—	SA 182 Gr.F91	2.0
HS11	HS11-1 N.12 PIECES	3	PIPE	12	Ø114.3	8.56	358	SA 335 Gr.P91	95.8
		3A	PIPE	12	Ø114.3	8.56	338	SA 335 Gr.P91	90.5
		3B	PIPE	12	Ø114.3	8.56	724	SA 335 Gr.P91	193.8
		6	ELBOW 45° BW LR	24	Ø114.3	8.56		SA 234 Gr.WP91	65.5
	HS11-2 N.12 PIECES	4	PIPE	12	Ø114.3	8.56	241	SA 335 Gr.P91	64.5
		4A	PIPE	12	Ø114.3	8.56	504	SA 335 Gr.P91	134.9
		4B	PIPE	12	Ø114.3	8.56	724	SA 335 Gr.P91	193.8
		6	ELBOW 45° BW LR	24	Ø114.3	8.56		SA 234 Gr.WP91	65.5
TOTAL WEIGHT								3839	

SITE FABRICATED MATERIAL									
IDENTIF. COMPON. (NOTE 3)	ERECTION MARK NUMBER	ITEM	COMPONENT DESCRIPTION	Q.TY	O.D. DIM. (mm)	THK (mm)	LENGHT (mm)	ASME MATERIAL	WEIGHT (Kg)
N.A.	/	10	PIPE	1	Ø33.4	4.55	400	SA 335 Gr.P91	1.1
		11	PLUG SW	1	Ø1"	6000	—	SA 182 Gr.F91	0.3
		12	PIPE	1	Ø60.3	8.74	300	SA 335 Gr.P91	3.3
TOTAL WEIGHT								4.7	

REFERENCE DRAWING	
DESCRIPTION	N. DRAWINGS
WATER AND STEAM HP SECTION P.&I. DIAGRAM	11680BTD03302
PRESSURE PARTS ASSEMBLY LONGITUDINAL AND SECTION	11680MDD03030 11680MDD03035
WELDING DETAIL TO SHOP	11680MDD04311
WELDING DETAIL TO FIELD	11680MDD04312
PRESSURE SECTION TECHNICAL DATA	11680MDD03042

REFERENCE DOCUMENTS	
DESCRIPTION	N. DOCUMENTS
SHOP WELDING TABLE	11680MDW02600
FIELD WELDING TABLE	11680MDW03800
ERECTION LIST	11680MDE02600

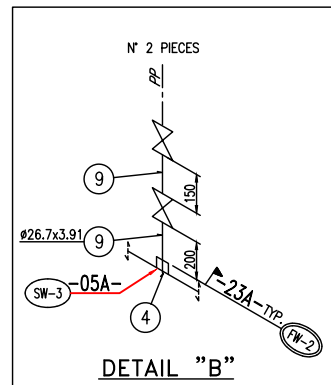
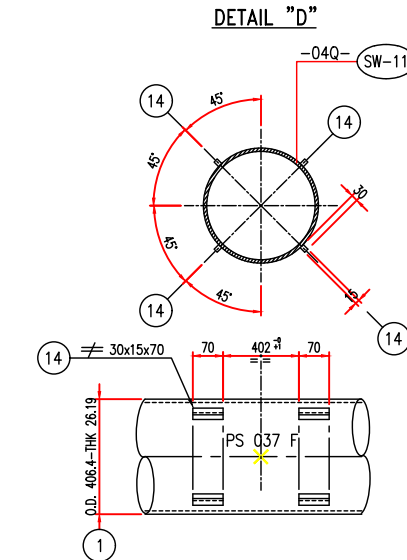
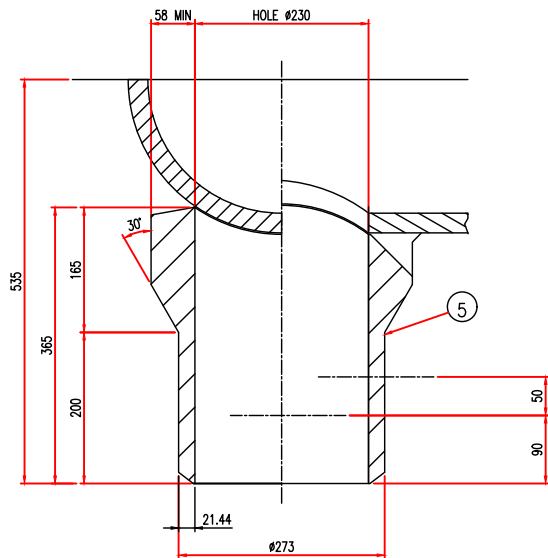
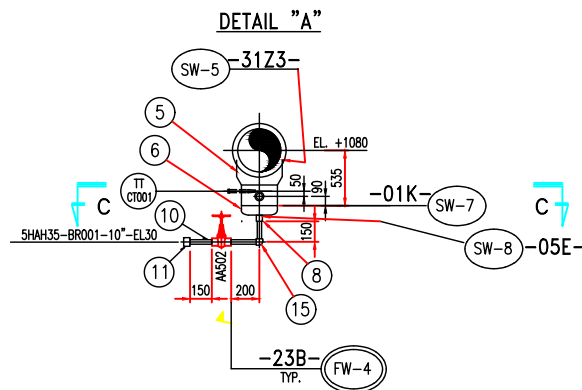
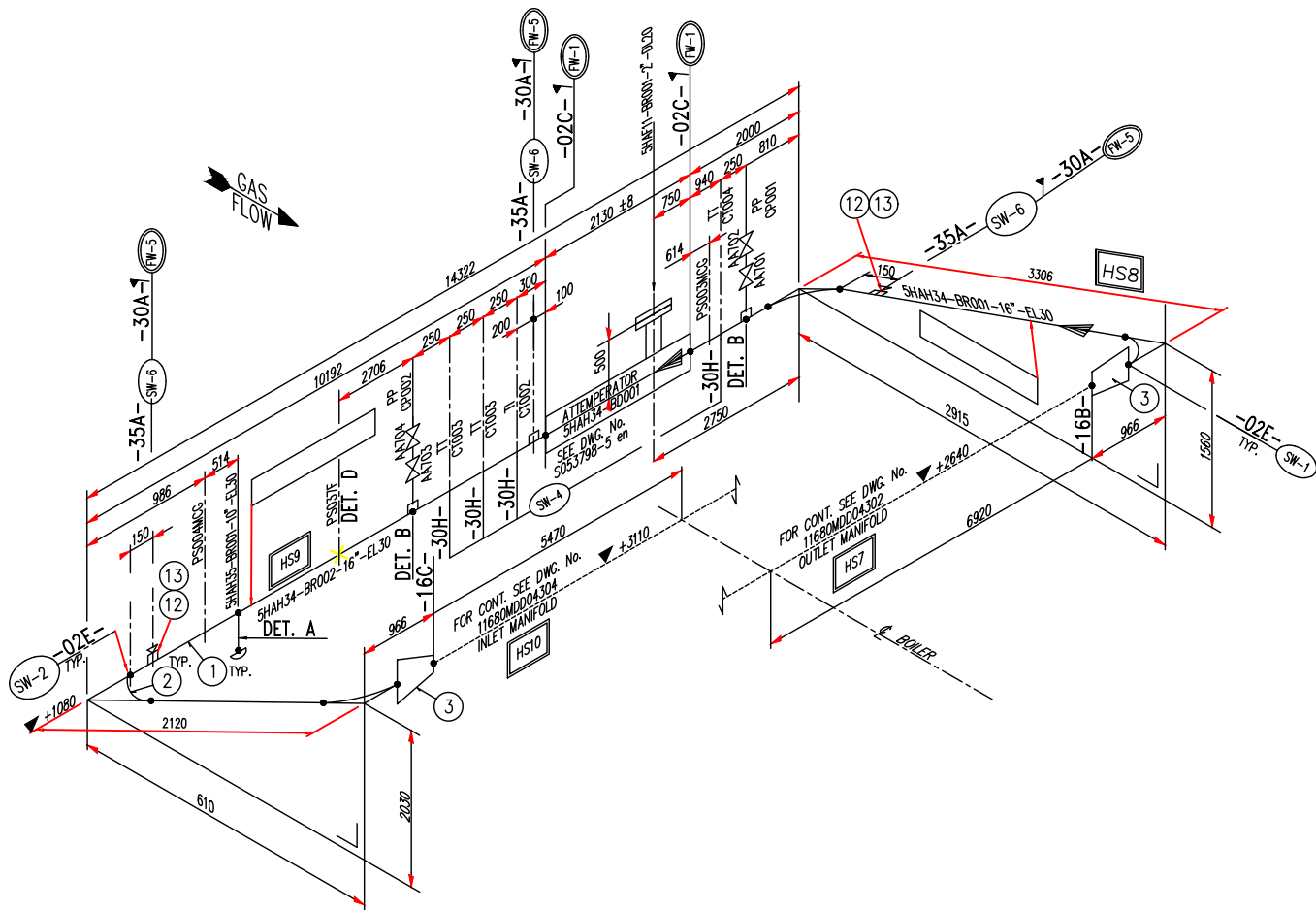
- NOTES:**
- ASME B31.1, ED.2001 + ADD.2002 AND DIRECTIVE 97/23/EC (P.E.D.)
 - ALL DIMENSIONS ARE IN mm, UNLESS WHERE OTHERWISE INDICATED
 - xx 10** TO SHOW IDENTIFICATION COMPONENTS ACCORDING TO ANALYSIS LETTER N° 11680BTX16060
 - 1** DENOTE ITEM NUMBER
 - xx 10** DENOTE ERECTION MARK NUMBER
 - ▲** SHOWS FIELD WELDS
 - SW...** DENOTES SHOP WELDING NUMBER
 - FW...** DENOTES FIELD WELDING NUMBER
 - ALL TOLERANCES, EXCEPT WHERE OTHERWISE INDICATED, ARE ACCORDING TO UNI EN 22768.1/M
 - PIPE MATERIAL PROCUREMENT AND FABRICATION SHALL BE IN FULL ACCORDANCE TO API M.R. 11680MDR02600
 - 05-** DENOTES DETAIL OF WELD ACCORDING DWG. 11680MDD04311 AND DWG. 11680MDD04312
 - THE SHOWN PIPING BELONG TO BOILER PROPER

3	22-09-05	REVISED FOR LABELLING "AS BUILT" ONLY. NO OTHER CHANGES	A.S.	A.R.	A.N.
2	22-10-04	REVISED WHERE INDICATED WITH ▲	M.B.	A.R.	A.N.
1	01-10-04	REVISED WHERE INDICATED WITH ▲	P.V.	A.R.	A.N.
REV.	DATA DATE	DESCRIZIONE/Description	DES.	CONTR.	VISTO
			Dwg.	Checked	Approv.
QUESTO DISEGNO E' PROPRIETA' DELLA ALSTOM Power Italia S.p.A. A TERME DI LEONE NE E' VIETATA LA RIPRODUZIONE E LA COMUNICAZIONE A TERZI. This Drawing is the Property of ALSTOM Power Italia S.p.A. The reproduction for any use by a third party is forbidden by law.			SCALE	FIRME/Signature	DATA/Date
			Scale	DIS./Dwg.	T.S.I.
			1:25	CONTR./Check.	A.R.
				VISTO/Approv.	A.N.
					15/09/04
			RIFERIMENTO N. Reference N.		
			N°. DISEGNO/Drawing No.		
			TAV. / DI Sh. / of		
			11680MDD04304		
			REV. / 3		

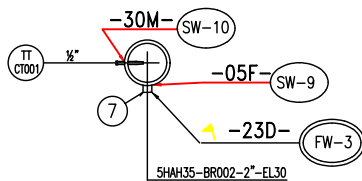
Rev. 1 and above are
RELEASED for ERECTION

KKS DWG.No. 5-HA-000-API-155

ALSTOM
ALSTOM Power Italia S.p.A.



SECTION C-C



REFERENCE DOCUMENTS	
DESCRIPTION	N. DOCUMENTS
SHOP WELDING TABLE	11680MDW02600
FIELD WELDING TABLE	11680MDW03800
ERECTION LIST	11680MDE02600

REFERENCE DRAWING	
DESCRIPTION	N. DRAWINGS
WATER AND STEAM HP SECTION P.&I. DIAGRAM	11680BTD03302
PRESSURE PARTS ASSEMBLY LONGITUDINAL AND SECTION	11680MDD03030 11680MDD03035
WELDING DETAIL TO SHOP	11680MDD04311
WELDING DETAIL TO FIELD	11680MDD04312
PRESSURE SECTION TECHNICAL DATA	11680MDD03042

DIMENSIONS SHOWN TO WELDS ARE INDICATIVE ONLY. NO ALLOWANCE FOR SCARFING, SQUARING, ROOT GAP OR WELD SHRINKAGE HAS BEEN INCLUDED IN RUNNING LENGTHS.

SHOP FABRICATED MATERIAL										
IDENTIF. COMPON. (NOTE 3)	LINE No.	SPOOL	ITEM	DESCRIPTION	Q.TY	O.D. DIM. (mm)	THK (mm)	LENGHT (mm)	ASME MATERIAL	WEIGHT (Kg)
HS8	SHAH34-BR001 16"-EL30	5HAH34-4500/A	1	PIPE	1	406.4	26.19 ±12.5%	3494	SA 335 Gr. P91	857.7
			2	ELBOW 90°-LR	2	406.4	26.19 ±12.5%	-	SA 234 Gr. WP91	490.8
			3	CONCENTRIC REDUCING-BW	1	14"x16"	sch. 100	-	SA 234 Gr. WP91	90.8
			4	HALF COUPLING-SW	1	83/4"	6000#	-	SA 182 Gr. F91	0.5
			12	HALF COUPLING-NPT	1	811/2"	6000#	-	SA 182 Gr. F91	1.7
HS9	SHAH34-BR002 16"-EL30	5HAH34-4500/B	13	ROUND HEAD PLUG-NPT	1	811/2"	6000#	-	SA 182 Gr. F91	1.2
			1	PIPE	1	406.4	26.19 ±12.5%	9321	SA 335 Gr. P91	2288.3
			2	ELBOW 90°-LR	2	406.4	26.19 ±12.5%	-	SA 234 Gr. WP91	490.8
			3	CONCENTRIC REDUCING-BW	1	14"x16"	sch. 100	-	SA 234 Gr. WP91	90.8
			4	HALF COUPLING-SW	1	83/4"	6000#	-	SA 182 Gr. F91	0.5
			5	FORGING	1	8346	58 MIN.	365	SA 234 Gr. WP91	24.8
			6	CAP-BW	1	8273	21.44	-	SA 182 Gr. F91	153
			7	HALF COUPLING-SW	1	82"	6000#	-	SA 182 Gr. F91	2.9
			8	HALF COUPLING-SW	1	81"	6000#	-	SA 182 Gr. F91	0.9
			12	HALF COUPLING-NPT	1	811/2"	6000#	-	SA 182 Gr. F91	1.7
			13	ROUND HEAD PLUG-NPT	1	811/2"	6000#	-	SA 182 Gr. F91	1.2
			14	PLATE 30x15	8	-	-	70	SA 387 Gr.91 CL2	1.0
			TOTAL WEIGHT							4497
			WEIGHT OF ATTEMPERATOR							901

