

Note: 1. THIS PART/BOILER (FLUID COOLED SPACERS) IS DESIGNED, FABRICATED, EXAMINED AND INSPECTED PER IBR-1950 WITH THE LATEST AMENDMENT, SPECIFICATION HG.5.1.1(2).
 2. DESIGN PRESSURE IS 19.95MPa(203.5kgf/cm²), DESIGN TEMPERATURE IS 442x6 SA-210A1 366°; 451x6.5 SA-213T12 437°; 442x6 SA-213T22 400°; WORKING PRESSURE IS 19MPa(193.8kgf/cm²), WORKING TEMPERATURE IS THE SAME AS DESIGN TEMPERATURE. MAXIMUM WORKING PRESSURE IS 19.95MPa(203.5kgf/cm²). MAXIMUM WORKING TEMPERATURE IS THE SAME AS DESIGN TEMPERATURE.
 3. ALL TUBE BUTT-JOINTS SHALL BE PERFORMED WITH RADIOGRAPH EXAMINATION PER IBR CODE NDE REQUIREMENTS.
 4. POST-WELD HEAT TREATMENT SHALL BE PERFORMED PER IBR CODE REQUIREMENTS.
 5. HYDRO-TEST SHALL BE PERFORMED AT THE PRESSURE OF 29.93MPa(305.3kgf/cm²). THE METAL WALL TEMPERATURE SHALL BE NOT LESS THAN 20°C AND NOT GREATER THAN 50°C DURING THE HYDRO-TEST.
 6. THE MINIMUM REQUIRED THICKNESS OF TUBE SEE FOLLOWING LIST:

TUBE	MATERIALS	THICKNESS
Ø51x6.5	SA-213T12	4.7
Ø51x6.5	SA-213T12	4.7
Ø42x6	SA-213T22	3.6
Ø42x6	SA-210A1	3.8

7. DETAILS DRAWINGS, H-H CUTAWAY VIEW AND POSITION ABOUT ASSEMBLING ON SITE OF P.NO.24 WERE DRAWN AT DRAWING F001CJ000D131.
 8. WELD METAL: SA-213T12+SA-351CH20 USE E309Mo. SA-210A1+SA-210A1, SA-210A1+SA213T12, SA-210A1+15CrMo USE E50. SA-213T12+SA213T12 SA-213T12+SA-213T22 USE E55-B2

