

**GENERAL NOTES**

- G1) BASIC DESIGN CONCEPT.
- THIS SYSTEM CAN BE TREATED AS NORMAL DRAIN PLUS THE FIRST 5 MINUTES OF ANY KIND OF EMULSION, SO THAT NO OIL OGS OVERBOARD.

**NOTES**

- 1) THE OVERBOARD DRAIN DISCHARGE PIPE TO BE ARRANGED WITHOUT LIQUID POCKETS.
- 2) LIQUID SEAL HEIGHT 1.5M
- 3) MANUAL SAMPLE VALVE
- 4) LEVEL SWITCH TO BE INSTALLED 1M ABOVE THE END OF THE INLET PIPE TO PROTECT LEAK SEAL.
- 5) FLUSHING PIPE ARRANGEMENT. THE PIPE TO BE FURNISHED WITH AN ADEQUATE NO. OF FLUSHING NOZZLES.
- 6) HAZARDOUS AREA DRAIN TANK ;
  - HH(98%), XV-101 TO BE IN OVERBOARD DIRECTION.
  - H(70%, STAND-BY START)
  - L(35%, DUTY START/STAND-BY STOP)
  - LL(15%, DUTY STOP AND XV-101 TO BE IN SOLID TREATMENT TK DIRECTION)
  - THE PUMPS TO BE STOPPED AT HH LEVEL OF DRAIN HOLDING TANK(REF. DA804P001-2).
- NON-HAZARDOUS AREA DRAIN TANK ;
  - HH(98%), XV-102 TO BE IN OVERBOARD DIRECTION.
  - H(60%, STAND-BY START)
  - L(30%, DUTY START/STAND-BY STOP)
  - LL(15%, DUTY STOP AND XV-102 TO BE IN SOLID TREATMENT TK DIRECTION)
  - THE PUMPS TO BE STOPPED AT HH LEVEL OF DRAIN HOLDING TANK(REF. DA804P001-2).
- 7) OVERFLOW FROM CHAMBERS TO DRAIN TANKS TO BE ROUTED TO PREVENT SPLASH
- 8) TO BE LOCATED AT HAZARDOUS ZONE OR OPEN DECK.
- 9) FOR SEA WATER CONNECTION, FOR FLEXIBLE HOSE TO BE USED AND THE LENGTH TO BE LESS THAN 10(M) METER.
- 10) FOR SLUDGE/RESIDUE PUMP CONNECTION, FLEXIBLE HOSE TO BE USED AND THE LENGTH TO BE LESS THAN 10(M) METER.
- 11) AUTO OVERRIDE TO BE PROVIDED AND MANUAL CONTROL TO BE PROVIDED AT LOCAL AND REMOTE SIDE.
- 12) SLUDGE/RESIDUE TO BE TRANSFERRED TO WASTE OIL TANK OR CUTTING CONTAINER AREA.
- 13) SHORT PIECE FOR FLUSHING.
- 14) SOL. VALVE TO BE ACTIVATED FROM MCC.
- 15) USED ONLY FOR EMERGENCY CONDITION

**REVISION HISTORY**

- 1) MODIFIED OPERATING CONCEPT AND PIPE SPECIFICATION. (10.11.17)
- 2) AS PER OWNER'S REQUEST.(2011.02.08)

TAGNO.	DESCRIPTION	TYPE	CAPACITY
A81-PP-001A/B/C/D	SUMP TRANSFER PUMP	CENTRIFUGAL	20m3/h x 3bar
A81-PP-002	SLUDGE/RESIDUE PUMP	MONO SCREW	20m3/h x 13bar