SITE FABRICATED MATERIAL							
LINE No.	ITEM	COMPONENT DESCRIPTION	Q.TY	O.D. DIM. (mm)	THK (mm)	LENGHT (mm)	ASME MATERIAL
SHAH34-BR001 16"-EL30	9	PIPE	1	26.7	3.91 ±12.5%	400	SA 335 Gr. P91
SHAH34-BR002 16"-EL30	9	PIPE	1	26.7	3.91 ±12.5%	400	SA 335 Gr. P91
SHAH35-BR001 10"-EL30	10	PIPE	1	81"	4.55 ±12.5%	400	SA 335 Gr. P91
	11	CAP-SW	1	33.4	6000#	-	SA 182 F91
	15	ELBOW 90°-SW	1	33.4	6000#	-	SA 182 F91
TOTAL WEIGHT							5.5

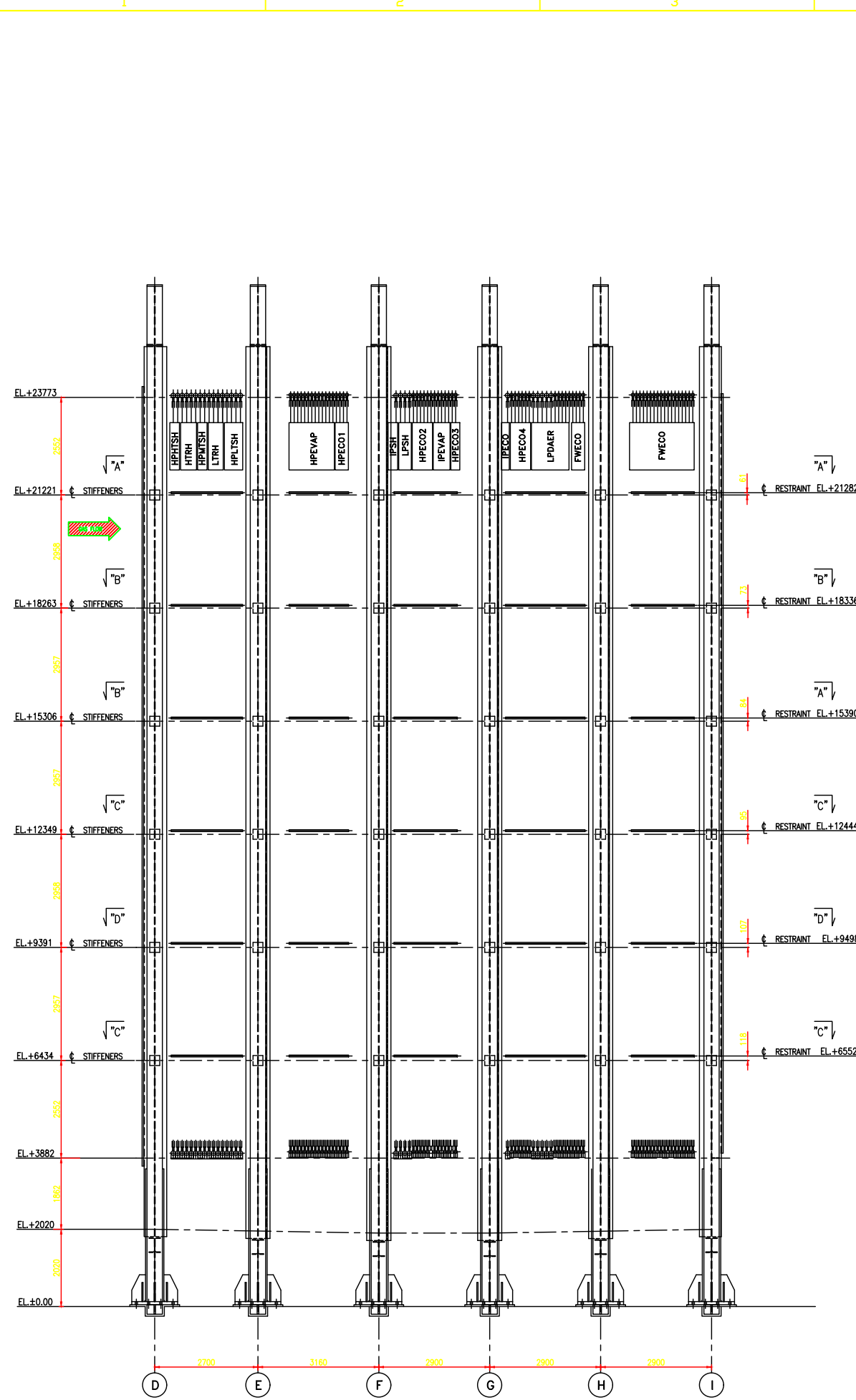
NOTES:

- ASME CODE SECTION I, ED.2001 + ADD.2003 AND DIRECTIVE 97/23/EC (P.E.D.).
- ALL DIMENSIONS ARE IN mm, UNLESS WHERE OTHERWISE INDICATED
- TO SHOW IDENTIFICATION COMPONENTS ACCORDING TO ANALYSIS LETTER N° 11680BTX16060
- ① DENOTE ITEM NUMBER
- XXXXXX-YYYY/Z = SPOOL MK. No.
- SHOWS FIELD WELDS
- SW... DENOTES SHOP WELDING NUMBER
- FW... DENOTES FIELD WELDING NUMBER
- ALL TOLERANCES, EXCEPT WHERE OTHERWISE INDICATED, ARE ACCORDING TO UNI EN 22768.1/M
- PIPE MATERIAL PROCUREMENT AND FABRICATION SHALL BE IN FULL ACCORDANCE TO API M.R. 11680MDR02600
- 05- DENOTES DETAIL OF WELD ACCORDING DWG. 11680MDD04311 AND DWG. 11680MDD04312

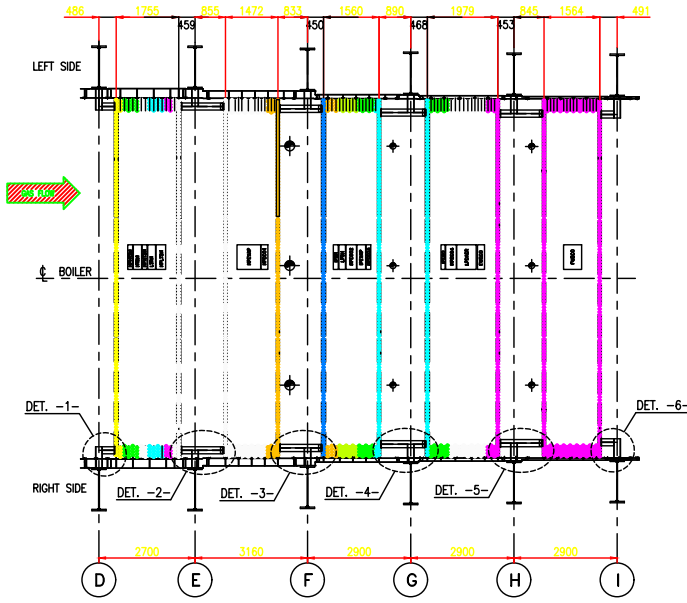
Rev. 5 and above are RELEASED for ERECTION

KKS DWG.No. 5-HA-000-API-169

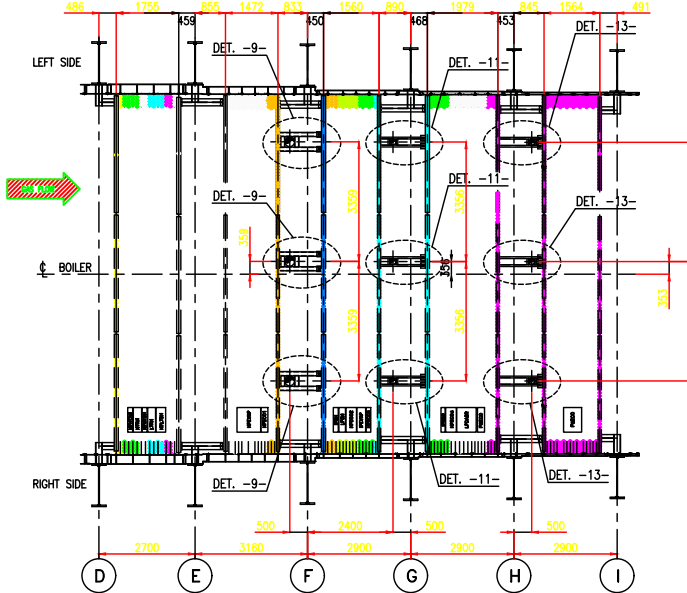
REV.	DATA	DESCRIZIONE/Description	SCALE	FIRME/Signature	DATA/Date
7	22-09-05	REVISED FOR LABELLING "AS BUILT" ONLY. NO OTHER CHANGES	A.S.	A.R.	A.N.
6	23-12-04	REVISED WHERE INDICATED	A.S.	A.R.	A.N.
5	08-11-04	REVISED WHERE INDICATED	A.S.	A.R.	A.N.
4	30-10-04	REVISED WHERE INDICATED	A.S.	A.R.	A.N.
3	25-10-04	REVISED WHERE INDICATED	M.B.	A.R.	A.N.
2	20-10-04	REMOVED HOLD AND REVISED WHERE INDICATED	M.B.	A.R.	A.N.
1	05-10-04	REVISED WHERE INDICATED	P.V.	A.R.	A.N.
QUESTO DISEGNO E' PROPRIETA' DELLA ALSTOM Power Italia S.p.A. A TERMINE DI LEGGE NE E' VIETATA LA RIPRODUZIONE E LA COMUNICAZIONE A TERZI. This drawing is the property of ALSTOM Power Italia S.p.A. The reproduction for any use by a third party is forbidden by law.			RIFERIMENTO N. Reference N.		
LAVRION - METKA HPSH DESUPERHEATER 5HAH34-BR001/2-16"-EL30 5HAH35-BR001-10"-EL30			N° DISEGNO/Drawing No.		
ALSTOM			11680MDD04500		
ALSTOM Power Italia S.p.A.			REV. 1/2/3/4/5/6/7		



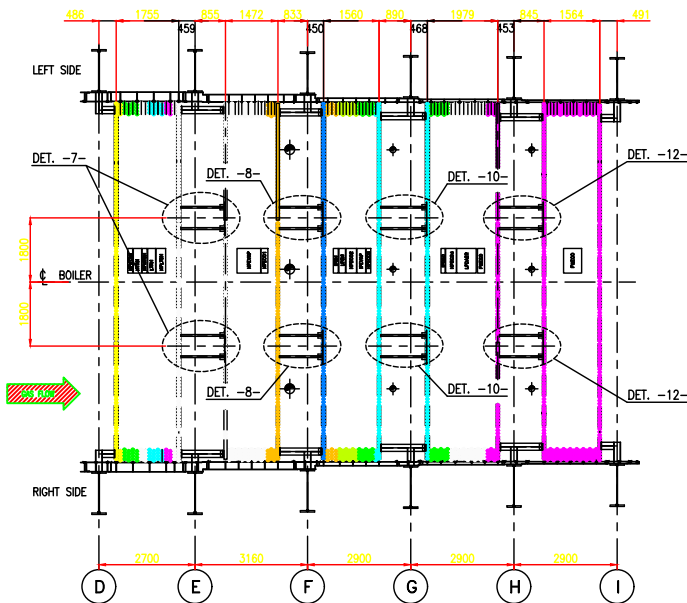
RIGHT SIDE ELEVATION



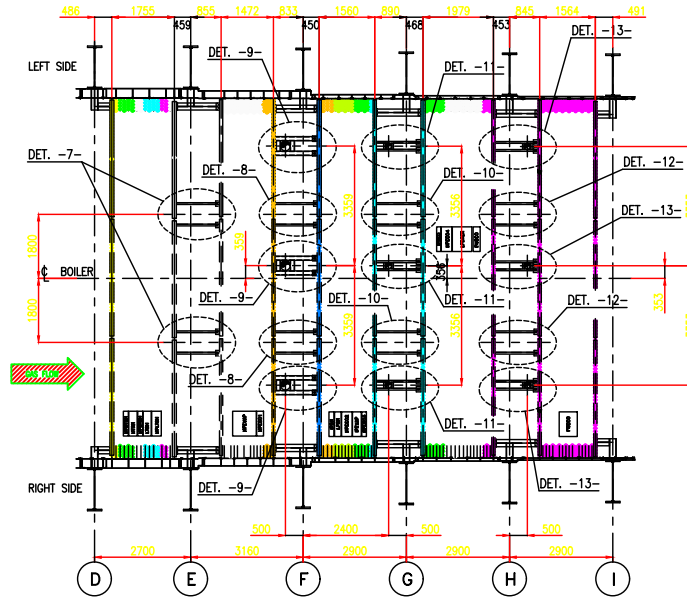
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(SCALE 1:33.3)



SECTION "C-C" - EL. +12444 / EL. +6552
(SCALE 1:33.3)



SECTION "D-D" - EL. +9498
(SCALE 1:33.3)



SECTION "B-B" - EL. +18336
(SCALE 1:33.3)

ERECTOR DWG. No.	PART MARK	DESCRIPTION	MAIN SHAPE	PCS	1 PC WEIGHT	TOTAL WEIGHT
11680MDD06235 & 06236	B/1	COMPOSED BEAM	TYPE "1"	12	39,8	477,5
11680MDD06235 & 06236	B/2	COMPOSED BEAM	TYPE "1"	12	67,5	809,5
11680MDD06235 & 06236	B/3	BEAM	HEA 180	12	60,5	726
11680MDD06235 & 06236	B/4	BEAM	HEA 180	12	63,1	757,8
11680MDD06235 & 06236	B/5	BEAM	HEA 180	12	61	732
11680MDD06235 & 06236	B/6	BEAM	HEA 180	12	38,8	466,3
11680MDD06235 & 06236	L/7/1	ANGLE	100 x 50 x 8	8	10,5	83,5
11680MDD06235 & 06236	L/8/1	ANGLE	100 x 50 x 8	8	10,4	83
11680MDD06235 & 06236	L/9/1	BEAM	UPN 120	18	15,5	279
11680MDD06235 & 06236	L/9/2	BEAM	UPN 120	18	3,65	65,5
11680MDD06235 & 06236	L10/1/1	ANGLE	100 x 50 x 8	8	11	88
11680MDD06235 & 06236	L11/1/1	ANGLE	100 x 50 x 8	18	11	199
11680MDD06235 & 06236	L11/2/1	ANGLE	100 x 50 x 8	18	2,6	47,5
11680MDD06235 & 06236	L12/1/1	ANGLE	100 x 50 x 8	8	10,5	84
11680MDD06235 & 06236	L13/1/1	ANGLE	100 x 50 x 8	18	10,5	189
11680MDD06235 & 06236	L13/2/1	ANGLE	100 x 50 x 8	18	2,6	47,5
11680MDD06235 & 06236	PLA/1	BEND PLATE	PL 8	12	3,7	44,4
11680MDD06235 & 06236	PLB/1	BEND PLATE	PL 8	36	3,7	133,2
11680MDD06235 & 06236	PLC/1	PLATE	PL-12	8	1,8	14,4
11680MDD06235 & 06236	PLC/2	PLATE	PL-12	60	1,8	108
11680MDD06235 & 06236	PLD/1	PLATE	PL-12	18	1,8	32,4
11680MDD06235 & 06236	BL/1	BOLT M 20 x 50	-	8	0,25	2
11680MDD06235 & 06236	BL/2	BOLT M 20 x 50	-	78	0,25	19,5
						TOTAL WEIGHT Kg. 5490

MARKING INSTRUCTIONS FOR SHOP DRAWINGS AND ERECTION:

- EACH COMPONENT WILL BE MARKED AS INDICATED:
- EXAMPLE : [MARK]
- DENOTES UNIT NUMBER
- DENOTES ERECTION MARK
- O MEANS BILL OF MATERIAL POSITION. -SHOP
- □ MEANS MARK'S NUMBER. -ERECTION

- WELDINGS:
- ALL WELDS TO BE CONTINUOUS FILLET WELDS UNLESS OTHERWISE SPECIFIED.
 - NOT DIMENSIONED FILLET WELDS SHALL HAVE A DIMENSION "S" EQUAL TO 0.7 TIMES. THE MINIMUM THICKNESS TO BE WELDED.
 - MEANS FIELD WELDING.