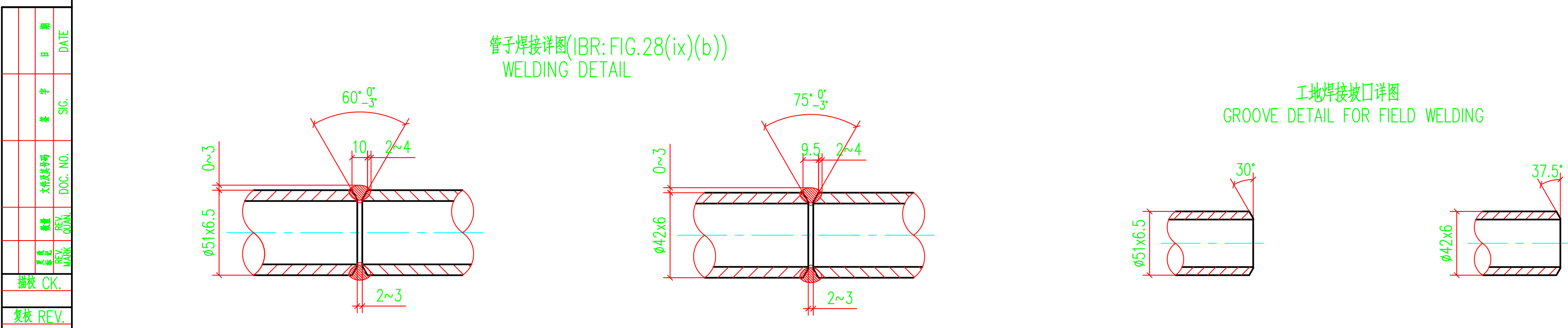
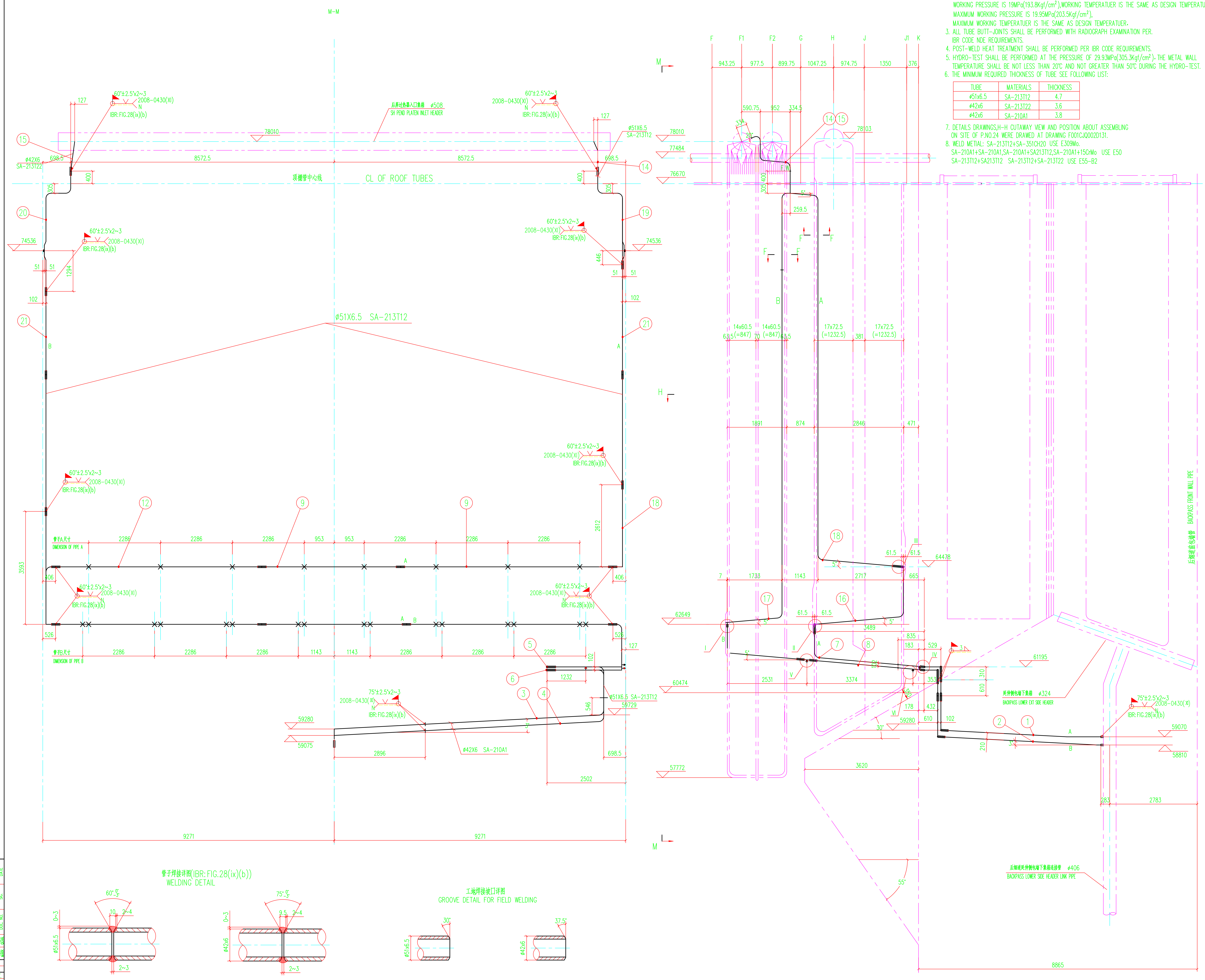
注: 1. 此部件(流体冷却间隔管)设计、制造、检验按IBR1950及最新修订和技术条件HG.5.1.1(2)。
 2. 设计压力: 19.95MPa(203.5kgf/cm²), 设计温度: 442x6 SA-210A1 366°; 451x6.5 SA-213T12 437°; 442x6 SA-213T22 400°; 工作压力: 19MPa(193.8kgf/cm²) 工作温度同设计温度; 最大允许工作压力为19.95MPa(203.5kgf/cm²), 最大允许工作温度同设计温度。
 3. 所有管子对接焊缝按 IBR NDE 要求进行无损检测。
 4. 焊后热处理按 IBR 要求。
 5. 水压试验压力 P=29.93MPa(305.3kgf/cm²), 温度 20~50°C。
 6. 本部件中管子理论计算最小壁厚见下表:

管子规格	材质	最小壁厚
Ø51x6.5	SA-213T12	4.7
Ø42x6	SA-213T22	3.6
Ø42x6	SA-210A1	3.8

7. 详图 H-H 剖视图及件号 24 的工地安装位置见图 F001CJ000D131。
 8. 焊接金属: SA-213T12+SA-351CH20 用 E309Mo. SA-210A1+SA-210A1, SA-210A1+SA213T12, SA-210A1+15CrMo 用 E50. SA-213T12+SA-213T12 SA-213T12+SA-213T22 用 E55-B2
 9. × 表示件号 24 的安装位置。
 10. 此部件(流体冷却间隔管)应按 IBR 要求进行检验及标记。
 11. 未注明公差按技术条件 HG-C-990-941。
 12. 管子对接焊缝按焊接详图 I (IBR FIG.28(ix)(b))。
 13. 所有管端坡口按 2008-0430XI 加工。
 14. 图中比例: 40 相当于 1in : 3.33feet。
 15. 材料详表见零件清单 F022CJ000D131

Job NO: T116053.T116054

Boiler No.3456(Unit 1) and Boiler No.3457(Unit 2) are identical



料号	图号	名称	材料规格	数量	单位	备注
27	YT15-4975	光面棒	SA-351CH20	2	0.33	0.66
26	YT15-4976	光面板	SA-351CH20	4	0.5	2
25	YT15-4973	光面棒	SA-351CH20	4	0.25	1
24	YT15-4970	隔板	SA-351CH20	24	0.112	2.69
23	YT15-4972	光面棒	SA-351CH20	128	0.195	25
22	YT15-4974	光面棒	SA-351CH20	2	0.33	0.58
21	AS DRAWING	管子 Ø51x6.5-L=3500	SA-213T12	4	25	100 SEE NOTE 13
20	F002CJ0014D131	管子	管子	1	31.5	管子 ASSY
19	F002CJ0014D131	管子	管子	1	30	管子 ASSY
18	F002CJ0013D131	管子 Ø51x6.5-L=5281	SA-213T12	1	37.8	管子 ASSY
17	F002CJ0012D131	管子	管子	1	39	管子 ASSY
16	F002CJ0011D131	管子 Ø51x6.5-L=4830	SA-213T12	1	34.5	管子 ASSY
15	F002CJ0010D131	管子 Ø42x6-L=2214	SA-213T22	1	11.7	管子 ASSY
14	F002CJ0009D131	管子 Ø51x6.5-L=2128	SA-213T12	1	15.2	管子 ASSY
13	AS DRAWING	圆钢 Ø12-L=100	15CrMo	4	0.088	0.35
12	AS DRAWING	管子 Ø51x6.5-L=2745	SA-213T12	4	19.58	78.32 SEE NOTE 13
11	AS DRAWING	管子 Ø51x6.5-L=2830	SA-213T12	3	20.19	60.57 SEE NOTE 13
10	AS DRAWING	管子 Ø51x6.5-L=3000	SA-213T12	3	21.4	64.2 SEE NOTE 13
9	AS DRAWING	管子 Ø51x6.5-L=3060	SA-213T12	8	21.83	174.66 SEE NOTE 13
8	F002CJ0008D131	管子	管子	1	48.2	管子 ASSY
7	F002CJ0007D131	管子 Ø51x6.5-L=4067	SA-213T12	1	29	管子 ASSY
6	F002CJ0006D131	管子	管子	1	42.8	管子 ASSY
5	F002CJ0005D131	管子	管子	1	44.5	管子 ASSY
4	F002CJ0004D131	管子	管子	1	34.1	管子 ASSY
3	F002CJ0003D131	管子	管子	1	33	管子 ASSY
2	F002CJ0002D131	管子	管子	1	42.9	管子 ASSY
1	F002CJ0001D131	管子	管子	1	42.4	管子 ASSY

OWNER: COASTAL ENERGEN PRIVATE LIMITED
 CONTRACTOR: TCE CONSULTING ENGINEERS LIMITED (BANGALORE)
 CONTRACTOR: HARBIN POWER ENGINEERING COMPANY LIMITED

料号	图号	名称	材料规格	数量	单位	备注
DES	2011.3.14	设计				
CHK	2011.3.14	检查				
REV	2011.3.14	修改				
DATE	2011.3.14	日期				

流体冷却间隔管总图 (一)
 GENERAL ARRANGEMENT OF FLUID COOLED SPACERS (I)

流体冷却间隔管
 FLUID COOLED SPACERS

HARBIN BOILER COMPANY LIMITED