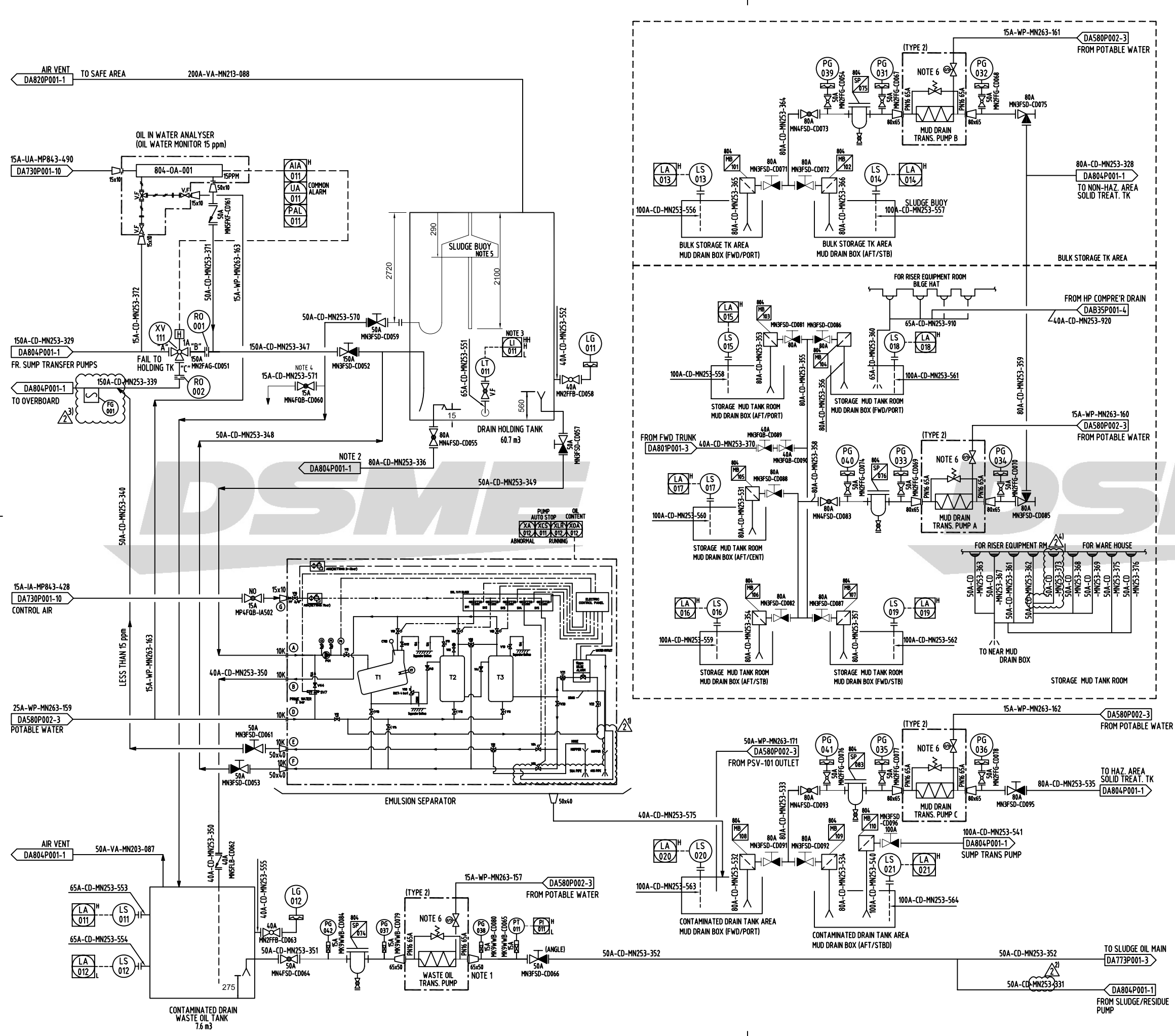
REV.	DATE	NOTE	DWN	CHK	CHIEF	APP.BY
2	2011.03.18	ISSUED FOR REVISION	JYK	TLJ		HCL
1	2010.10.29	ISSUED FOR REVISION	JYK	TLJ		SDH
0	2010.07.23	APPROVED FOR CONSTRUCTION	JYK	HSP		SDH
A	2010.06.18	ISSUED FOR APPROVAL	JYK	HSP		SDH

**DSME** DAEWOO SHIPBUILDING & MARINE ENGINEERING CO.,LTD.

- ISSUED FOR INFORMATION
- ISSUED FOR APPROVAL
- ISSUED FOR CONSTRUCTION

DATE

PROJ. NO. 3610	DIVN BY (TEL.7859) J.Y.KIM	TITLE : PID OF CONTAMINATED DRAIN SYSTEM	SHEET 1 / 6
DEPT OUTFITTING DESIGN TEAM 2	DATE 2011.03.18	SCALE NONE	DWG. NO. DA804P001



**GENERAL NOTES**  
G1) ---

**NOTES**  
1) LEVEL LOW ALARM MONITORING : PUMP STOP (MANUALLY)  
LEVEL HIGH ALARM MONITORING : PUMP START (MANUALLY)  
2) FOR SLUDGE/RESIDUE PUMP CONNECTION (REF. DA804P001-1).  
3) HH OF DRAIN HOLDING TANK ; SUMP TRANSFER PUMPS A/B/C/D TO BE STOPPED (REF. DA804P001-1).  
LEVEL LOW : THE EMULSION SEPARATOR TO BE STOPPED AUTOMATICALLY  
LEVEL HIGH : THE EMULSION SEPARATOR TO BE STARTED MANUALLY  
4) MANUAL SAMPLE VALVE  
5) NORMAL RATES ARE BETWEEN 2 - 6 M3/HOUR.  
6) SOL. VALVE TO BE ACTIVATED FROM MCC.