MATERIALS:

- (MODULES 1-2):
- PLATES
 - BOLTS M20 UN 5277
 - (N.1 WASHER EACH BOLT)
- ASTM A240 TP409
 ASTM A193 B8 M (OR EQUIV.)
- (MODULES 3-4-5):
- PLATES & ANGLES
 - BOLTS M20 UN 5277
 - (N.1 WASHER EACH BOLT)
- S275JR EN 10025
 CL. 8.8 - EN20898

NOTES:

- ALL DIMENSIONS ARE MILLIMETERS UNLESS DIFFERENTLY SHOWN.
- ALL ELEVATIONS REFER TO QUOTE +0.00 FINISHED GROUND FLOOR.
- ARRANGEMENT SHOWN IS FOR (1) ONE UNIT, (1) ONE UNIT ON THIS CONTRACT.
- FOR ALL OTHER MANUFACTURING, TESTING AND PAINTING INSTRUCTIONS REFER TO M.R. 11680MDD06200.

ERECTION/LIFTING PROCEDURE:

- 1) THE FABRICATOR/ERECTOR IS RESPONSIBLE FOR DESIGN & SUPPLY OF ANY EXTRA LIFTING ATTACHMENTS REQUIRED, INCLUDING TRUNNIONS, BRACING AND LUGS ETC. DETAILS OF LIFTING ATTACHMENTS TO BE SUBMITTED TO A.P.I. FOR APPROVAL. NOTE THAT ANY INTERNAL TRUNNIONS OR BRACING MUST BE REMOVED AFTER ERECTION.
- 2) THE ERECTOR IS TO ENSURE BOILER OUTLET FLANGE IS ATTACHED TO STACK INLET FLANGE PRIOR TO LIFTING STACK INTO POSITION.

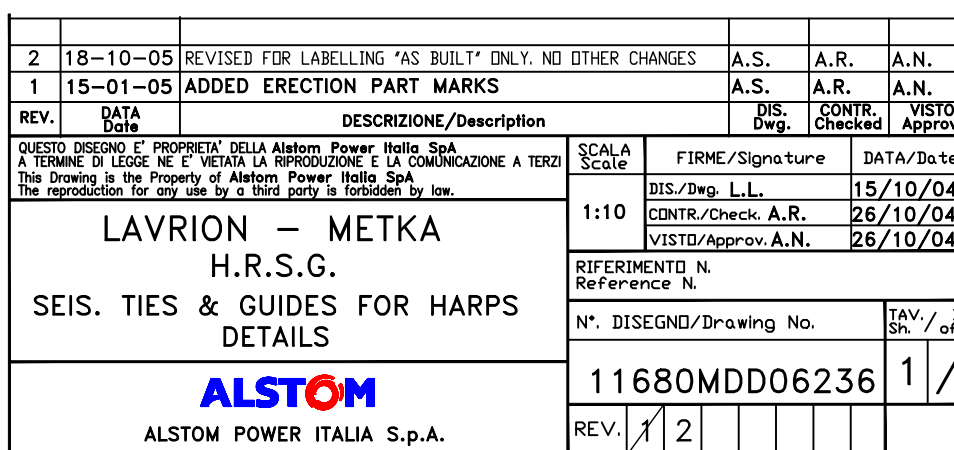
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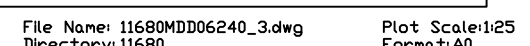
- FOR PRESSURE PARTS ASSEMBLY SEE DWG. N° 11680MDD03030/3035
- FOR HARPS TUBE TO HEADER BAFFLES SEE DWG. N° 11680-1E0162
- FOR MODULE INSULATED PANELS - ASSEMBLY EXTERNAL LEFT & RIGHT SIDE SEE DWG. N° 11680MDD06250
- FOR SEIS. TIES & GUIDES FOR HARPS - DETAILS SEE DWG. N° 11680MDD06236
- FOR SEIS. TIES & GUIDES FOR HARPS MATERIAL FORECAST SEE DOC. N° 11680MDD06235
- FOR SEIS. TIES & GUIDES FOR HARPS MATERIAL REQUISITION SEE DOC. N° 11680MDD06240

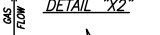
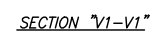
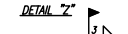
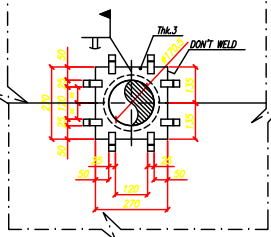
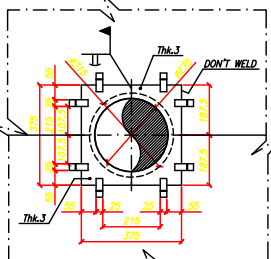
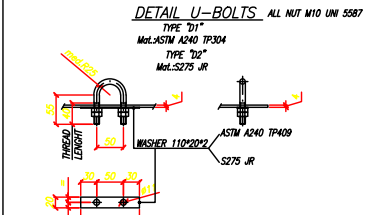
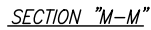
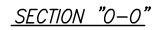
Rev. 0 and above are RELEASED for ERECTION

KKS DWG. No. 5-HA-000-API-335

REV.	DATE	DESCRIPTION/Modification	SCALE	DESIGNED/Signature	CHECKED/Signature	DATE/Date
2	18-10-05	REVISED FOR LABELLING "AS BUILT" ONLY NO OTHER CHANGES		A.S.	A.R.	A.N.
1	13-01-05	ADDED ERECTION PART MARK LIST		A.S.	A.R.	A.N.
LAVRION - METKA H.R.S.G. SEIS. TIES & GUIDES FOR HARPS ASSEMBLY ALSTOM POWER ITALIA S.p.A.						
N° DESIGNED/Drawing No.						11680MDD06235
REV. 1/2						1/



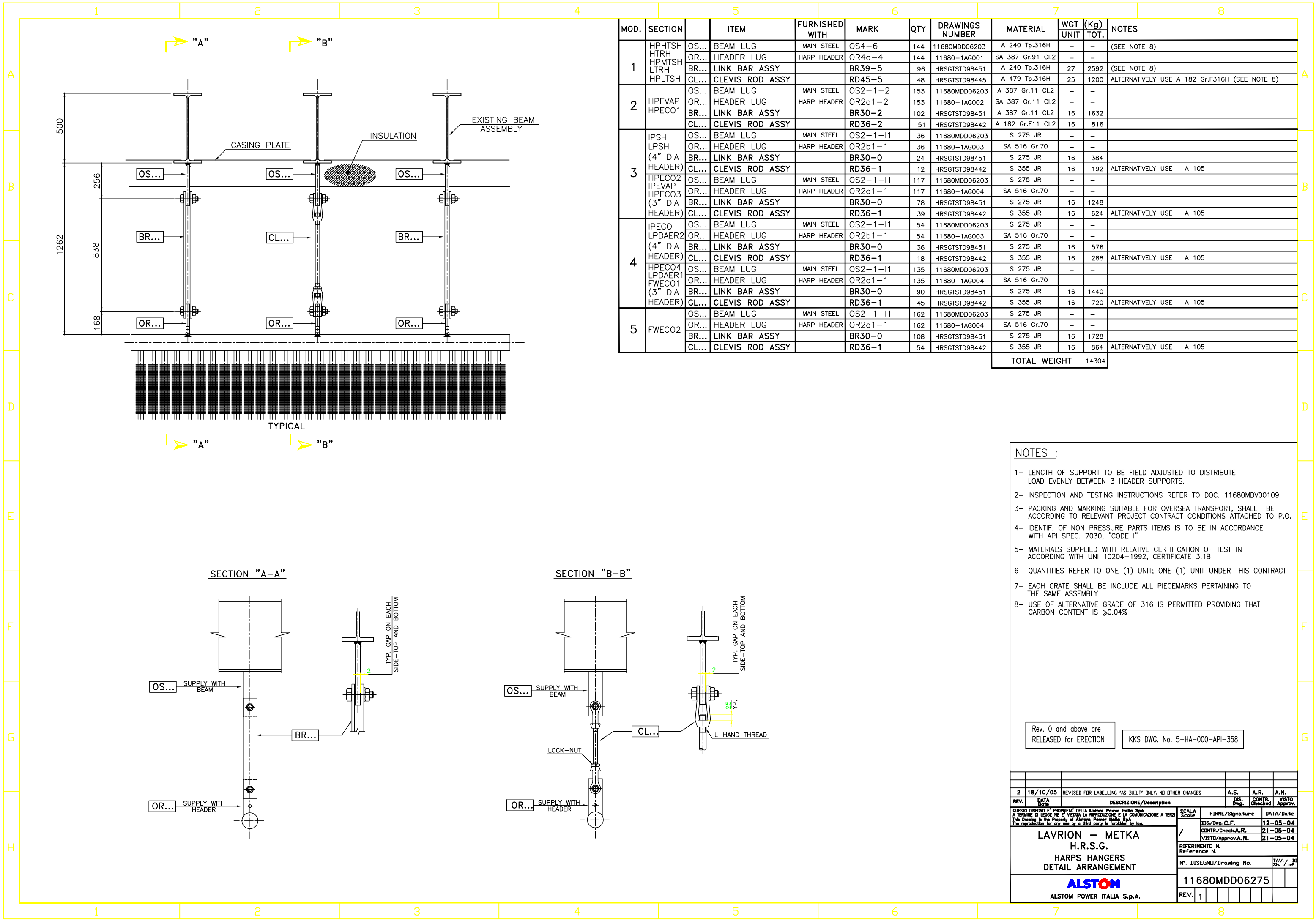




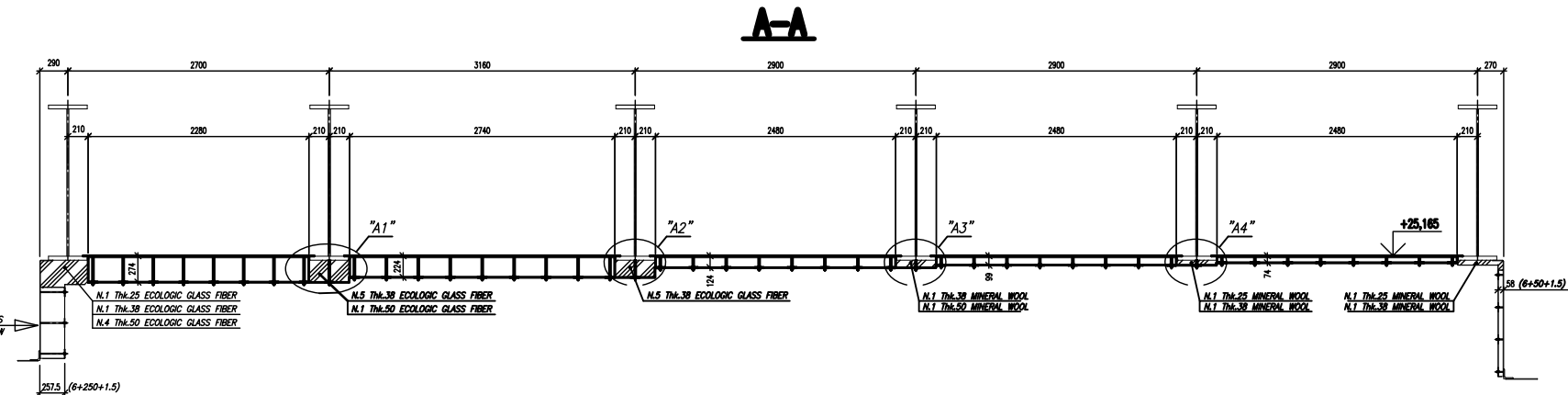
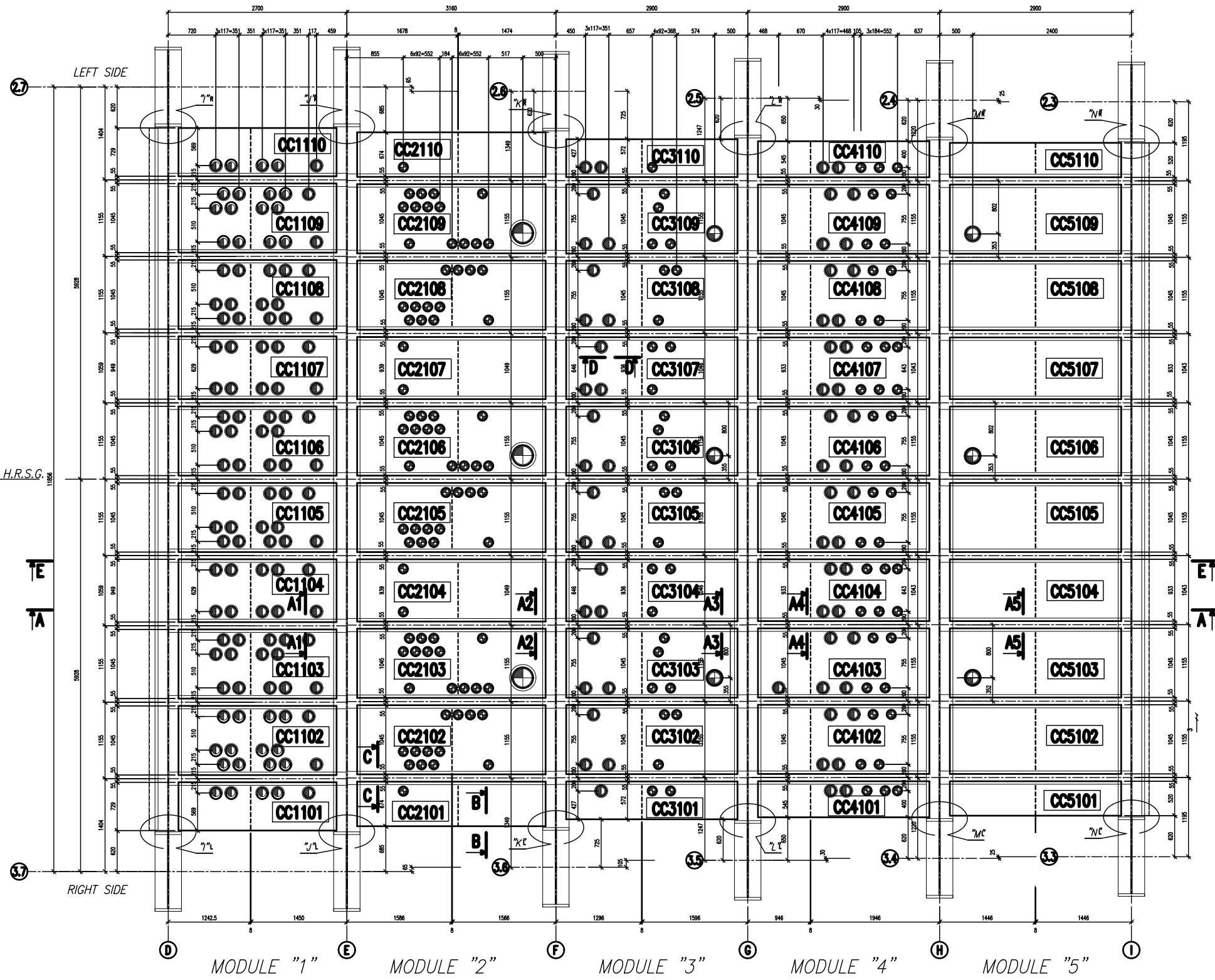
- FOR GENERAL NOTES, MATERIALS & REFERENCE DRAWING SEE DWG. N. 11680MDD06240

KKS DWG. No. 5-HA-000-API-338

3	18/10/05	REVISED FOR LABELLING 'AS BUILT' ONLY, NO OTHER CHANGES	A.S. A.R.	A.N.
2	14/01/05	COMPLETED WITH ERECTION MARKS	G.Mac.	A.R.
1	05/04/04	REVISED APPROVED	L.L.	A.R.
REV.	DATA	DESCRIPTION/Description	ALL	FORNIT.
			APPROV.	VISTO
GRANDI OPERE DI EDILIZIONE CIVILE (ALBA Edilizia Progett. SpA) - 10126 TORINO 10126 TORINO - VIA S. PIETRO 10 - TEL. 011/510001 - FAX 011/510002 The Drawing is the Property of ALBA Edilizia Progett. SpA. No reproduction or use is permitted without the written consent of ALBA Edilizia Progett. SpA.			SCALE	DATE/Date
			1:25	15/07/04
			FIRME/Signature	DATA/Date
			DESIGN. I.C.M.P.	15/07/04
			CONTR./Check A.R.	15/07/04
			VISTO/Approved A.N.	15/07/04
LAVRION - METKA H.R.S.G. GAS SEAL BAFFLES BOTTOM ASSEMBLY			REFERENCE N. REFERENCE N.	TAV./IN SH./sf
N° DISSEGNO/Drawing No.			11680MD06241	
ALSTOM			REV. / 1 2 3	
ALSTOM POWER ITALIA S.p.A.				



EXTERNAL VIEW ROOF



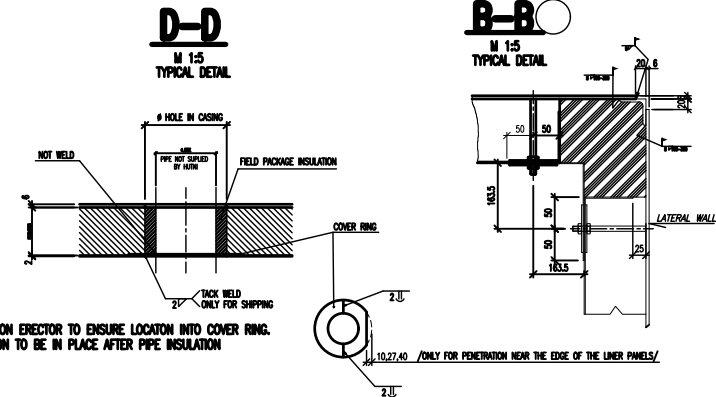
MODULE	ERECTION DWG. No.	SHEET	PART	DESCRIPTION	MAIN SHAPE	PCS	1 PC WEIGHT	TOTAL WEIGHT	SHOP DWG. No.
1	11680MM000293	1	CC1101	PANEL	PLATE 6	1	142.3	142.3	362-3-01-001
	11680MM000293	1	CC1102	PANEL	PLATE 6	1	255.4	255.4	362-3-01-001
	11680MM000293	1	CC1103	PANEL	PLATE 6	1	255.4	255.4	362-3-01-001
	11680MM000293	1	CC1104	PANEL	PLATE 6	1	255.4	255.4	362-3-01-001
	11680MM000293	1	CC1105	PANEL	PLATE 6	1	255.4	255.4	362-3-01-001
	11680MM000293	1	CC1106	PANEL	PLATE 6	1	255.4	255.4	362-3-01-001
	11680MM000293	1	CC1107	PANEL	PLATE 6	1	233.7	233.7	362-3-01-001
	11680MM000293	1	CC1108	PANEL	PLATE 6	1	281.7	281.7	362-3-01-001
	11680MM000293	1	CC1109	PANEL	PLATE 6	1	281.7	281.7	362-3-01-001
	11680MM000293	1	CC1110	PANEL	PLATE 6	1	161.4	161.4	362-3-01-001
	11680MM000293	2	CR151	STIFFENER	N.A.	578	0.1	57.8	362-3-01-001
	11680MM000293	2	CR152	STIFFENER	N.A.	0.8	3.2	362-3-01-001	
	11680MM000293	2	CR153	STIFFENER	N.A.	34	0.2	6.8	362-3-01-001
	11680MM000293	2	CR155	STIFFENER	N.A.	34	0.2	6.8	362-3-01-001
	11680MM000293	2	CR156	STIFFENER	N.A.	68	0.1	6.8	362-3-01-001
	11680MM000293	2	CR157	STIFFENER	N.A.	68	0.2	13.6	362-3-01-001
2	11680MM000293	2	CR158	STIFFENER	N.A.	4	0.1	0.4	362-3-01-001
	11680MM000293	1	CC2101	PANEL	PLATE 6	1	146	146	362-3-01-002
	11680MM000293	1	CC2102	PANEL	PLATE 6	1	286.4	286.4	362-3-01-002
	11680MM000293	1	CC2103	PANEL	PLATE 6	1	285.8	285.8	362-3-01-002
	11680MM000293	1	CC2104	PANEL	PLATE 6	1	242.3	242.3	362-3-01-002
	11680MM000293	1	CC2105	PANEL	PLATE 6	1	286.4	286.4	362-3-01-002
	11680MM000293	1	CC2106	PANEL	PLATE 6	1	285.8	285.8	362-3-01-002
	11680MM000293	1	CC2107	PANEL	PLATE 6	1	242.3	242.3	362-3-01-002
	11680MM000293	1	CC2108	PANEL	PLATE 6	1	286.4	286.4	362-3-01-002
	11680MM000293	1	CC2109	PANEL	PLATE 6	1	285.8	285.8	362-3-01-002
	11680MM000293	1	CC2110	PANEL	PLATE 6	1	147.1	147.1	362-3-01-002
	11680MM000293	2	CR251	STIFFENER	N.A.	612	0.1	61.2	362-3-01-002
	11680MM000293	2	CR252	STIFFENER	N.A.	4	0.8	3.2	362-3-01-002
	11680MM000293	2	CR253	STIFFENER	N.A.	2	0.4	0.8	362-3-01-002
	11680MM000293	2	CR254	STIFFENER	N.A.	34	0.2	6.8	362-3-01-002
	11680MM000293	2	CR255	STIFFENER	N.A.	34	0.2	6.8	362-3-01-002
3	11680MM000293	2	CR256	STIFFENER	N.A.	68	0.1	6.8	362-3-01-002
	11680MM000293	2	CR257	STIFFENER	N.A.	68	0.2	13.6	362-3-01-002
	11680MM000293	2	CR258	STIFFENER	N.A.	4	0.1	0.4	362-3-01-002
	11680MM000293	1	CC3101	PANEL	PLATE 6	1	106.8	106.8	362-3-01-003
	11680MM000293	1	CC3102	PANEL	PLATE 6	1	208.7	208.7	362-3-01-003
	11680MM000293	1	CC3103	PANEL	PLATE 6	1	208.2	208.2	362-3-01-003
	11680MM000293	1	CC3104	PANEL	PLATE 6	1	189.7	189.7	362-3-01-003
	11680MM000293	1	CC3105	PANEL	PLATE 6	1	208.7	208.7	362-3-01-003
	11680MM000293	1	CC3106	PANEL	PLATE 6	1	208.2	208.2	362-3-01-003
	11680MM000293	1	CC3107	PANEL	PLATE 6	1	189.7	189.7	362-3-01-003
	11680MM000293	1	CC3108	PANEL	PLATE 6	1	208.7	208.7	362-3-01-003
	11680MM000293	1	CC3109	PANEL	PLATE 6	1	208.2	208.2	362-3-01-003
	11680MM000293	1	CC3110	PANEL	PLATE 6	1	106.8	106.8	362-3-01-003
	11680MM000293	2	CR351	STIFFENER	N.A.	612	0.1	61.2	362-3-01-003
	11680MM000293	2	CR352	STIFFENER	N.A.	4	0.8	3.2	362-3-01-003
	11680MM000293	2	CR353	STIFFENER	N.A.	2	0.4	0.8	362-3-01-003
4	11680MM000293	2	CR354	STIFFENER	N.A.	34	0.2	6.8	362-3-01-003
	11680MM000293	2	CR355	STIFFENER	N.A.	34	0.1	3.4	362-3-01-003
	11680MM000293	2	CR356	STIFFENER	N.A.	68	0.1	6.8	362-3-01-003
	11680MM000293	2	CR357	STIFFENER	N.A.	68	0.2	13.6	362-3-01-003
	11680MM000293	2	CR358	STIFFENER	N.A.	4	0.1	0.4	362-3-01-003
	11680MM000293	1	CC4101	PANEL	PLATE 6	1	100.1	100.1	362-3-01-004
	11680MM000293	1	CC4102	PANEL	PLATE 6	1	200.2	200.2	362-3-01-004
	11680MM000293	1	CC4103	PANEL	PLATE 6	1	200.7	200.7	362-3-01-004
	11680MM000293	1	CC4104	PANEL	PLATE 6	1	181.7	181.7	362-3-01-004
	11680MM000293	1	CC4105	PANEL	PLATE 6	1	200.2	200.2	362-3-01-004
	11680MM000293	1	CC4106	PANEL	PLATE 6	1	200.2	200.2	362-3-01-004
	11680MM000293	1	CC4107	PANEL	PLATE 6	1	181.7	181.7	362-3-01-004
	11680MM000293	1	CC4108	PANEL	PLATE 6	1	200.2	200.2	362-3-01-004
	11680MM000293	1	CC4109	PANEL	PLATE 6	1	200.7	200.7	362-3-01-004
	11680MM000293	1	CC4110	PANEL	PLATE 6	1	115.4	115.4	362-3-01-004
	11680MM000293	2	CR451	STIFFENER	N.A.	758	0.1	75.6	362-3-01-004
5	11680MM000293	2	CR452	STIFFENER	N.A.	4	0.8	3.2	362-3-01-004
	11680MM000293	2	CR453	STIFFENER	N.A.	2	0.4	0.8	362-3-01-004
	11680MM000293	2	CR454	STIFFENER	N.A.	34	0.1	3.4	362-3-01-004
	11680MM000293	2	CR455	STIFFENER	N.A.	34	0.1	3.4	362-3-01-004
	11680MM000293	2	CR456	STIFFENER	N.A.	68	0.1	6.8	362-3-01-004
	11680MM000293	2	CR457	STIFFENER	N.A.	68	0.2	13.6	362-3-01-004
	11680MM000293	2	CR458	STIFFENER	N.A.	4	0.1	0.4	362-3-01-004
	11680MM000293	1	CC5101	PANEL	PLATE 6	1	95	95	362-3-01-005
	11680MM000293	1	CC5102	PANEL	PLATE 6	1	194.5	194.5	362-3-01-005
	11680MM000293	1	CC5103	PANEL	PLATE 6	1	194.5	194.5	362-3-01-005
	11680MM000293	1	CC5104	PANEL	PLATE 6	1	176.8	176.8	362-3-01-005
	11680MM000293	1	CC5105	PANEL	PLATE 6	1	194.5	194.5	362-3-01-005
	11680MM000293	1	CC5106	PANEL	PLATE 6	1	194.5	194.5	362-3-01-005
	11680MM000293	1	CC5107	PANEL	PLATE 6	1	176.8	176.8	362-3-01-005
	11680MM000293	1	CC5108	PANEL	PLATE 6	1	194.5	194.5	362-3-01-005
	11680MM000293	1	CC5109	PANEL	PLATE 6	1	194.4	194.4	362-3-01-005
11680MM000293	1	CC5110	PANEL	PLATE 6	1	77.4	77.4	362-3-01-005	
11680MM000293	2	CR551	STIFFENER	N.A.	648	0.1	64.8	362-3-01-005	
11680MM000293	2	CR552	STIFFENER	N.A.	4	0.8	3.2	362-3-01-005	
11680MM000293	2	CR553	STIFFENER	N.A.	2	0.2	0.4	362-3-01-005	
11680MM000293	2	CR556	STIFFENER	N.A.	4	0.1	0.4	362-3-01-005	
						TOTAL WEIGHT Kg.	1005,1		

Rev. 1 and above are
RELEASED for ERECTION

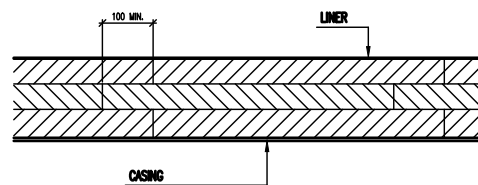
KKS DWG. No. 5-HA-000-API-310

MATERIALS:

- | | |
|--|--|
| • OSING PLATE (beam THK.) | SZ75MR EN 10025 |
| • EXTERNAL STIFFENERS (BEAMS & PLATES) | SZ75MR EN 10025 |
| • OSING INTERNAL STIFF. FOR GUIDES AND STOP DECKES: | |
| MODULES 1-2 | ASTM A307 G-22 |
| MODULES 3-4-5 | SZ75MR EN 10025 |
| • TEST POINT, THERMOCOUPLE & DRAIN PIPE | ASTM A312 TP304 |
| • BOLTS | CL. 8.8 - EN-200898 - UM 5737 / DIN 931 (GALVANIZED) |
| • NUTS | CL. 8 - EN-200898 - UM 5508 / DIN 934 |
| • WASHER (M2 x BOLT) | R80 - EN-200898 - UM 6562 / DIN 125/A |
| • LINER AND COVER PLATES (MODULES 1-2): | |
| LATERAL & ROOF 1.5 THK. | ASH 400 |
| FLOOR 2.5 THK. | ASH 400 |
| • LINER AND COVER PLATES (MODULES 3-4-5): | |
| LATERAL & ROOF 1.5 THK. | SZ75MR EN 10025 |
| FLOOR 2.5 THK. | SZ75MR EN 10025 |
| • STUDS, PWS & WASHERS (MODULES 1-2): | |
| STUD M12 | ASTM A192 F304 (OR EQUIV.) |
| NUT M12 UM 5508 | ASTM A1916 B7 (OR EQUIV.) |
| WASHERS 30x40x2.5 | ASTM A1916 B7 (OR EQUIV.) |
| PN 43 | ASTM A192 F304 (OR EQUIV.) |
| • STUDS, PWS & WASHERS (MODULES 3-4-5): | |
| STUD M12 | ST 37 300 (OR EQUIV.) |
| NUT M12 UM 5508 | ST 37 200X2 (OR EQUIV.) |
| WASHERS 30x40x2.5 | SZ75MR EN 10025 |
| PN 43 | ASTM A192 F304 (OR EQUIV.) |
| • INSULATION: | |
| ECOLOGIC GLASS FIBER 400-kg/m ³ 160 kg/m ³  | |
| MINERAL WOOL 120 kg/m ³ | |



TYPICAL DETAIL OF INSULATION OVERLAPPING



FIELD WELD SYMBOLS ACC. AWS A2.4-88
[A]-(mm)






3									
2									
1									
0									

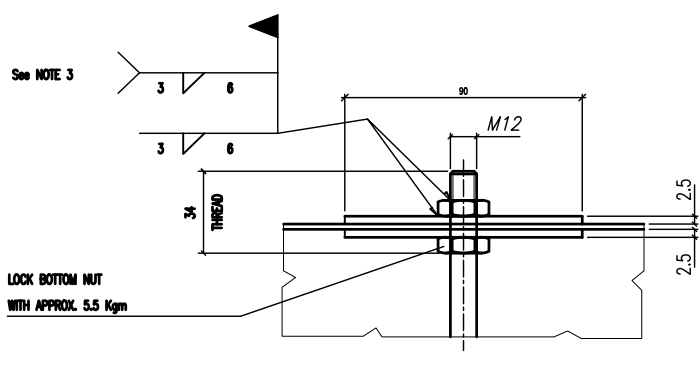
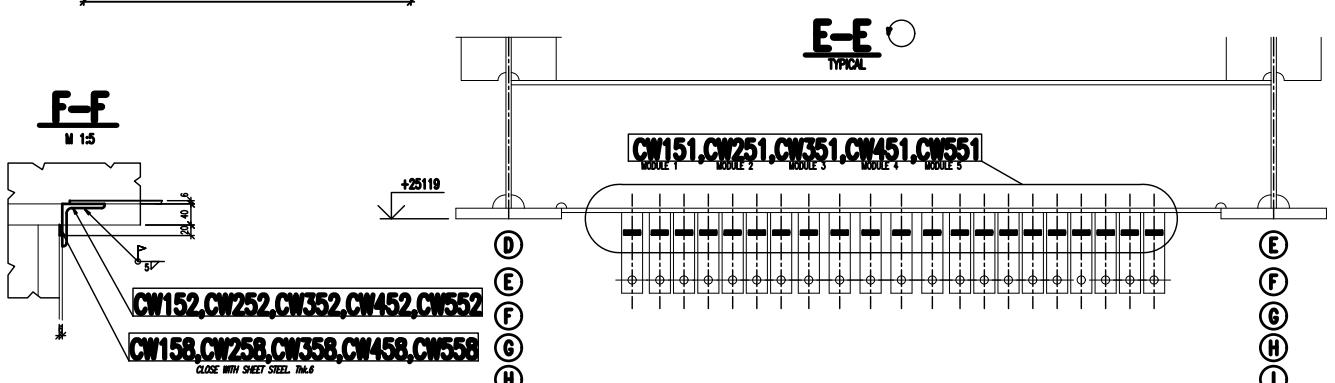
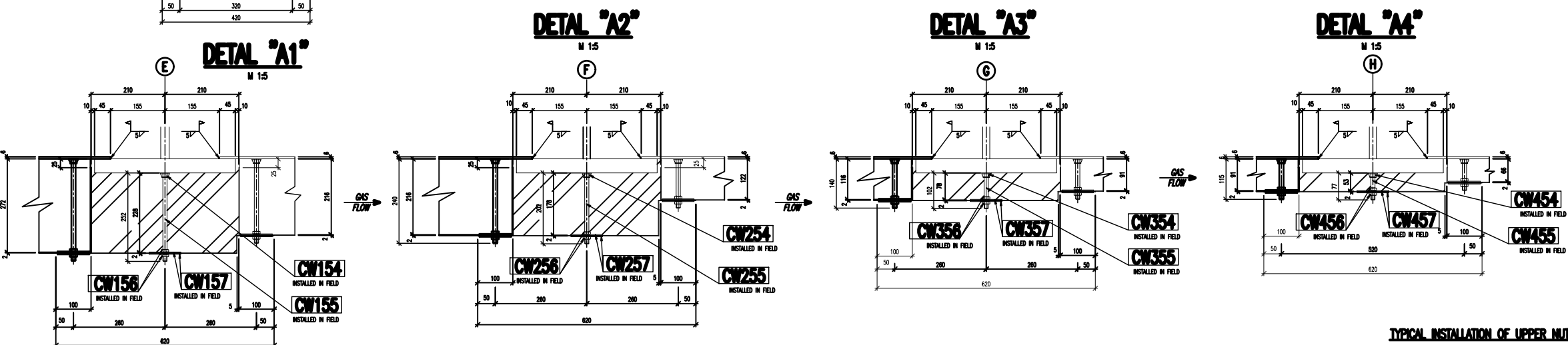
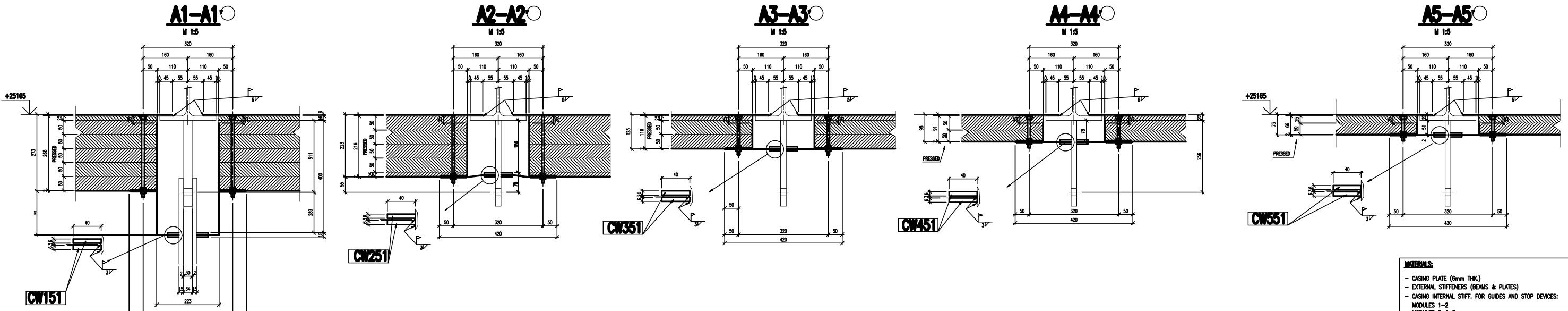
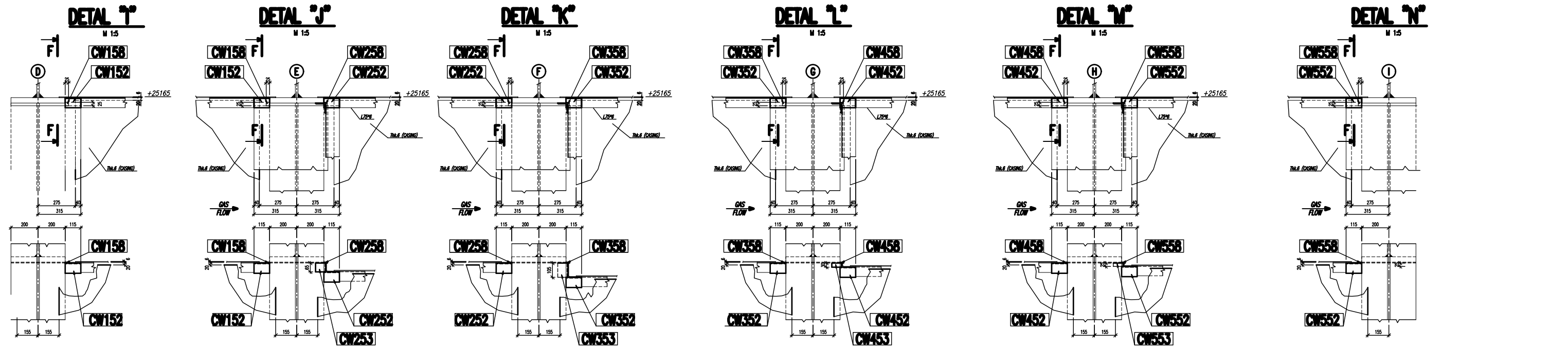
No.	Date	Description	Drawn	Check	Appr.	Scale
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NITIM NORDIME OSTIA L.R.A.
 STEEL STRUCTURES MANUFACTURING
 U. MAGGIORI MAG. 472 11
 00127 ROMA (RM)

Revision	Date	Description
01	18.05.2004	MODUL
02	18.05.2004	MODUL
03	18.05.2004	MODUL

Drawn:  Date: 18.05.2004
 Check:  Date: 18.05.2004
 Appr.:  Date: 18.05.2004

2	18-10-05	REVISED AS PER MOD. TRACKING #3 AND LABELLING "AS BUILT"	A.S.	A.R.	A.N.
2	28-07-04	REVISED UPDATE	A.S.	A.R.	A.N.
REV.	DATA	DESCRIZIONE/Description	SCALE	DATE	DATE
QUESTO DISEGNO E' PROPRIETA' DELLA ALSTOM POWER ITALIA S.p.A. E' CONSIDERAZIONE A TITOLO DI PRELIMINARE. IL DISEGNO E' LA PROPRIETA' DI ALSTOM POWER ITALIA S.p.A. E' CONSIDERAZIONE A TITOLO DI PRELIMINARE.			SCALE	DATE	DATE
LAVIRON - METKA			SCALE	DATE	DATE
CASINO			SCALE	DATE	DATE
ROOF ASSEMBLY			SCALE	DATE	DATE
ERECTOR SCHEMA			SCALE	DATE	DATE
ALSTOM			SCALE	DATE	DATE
ALSTOM POWER ITALIA S.p.A.			SCALE	DATE	DATE



TYPICAL INSTALLATION OF UPPER NUT

NOTES: 1) LOCK WITH WRENCH THE TOP NUT UNTIL THERE IS FULL CONTACT BETWEEN LINER AND WASHER, THEN TURN BACK THE NUT ONE FULL REVOLUTION.
2) PROCEED TO WELD AS SHOWN.
3) ALL NUTS CORRESPONDING TO THE CORNER OF THE PANELS SECTION SHALL BE WELDED AT SITE (DO NOT WELD IN SHOP)

MATERIALS:

- CASING PLATE (6mm THK.)	S275JR EN 10025
- EXTERNAL STIFFENERS (BEAMS & PLATES)	S275JR EN 10025
- CASING INTERNAL STIFF. FOR GUIDES AND STOP DEVICES:	
MODULES 1-2	ASTM A387 Gr.22
MODULES 3-4-5	S275JR EN 10025
- TEST PORT, THERMOCOUPLE & DRAIN PIPE	ASTM A312 TP304
- BOLTS	CL. 8.8 - EN20898 - UNI 5737 / DIN 931 (GALVANIZED)
- NUTS	CL. 8 - EN20898 - UNI 5588 / DIN 934
- WASHER (M2 x BOLT)	R80 - EN20898 - UNI 6592 / DIN 125/A
- LINER AND COVER PLATES (MODULES 1-2):	
LATERAL & ROOF 1.5 THK.	ASI 409
FLOOR 2.5 THK.	ASI 409
- LINER AND COVER PLATES (MODULES 3-4-5):	
LATERAL & ROOF 1.5 THK.	S275JR EN 10025
FLOOR 2.5 THK.	S275JR EN 10025
- STUDS, PINS & WASHERS (MODULES 1-2):	
STUD M12	ASTM A182 F304 (OR EQUIV.)
NUT M12 UNI 5589	ASTM A194 B8 (OR EQUIV.)
WASHERS 90x90x2.5	ASTM A182 F304 (OR EQUIV.)
PIN A3	ASTM A182 F304 (OR EQUIV.)
- STUDS, PINS & WASHERS (MODULES 3-4-5):	
STUD M12	ST 37.3K (OR EQUIV.)
NUT M12 UNI 5589	UNI EN 20898/2 (OR EQUIV.)
WASHERS 90x90x2.5	S275JR EN 10025
PIN A3	ASTM A182 F304 (OR EQUIV.)
- INSULATION:	
ECOLOGIC GLASS FIBER 128 Kg/m³	160 Kg/m³ / 2
MINERAL WOOL 120 Kg/m³	

FIELD WELD SYMBOLS ACC. AWS A2.4-98

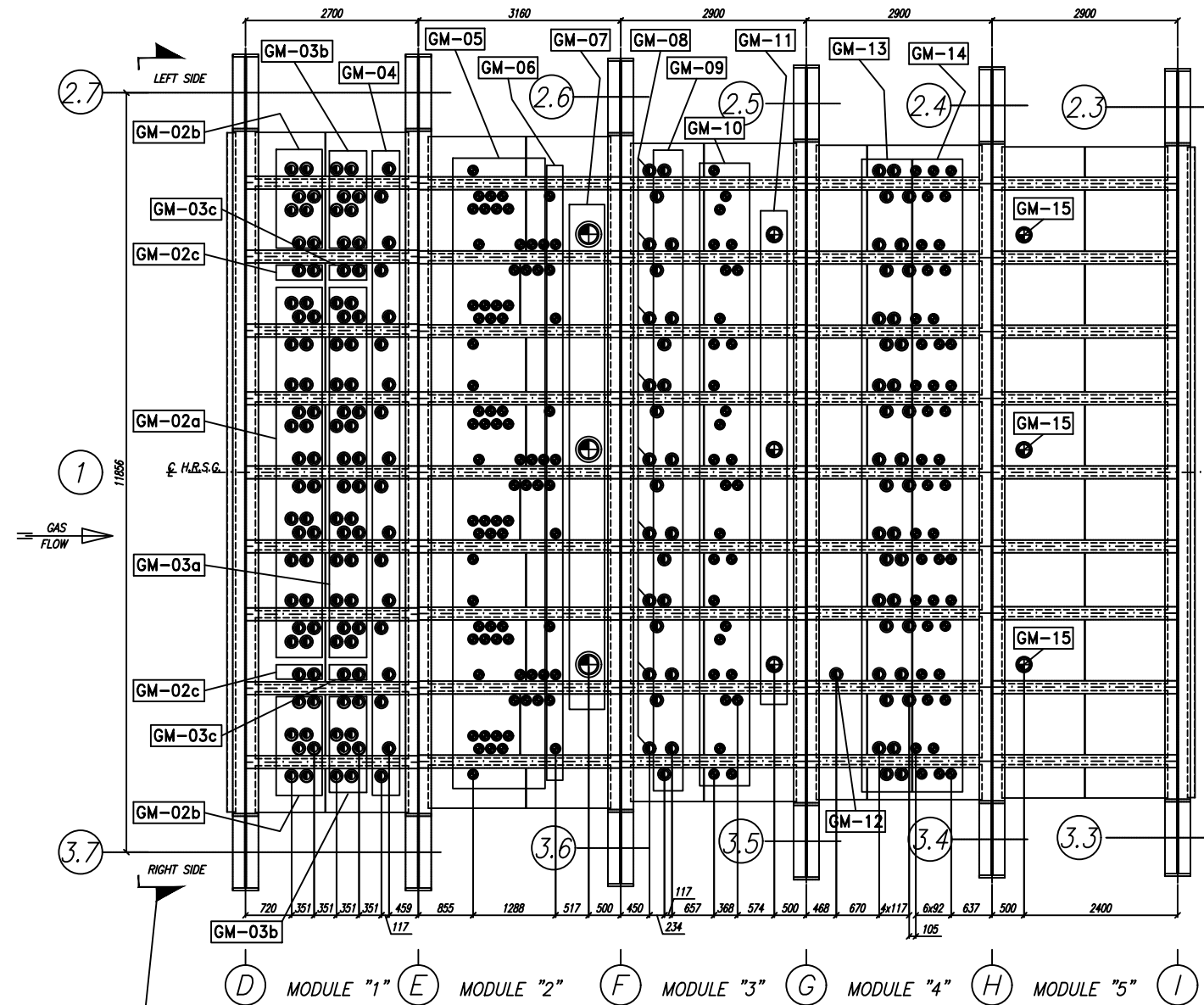
(A)-(mm)

Rev.	Date	Description	Drawn	Check	Appr.	Scale
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2						
1						
0						

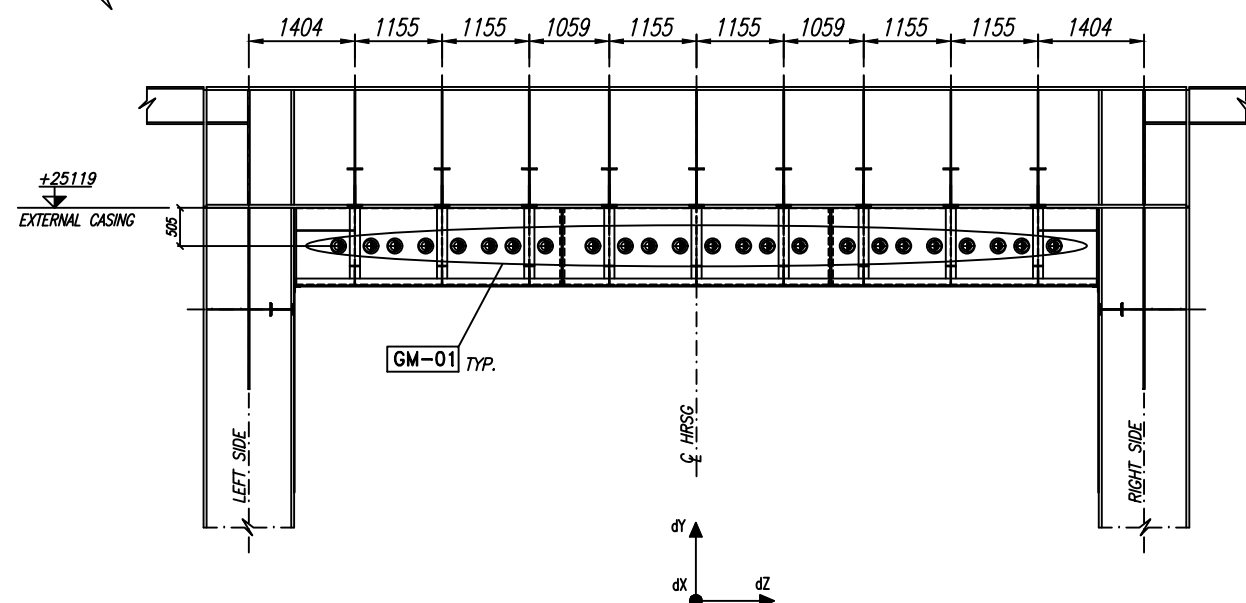
REVISED BY: HUTNI MONIZZE OSTRAVA s.r.o.
DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.
DATE: 19.08.2004
SCALE: 1:25
SHEET: 12/25
PROJECT: KKS DWG. No. 5-HA-000-API-311

2	18-10-05	REVISED AS PER MODIFICATION #3 AND LABELLING "AS BUILT"	A.S.	A.R.	A.N.
1	26-07-04	REVISED UPDATE	L.L.	A.R.	A.N.
REV.	DATA	DESCRIPTION/Description	SCALE	DATE	BY
1	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
2	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
3	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
4	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
5	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
6	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
7	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
8	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
9	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
10	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
11	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
12	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
13	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
14	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
15	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
16	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
17	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
18	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
19	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
20	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
21	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
22	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
23	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
24	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
25	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
26	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
27	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
28	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
29	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
30	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
31	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
32	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
33	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
34	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
35	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
36	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
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38	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
39	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
40	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
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42	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
43	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
44	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
45	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
46	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
47	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
48	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
49	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
50	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
51	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
52	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
53	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
54	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
55	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
56	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
57	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
58	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
59	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
60	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
61	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
62	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
63	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
64	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
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66	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
67	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
68	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
69	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
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73	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
74	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
75	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
76	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
77	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
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79	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
80	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
81	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
82	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
83	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
84	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
85	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
86	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
87	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
88	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
89	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
90	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
91	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
92	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
93	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
94	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
95	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
96	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
97	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
98	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
99	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04
100	19/08/04	DESIGN: HUTNI MONIZZE OSTRAVA s.r.o.	1:25	19/08/04	19/08/04

EXTERNAL VIEW ROOF

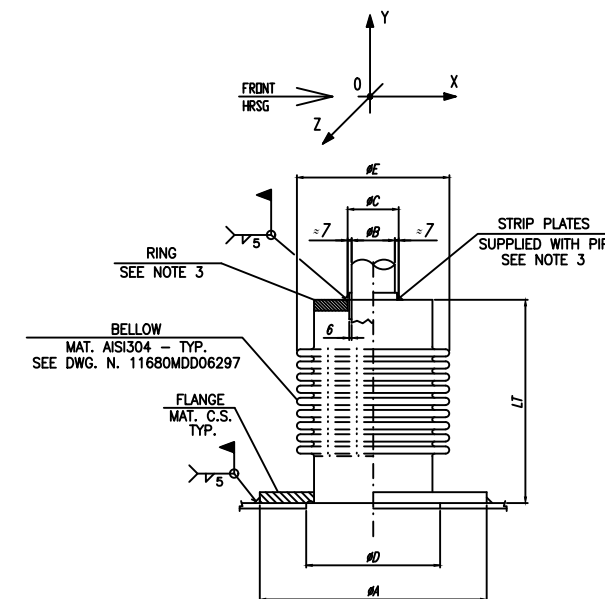


FRONT SIDE - EXTERNAL VIEW



MODULE	IDENTIF. COMPON.	ITEM	DESCRIPTION	Q.ty	DIMENSIONS							MAXIMUM MOVEMENTS				DESIGN TEMPERATURE (GAS SIDE) (°C)	DESIGN PRESSURE (GAS SIDE) (mmH2O)	PIPE MATERIAL (NOTE 3)
					DN ND	øA (mm)	øB (mm)	øC (mm)	øD (mm)	øE (mm)	LT (mm)	dx (mm)	dy (mm)	dz (mm)	NOTE			
UPPER FRONT PANEL	HS12	GM-01	HPHTSH outlet links	24	100	200	114,3	128	SLOT 156x170	186	200	±6	±10	±17	(1)	604	+550	SA335 P91
1	RS12	GM-02a	HTRH outlet links	28	100	200	114,3	128	155	186	200	±5	±10	±19		604	+550	SA335 P91
		GM-02b	HTRH outlet links	16	100	200	114,3	128	SLOT 156x170	186	200	±5	±10	±17	(2)	604	+550	SA335 P91
		GM-02c	HTRH outlet links	4	100	220	114,3	128	160	205	200	±5	±10	±22		604	+550	SA335 P91
		GM-03a	LTRH inlet links	28	100	200	114,3	128	155	186	200	±5	±10	±14		604	+550	SA335 P91
	RS4	GM-03b	LTRH inlet links	16	100	220	114,3	128	SLOT 156x170	205	200	±5	±10	±23		604	+550	SA335 P91
		GM-03c	LTRH inlet links	4	100	200	114,3	128	160	186	200	±5	±10	±16		604	+550	SA335 P91
		HS1	GM-04	HPLTSH1 inlet links	18	100	200	114,3	128	155	186	200	±5	±10	±6		604	+550
	2	HE7-HE10	GM-05	HPEVAP risers	69	80	200	88,9	103	130	158	200	±5	±10	±20		444	+550
HW14		GM-06	HPECO1 outlet links	12	80	160	88,9	103	130	158	200	±5	±10	±18		444	+550	SA106 Gr.B
HE1		GM-07	HPEVAP downcomer	3	250	400	273	287	315	368	300	±5	-15	±16		444	+550	SA106 Gr.B
3	IS5	GM-08	IPSH outlet links	9	100	200	114,3	128	155	186	200	±5	±10	±19		321	+550	SA106 Gr.B
	LS1	GM-09	LPSH inlet links	18	100	200	114,3	128	155	186	200	±5	±10	±5		321	+550	SA106 Gr.B
	IE6-IE8	GM-10	IPEVAP risers	30	80	160	88,9	103	130	158	200	±5	±10	±14		321	+550	SA106 Gr.B
	IE1	GM-11	IPEVAP downcomer	3	150	300	168,3	182	210	259	200	±5	-11	±12		321	+550	SA106 Gr.B
4	IW4	GM-12	IPECO outlet links	1	100	200	114,3	128	155	186	200	±5	±10	±5		254	+550	SA106 Gr.B
	LE5-LE6	GM-13	LPDAER1 risers	36	100	200	114,3	128	155	186	200	±5	±10	±10		254	+550	SA106 Gr.B
	LE7	GM-14	LPDAER2 risers	42	80	160	88,9	103	130	158	200	±5	±10	±10		254	+550	SA106 Gr.B
5	LE1	GM-15	LPDAER downcomer	3	150	300	168,3	182	210	259	200	±5	-10	±9		190	+550	SA106 Gr.B

- NOTES:
- 1) INSTALLATION PRE-SET= 50% (MAXIMUM MOVEMENT: GM-1 ... dz= 33mm);
 - 2) INSTALLATION PRE-SET= 50% (MAXIMUM MOVEMENT: GM-2b... dz= 33mm);
 - 3) SA335 P91 PIPE TO HAVE SA335 P91 RING & STRIP PLATES.
SA335 P22 PIPE TO HAVE SA387 Gr.22 RING & STRIP PLATES.
SA106 Gr.B PIPE TO HAVE SA516 Gr.70 (OR EQUIVALENT) RING & STRIP PLATES.



MARKING INSTRUCTIONS FOR SHOP DRAWINGS AND ERECTION:

- EACH COMPONENT WILL BE MARKED AS INDICATED:
- EXAMPLE: GM-01
- DENOTES UNIT NUMBER
- DENOTES ERECTION MARK
- ○ MEANS BILL OF MATERIAL POSITION. -SHOP
- □ MEANS MARK'S NUMBER. -ERECTION

WELDINGS:

- ALL WELDS TO BE CONTINUOUS FILLET WELDS UNLESS OTHERWISE SPECIFIED.
- NOT DIMENSIONED FILLET WELDS SHALL HAVE A DIMENSION "a" EQUAL TO 0,7 TIMES THE MINIMUM THICKNESS TO BE WELDED.
- MEANS FIELD WELDING.

NOTES:

- ALL DIMENSIONS ARE MILLIMETERS UNLESS DIFFERENTLY SHOWN.
- ALL ELEVATIONS REFER TO QUOTE +0,00 FINISHED GROUND FLOOR.
- ARRANGEMENT SHOWN IS FOR (1) ONE UNIT, (1) ONE UNIT ON THIS CONTRACT.
- FOR ALL OTHER MANUFACTURING, TESTING AND PAINTING INSTRUCTIONS REFER TO M.R. 11680MDR06290.

NOTES FOR ERECTION:

- METALLIC EXPANSION JOINTS SHALL BE INSTALLED ON EACH PIPE BEFORE THE WELDING OF PIPE.
- METALLIC EXPANSION JOINTS TO BE PROTECTED DURING ERECTION.

REFERENCE DRAWINGS:

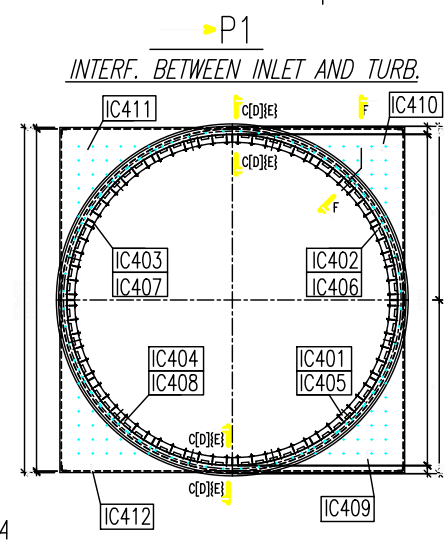
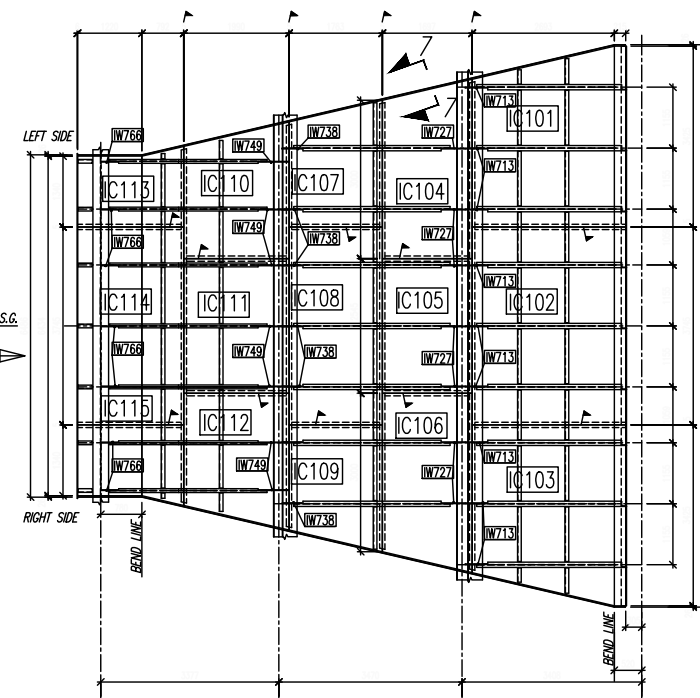
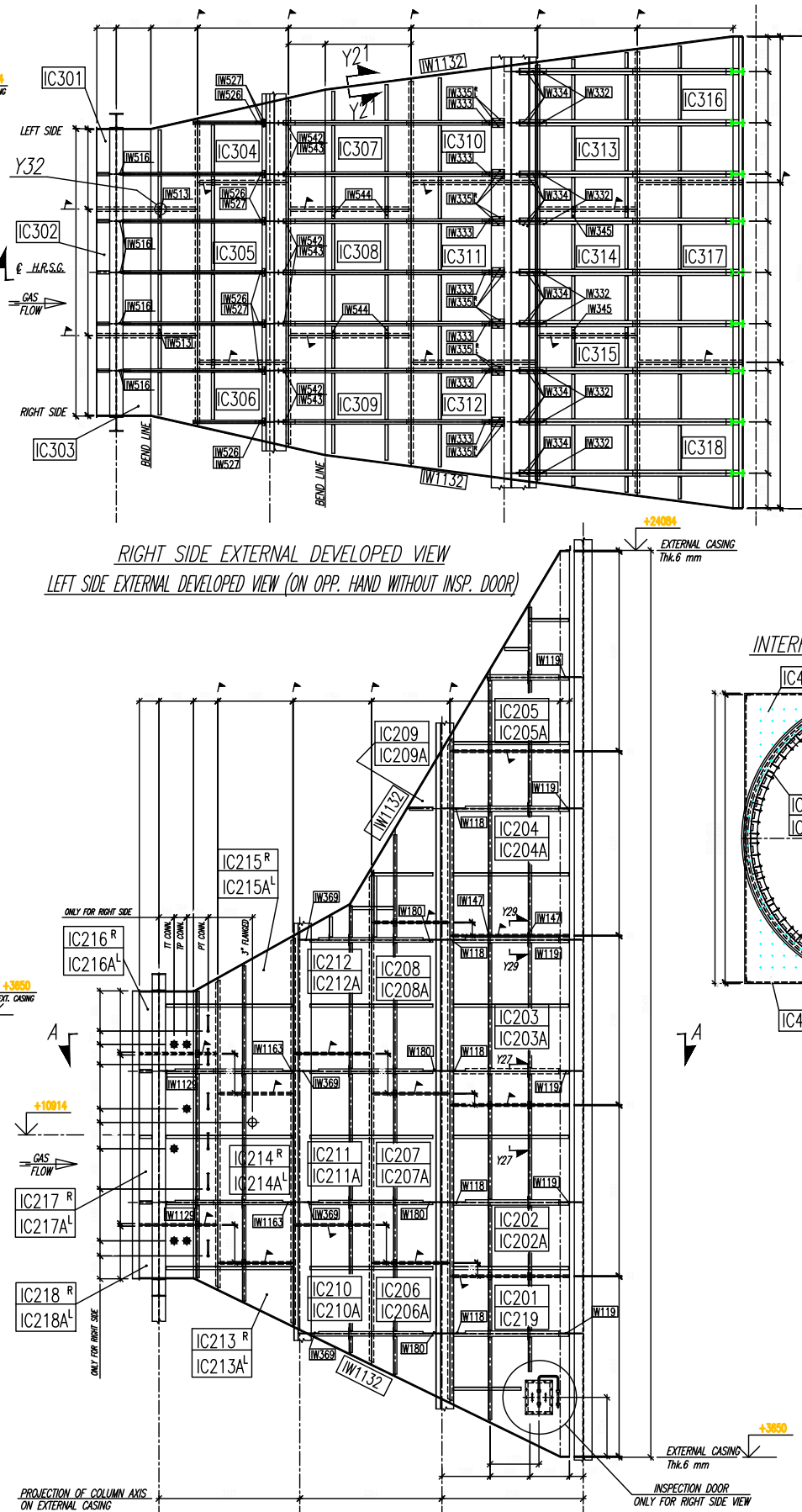
- FOR MODULE INSULATED PANELS - ROOF ASSEMBLY SEE DWG. N. 11680MDR06254

Rev. 1 and above are
RELEASED for ERECTION

KKS DWG. No. 5-HA-000-API-362

2	18-10-05	REVISED FOR LABELLING "AS BUILT" ONLY. NO OTHER CHANGES	A.S.	A.R.	A.N.
1	07/10/04	REVISED WHERE INDICATED WITH 	L.L.	A.R.	A.N.
REV.	DATA Date	DESCRIPTION/Description	DIS. Dwg.	CONTR. Checked	VISTO Approv.
QUESTO DISEGNO E' PROPRIETA' DELLA Alstom Power, Infilco S.p.A. A TERMINE DI LEGGE NE E' VIETATA LA RIPRODUZIONE E LA COMUNICAZIONE A TERZI (This Drawing is the Property of Alstom Power, Infilco S.p.A. The reproduction, for any use by a third party is forbidden by law.			SCALA Scale	FIRME/Signature	DATA/Date
			1:25	DIS./Dwg. I.C.I.M.P.	16/07/04
				CONTR./check. A.R.	23/07/04
LAVIRON - METKA H.R.S.G. HRSG METAL JOINTS ASSEMBLY AND DETAILS				RIFERIMENTO N. Reference N.	
				N°. DISEGNO/Drawing No.	
ALSTOM ALSTOM POWER ITALIA S.p.A.				TAV./ DI Sh. / of	
				11680MDD06296	
REV.		1	2		

FLOOR EXTERNAL DEVELOPED VIEW



OBJECT	ERECTON DWG. No.	SHEET	PART DESCRIPTION	MAIN SHAPE	PCS	1 PC WEIGHT	TOTAL WEIGHT	SHOP DWG. No.	
FLOOR	11680MD09195	1	IC101 PANEL	PL 6	1	1321.8	1321.8	362-4-011	
	11680MD09195	1	IC102 PANEL	PL 6	1	1601.9	1601.9	362-4-011	
	11680MD09195	1	IC103 PANEL	PL 6	1	1316.8	1316.8	362-4-011	
	11680MD09195	1	IC173 STIFFENER	PL 12	9	17.7	159.3	362-4-011	
	11680MD09195	1	IC104 PANEL	PL 6	1	721.6	721.6	362-4-012	
	11680MD09195	1	IC105 PANEL	PL 6	1	679.4	679.4	362-4-012	
	11680MD09195	1	IC106 PANEL	PL 6	1	721.6	721.6	362-4-012	
	11680MD09195	1	IC107 PANEL	PL 6	1	541.3	541.3	362-4-012	
	11680MD09195	1	IC108 PANEL	PL 6	1	992.4	992.4	362-4-012	
	11680MD09195	1	IC109 PANEL	PL 6	1	535.2	535.2	362-4-012	
	11680MD09195	1	IC1727 STIFFENER	PL 12	7	28.5	199.5	362-4-012	
	11680MD09195	1	IC1738 STIFFENER	PL 12	7	12.8	89.6	362-4-012	
	11680MD09195	1	IC110 PANEL	PL 6	1	648.5	648.5	362-4-013	
	11680MD09195	1	IC111 PANEL	PL 6	1	789	789	362-4-013	
	11680MD09195	1	IC112 PANEL	PL 6	1	659.9	650.9	362-4-013	
	11680MD09195	1	IC113 PANEL	PL 6	1	349	349	362-4-013	
	11680MD09195	1	IC114 PANEL	PL 6	1	925.6	925.6	362-4-013	
	11680MD09195	1	IC115 PANEL	PL 6	1	346.7	346.7	362-4-013	
	11680MD09195	1	IC1749 STIFFENER	PL 12	7	23.1	161.7	362-4-013	
	11680MD09195	1	IC1766 STIFFENER	PL 12	7	10.8	75.6	362-4-013	
	11680MD09195	1	IC1316 PANEL	PL 6	1	1119.7	1119.7	362-4-014	
	11680MD09195	1	IC1317 PANEL	PL 6	1	1392.8	1392.8	362-4-014	
	11680MD09195	1	IC1318 PANEL	PL 6	1	1119.7	1119.7	362-4-014	
	11680MD09195	1	IC1310 PANEL	PL 6	1	1082.8	1082.8	362-4-015	
	11680MD09195	1	IC1311 PANEL	PL 6	1	1497.1	1497.1	362-4-015	
	11680MD09195	1	IC1312 PANEL	PL 6	1	1082.8	1082.8	362-4-015	
	11680MD09195	1	IC1313 PANEL	PL 6	1	1119.7	1119.7	362-4-015	
	11680MD09195	1	IC1314 PANEL	PL 6	1	1028.4	1028.4	362-4-015	
	11680MD09195	1	IC1315 PANEL	PL 6	1	1198.5	1198.5	362-4-015	
	11680MD09195	1	IC1332 STIFFENER	IPE 270	9	21.5	193.5	362-4-015	
	11680MD09195	1	IC1333 STIFFENER	IPE 200	7	10.9	76.3	362-4-015	
	11680MD09195	1	IC1334 STIFFENER	PL 12	18	10.7	192.6	362-4-015	
11680MD09195	1	IC1335 STIFFENER	L 100x10	14	7.1	99.4	362-4-015		
11680MD09195	1	IC1345 STIFFENER	L 70x7	4	2.2	8.8	362-4-015		
ROOF	11680MD09195	1	IC301 PANEL	PL 6	1	476.5	476.5	362-4-017	
	11680MD09195	1	IC302 PANEL	PL 6	1	733.1	733.1	362-4-017	
	11680MD09195	1	IC303 PANEL	PL 6	1	476.5	476.5	362-4-017	
	11680MD09195	1	IC304 PANEL	PL 6	1	491.2	491.2	362-4-017	
	11680MD09195	1	IC305 PANEL	PL 6	1	1006.3	1006.3	362-4-017	
	11680MD09195	1	IC306 PANEL	PL 6	1	491.2	491.2	362-4-017	
	11680MD09195	1	IC1353 STIFFENER	L 70x7	2	2.4	4.8	362-4-017	
	11680MD09195	1	IC1354 STIFFENER	PL 10	1	1.7	1.7	362-4-017	
	11680MD09195	1	IC1356 STIFFENER	IPE 140	7	2.6	18.2	362-4-017	
	11680MD09195	1	IC1357 STIFFENER	L 80x8	14	1.6	22.4	362-4-017	
	11680MD09195	1	IC307 PANEL	PL 6	1	666.4	666.4	362-4-018	
	11680MD09195	1	IC308 PANEL	PL 6	1	752.5	752.5	362-4-018	
	11680MD09195	1	IC309 PANEL	PL 6	1	666.4	666.4	362-4-018	
	11680MD09195	1	IC1358 STIFFENER	IPE 200	7	8.4	58.8	362-4-018	
	11680MD09195	1	IC1359 STIFFENER	PL 8	14	2.9	40.6	362-4-018	
	11680MD09195	1	IC1360 STIFFENER	L 70x7	4	2.3	9.2	362-4-018	
	SIDE WALL	11680MD09195	1	IC401 PANEL	PL 6	1	219.1	219.1	362-4-019
		11680MD09195	1	IC402 PANEL	PL 6	1	219.1	219.1	362-4-019
		11680MD09195	1	IC403 PANEL	PL 6	1	219.1	219.1	362-4-019
		11680MD09195	1	IC404 PANEL	PL 6	1	219.1	219.1	362-4-019
11680MD09195		1	IC405 PANEL	PL 6	1	132.5	132.5	362-4-019	
11680MD09195		1	IC406 PANEL	PL 6	1	132.5	132.5	362-4-019	
11680MD09195		1	IC407 STIFFENER	PL 6	1	346.7	346.7	362-4-019	
11680MD09195		1	IC408 PANEL	PL 6	1	132.5	132.5	362-4-019	
11680MD09195		1	IC409 PANEL	PL 6	1	346.7	346.7	362-4-019	
11680MD09195		1	IC410 PANEL	PL 6	1	346.7	346.7	362-4-019	
11680MD09195		1	IC411 PANEL	PL 6	1	346.7	346.7	362-4-019	
11680MD09195		1	IC412 PANEL	PL 6	1	346.7	346.7	362-4-019	
11680MD09195		1	IC1708 STIFFENER	PL 6	1	10.5	10.5	362-4-019	
11680MD09195		1	IC1216 PANEL	PL 6	1	426.3	426.3	362-4-020	
11680MD09195		1	IC1216A PANEL	PL 6	1	493.5	493.5	362-4-020	
11680MD09195		1	IC1217 PANEL	PL 6	1	1053.5	1053.5	362-4-020	
11680MD09195		1	IC1217A PANEL	PL 6	1	984.8	984.8	362-4-020	
11680MD09195		1	IC1218 PANEL	PL 6	1	335.2	335.2	362-4-020	
11680MD09195		1	IC1218A PANEL	PL 6	1	316.2	316.2	362-4-020	
11680MD09195		1	IC17129 STIFFENER	PL 12	4	9.5	38	362-4-020	
11680MD09195		1	IC17132 STIFFENER	L 100x10	10	90.6	906	362-4-020	
11680MD09195		1	IC1213 PANEL	PL 6	1	235.2	235.2	362-4-021	
11680MD09195		1	IC1213A PANEL	PL 6	1	267.4	267.4	362-4-021	
11680MD09195		1	IC1214 PANEL	PL 6	1	1005.9	1005.9	362-4-021	
11680MD09195		1	IC1214A PANEL	PL 6	1	980.5	980.5	362-4-021	
11680MD09195		1	IC1215 PANEL	PL 6	1	790.2	790.2	362-4-021	
11680MD09195		1	IC1215A PANEL	PL 6	1	790.2	790.2	362-4-021	
11680MD09195		1	IC1216 STIFFENER	PL 12	7	70.9	537.2	362-4-022	
11680MD09195		1	IC1217 PANEL	PL 6	1	709.7	709.7	362-4-022	
11680MD09195		1	IC1210A PANEL	PL 6	1	709.7	709.7	362-4-022	
11680MD09195		1	IC1211 PANEL	PL 6	1	1053.8	1053.8	362-4-022	
11680MD09195		1	IC1211A PANEL	PL 6	1	1053.8	1053.8	362-4-022	
11680MD09195	1	IC1212 PANEL	PL 6	1	889.4	889.4	362-4-022		
11680MD09195	1	IC1212A PANEL	PL 6	1	889.4	889.4	362-4-022		
11680MD09195	1	IC17369 STIFFENER	PL 12	4	9.8	39.2	362-4-022		
11680MD09195	1	IC206 PANEL	PL 6	1	732.9	732.9	362-4-023		
11680MD09195	1	IC206A PANEL	PL 6	1	732.9	732.9	362-4-023		
11680MD09195	1	IC1207 STIFFENER	PL 12	10	1021.2	1021.2	362-4-023		
11680MD09195	1	IC207A PANEL	PL 6	1	1021.2	1021.2	362-4-023		
11680MD09195	1	IC208 PANEL	PL 6	1	1061.7	1061.7	362-4-023		
11680MD09195	1	IC208A PANEL	PL 6	1	1061.7	1061.7	362-4-023		
11680MD09195	1	IC209 PANEL	PL 6	1	717.5	717.5	362-4-023		
11680MD09195	1	IC209A PANEL	PL 6	1	717.5	717.5	362-4-023		
11680MD09195	1	IC17180 STIFFENER	PL 12	8	3	26.4	362-4-023		
11680MD09195	1	IC201 PANEL	PL 6	1	1366.4	1366.4	362-4-024		
11680MD09195	1	IC202 PANEL	PL 6	1	1475.2	1475.2	362-4-024		
11680MD09195	1	IC202A PANEL	PL 6	1	1475.2	1475.2	362-4-024		
11680MD09195	1	IC17178 STIFFENER	PL 12	18	180	3240	362-4-024		
11680MD09195	1	IC17179 STIFFENER	PL 12	14.7	175.4	2578.4	362-4-024		
11680MD09195	1	IC17209 STIFFENER	PL 12	47	47.1	362-4-024			
11680MD09195	1	IC203 PANEL	PL 6	1	1517.1	1517.1	362-4-025		
11680MD09195	1	IC203A PANEL	PL 6	1	1517.1	1517.1	362-4-025		
11680MD09195	1	IC204 PANEL	PL 6	1	1561.6	1561.6	362-4-025		
11680MD09195	1	IC204A PANEL	PL 6	1	1561.6	1561.6	362-4-025		
11680MD09195	1	IC17147 STIFFENER	PL 8	4	1.9	7.6	362-4-025		
11680MD09195	1	IC205 PANEL	PL 6	1	1072.9	1072.9	362-4-026		
11680MD09195	1	IC205A PANEL	PL 6	1	1072.9	1072.9	362-4-026		
11680MD09195	1	IC219 PANEL	PL 6	1	1328	1328	362-4-026		
TOTAL WEIGHT KG.						68345			

- FOR INLET DUCT INSULATED PANELS - DETAILS SEE DWG.
- FOR INLET DUCT INSULATED PANELS - ERECTION BOLT LIST

KKS DWG.No. 5-HA-000-API-407

[A]=[mm]

STEEL STRUCTURES MANUFACTURING
MORAVSKÝ KRUMLOV
U NADRAŽÍ 895 872 11
CZECH REPUBLIC

1	18-10-05	REVISED AS PER MOD. TRACKING

LAVRION - METKA

INLET DUCT INSULATED PANEL
ERECTION SCHEME

ALSTOM
ALSTOM POWER ITALIA S.p.A.

From:	10.11.2004	KODERA	Size A0
Coord:	10.11.2004	FIALA	
Check:	10.11.2004	FIALA	

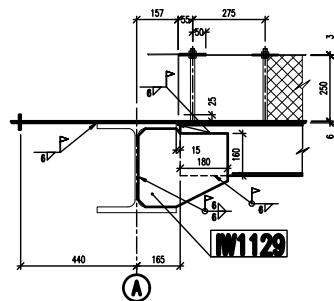
G #3 AND LABELLING "AS BUILT"	A.S.	A.R.	A.N.
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1:50	DIS./Deg. HUTNI	10/11/04
	CONTR./Check. HUTNI	10/11/04

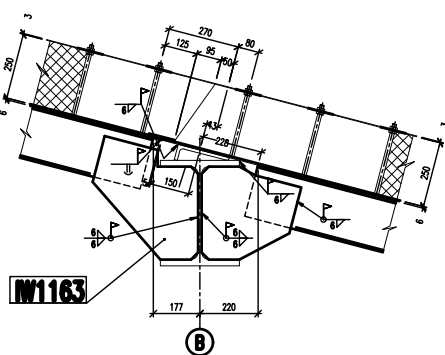
NELS	N. DISEGNO/Drawing No.	TAV. / D. of	
		1	2

11680MDD09195								1	Z
REV.	1								

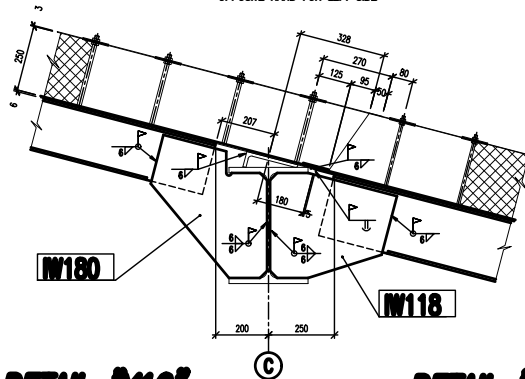
DETAIL "Y1"
AS SHOWN FOR RIGHT SIDE
OPPOSITE HAND FOR LEFT SIDE



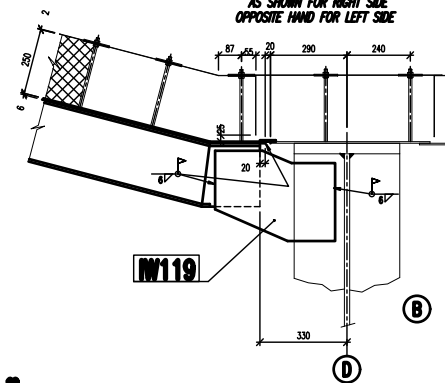
DETAIL "Y2"
AS SHOWN FOR RIGHT SIDE
OPPOSITE HAND FOR LEFT SIDE



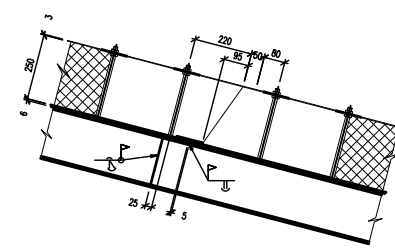
DETAIL "Y3"
AS SHOWN FOR RIGHT SIDE
OPPOSITE HAND FOR LEFT SIDE



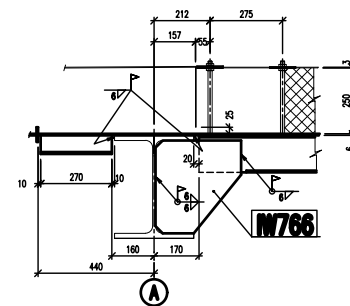
DETAIL "Y4"
AS SHOWN FOR RIGHT SIDE
OPPOSITE HAND FOR LEFT SIDE



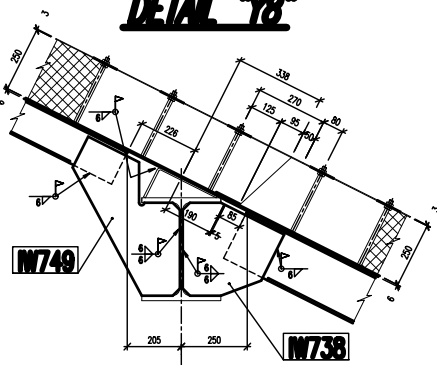
DETAIL "Y5"
AS SHOWN FOR RIGHT SIDE
OPPOSITE HAND FOR LEFT SIDE



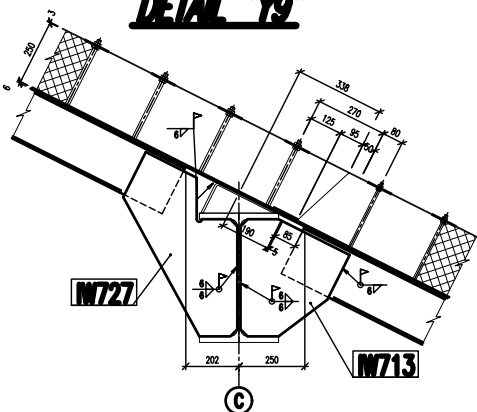
DETAIL "Y7"



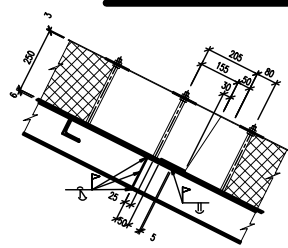
DETAIL "Y8"



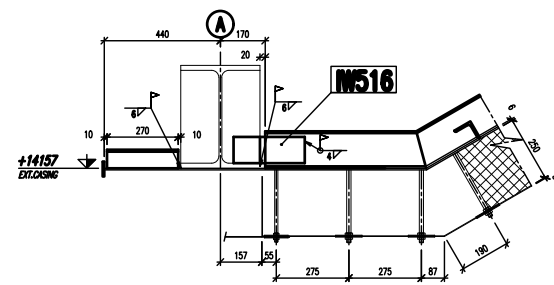
DETAIL "Y9"



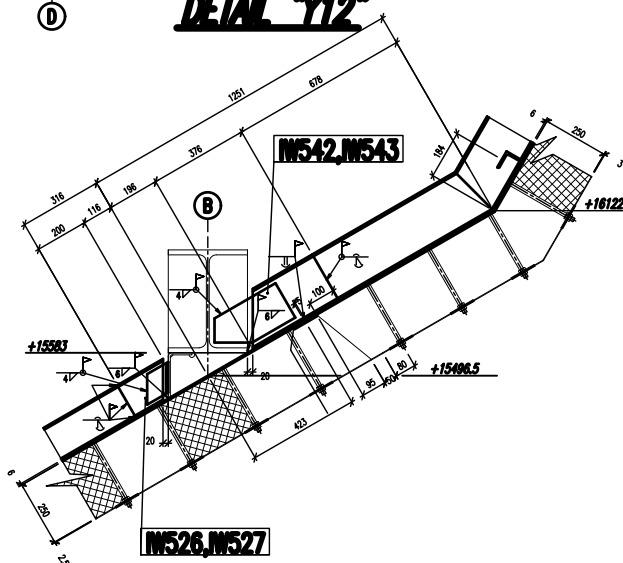
DETAIL "Y10"



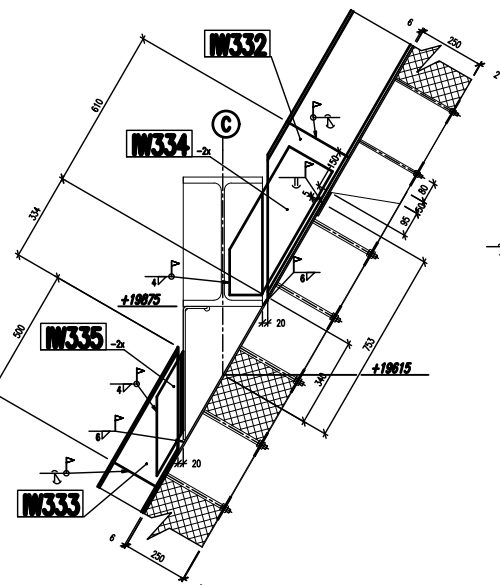
DETAIL "Y11"



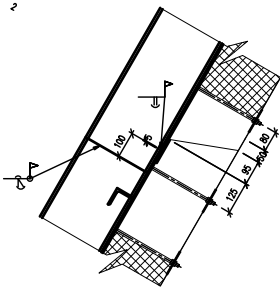
DETAIL "Y12"



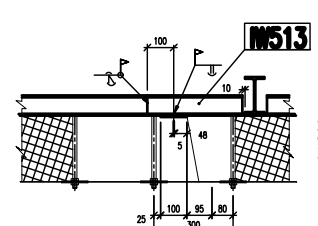
DETAIL "Y13"



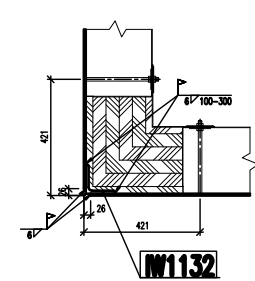
DETAIL "Y14"



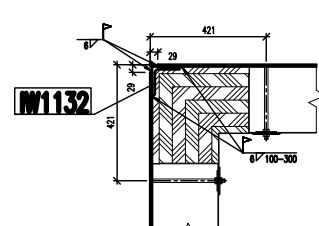
DETAIL "Y32"



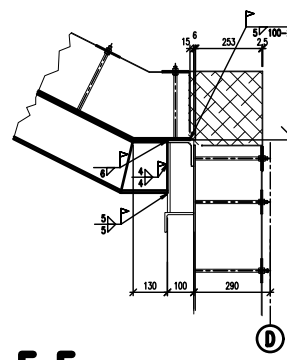
SECTION 7-7



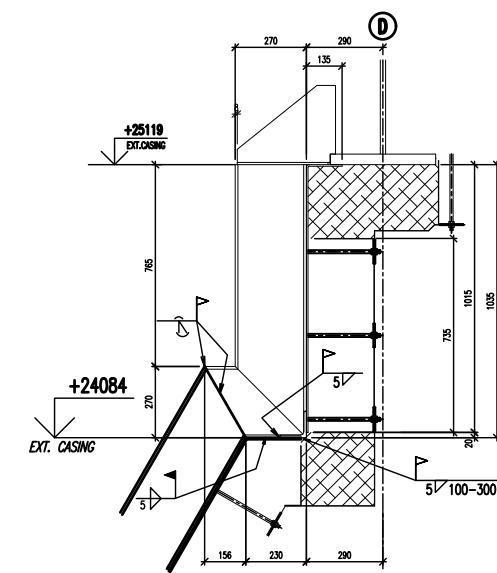
SECTION Y21-Y21



DETAIL "D1"

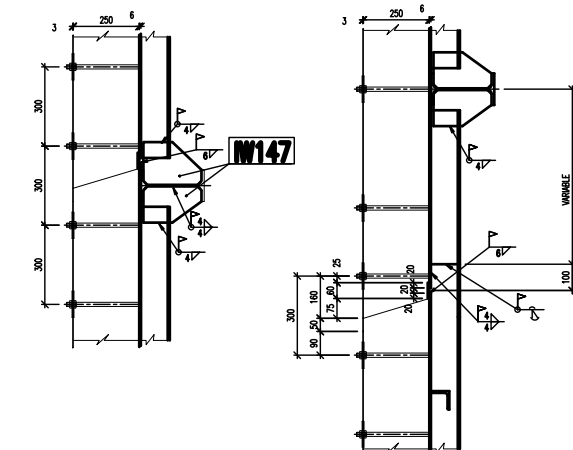


DETAIL "D2"



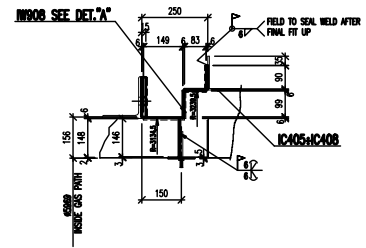
SEC. "Y29-Y29"

SEC. "Y27-Y27"



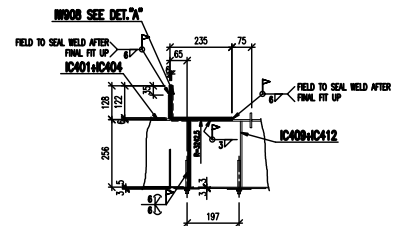
C-C

IC401, IC402, IC403, IC404



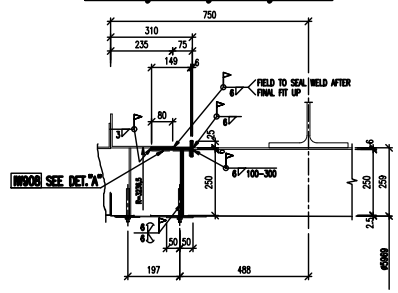
D-D

IC405, IC406, IC407, IC408

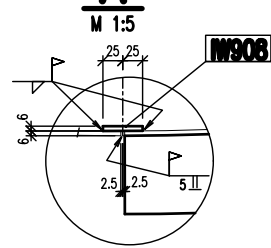


E-E

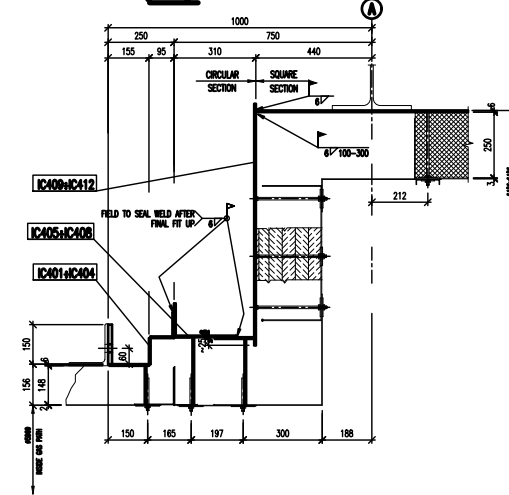
IC409, IC410, IC411, IC412



A



E-E

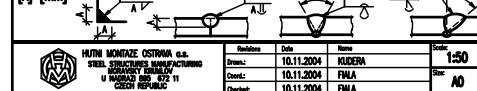


Rev. 0 and above are RELEASED for ERECTION

WKS DWG. 5-HA-000-API-407

FOR GENERAL NOTES AND MATERIALS SEE DWG. 11680MDD09195 Sh1

FIELD WELD SYMBOLS ACC. AWS A2.4-98



LAVION - METKA INLET DUCT STEEL WORKS ERECTION SCHEME - DETAILS		SCALE: 1:10 DATE: 10/11/04 DRAWN: H. HUTNI CHECKED: H. HUTNI APPROVED: H. HUTNI	PROJECT: 11680MDD09195 SHEET: 22 REV. 1
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