DRAIN HOLDING TANK 60.7 m³	HAZARDOUS AREA SOLID TREAT. TK 12.1 m³	NON-HAZARDOUS AREA SOLID TREAT. TK 24.2 m³
WASTE OIL TANK 7.6 m³	HAZARDOUS AREA DRAIN TANK 22.0 m³	NON-HAZARDOUS AREA DRAIN TANK 44.1 m³

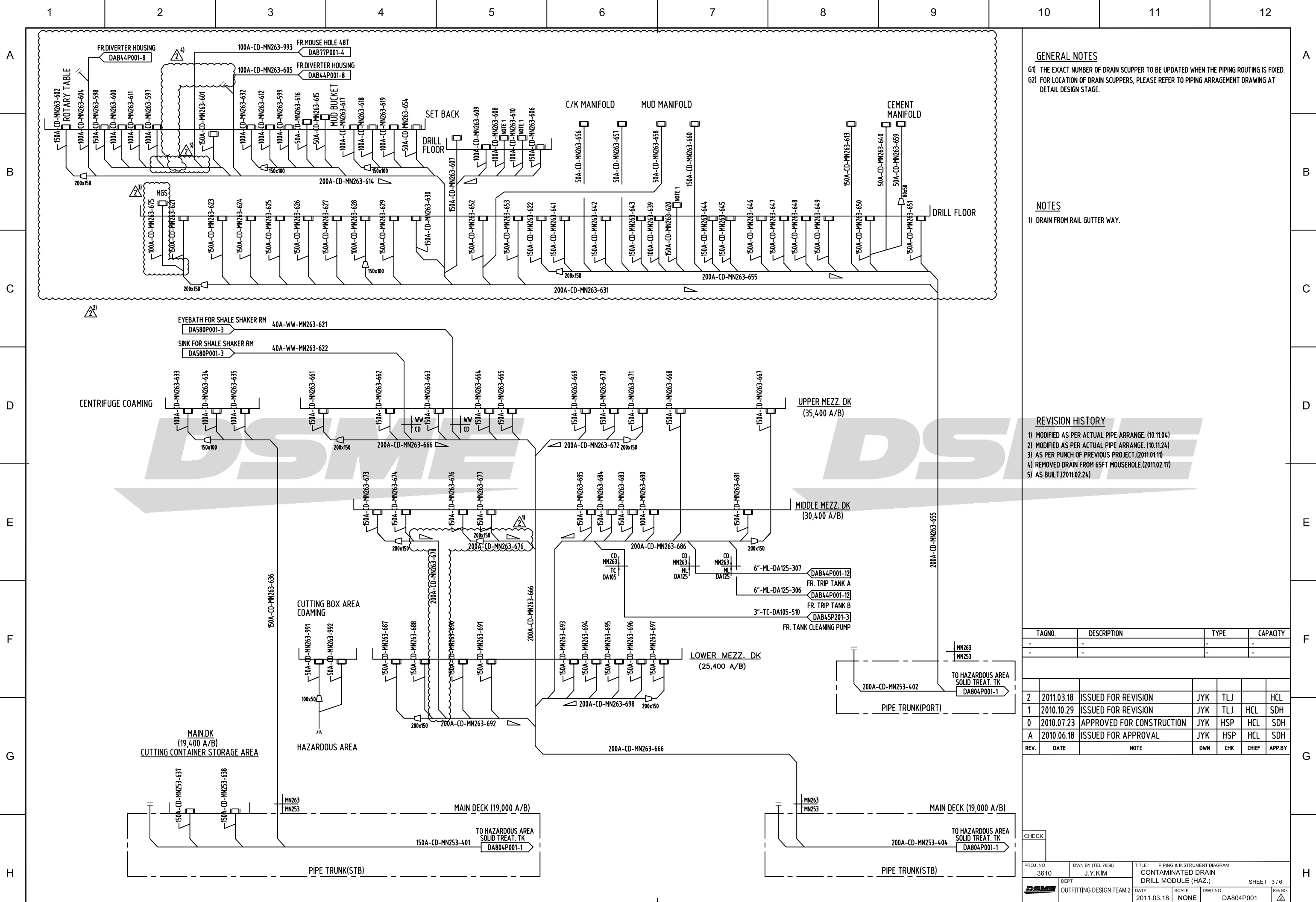
**REVISION HISTORY**

- 1) MODIFIED AS PER LATEST VENDOR DWG. (10.11.04)
- 2) MODIFIED OPERATING CONCEPT AND PIPE SPECIFICATION. (10.11.17)
- 3) ADDED FLOW METER AS PER OWNER'S REQUEST-COP-0027. (10.12.01)
- 4) MODIFIED AS PER ACTUAL COMMENT.(2011.03.17)

TAGNO.	DESCRIPTION	TYPE	CAPACITY
A92-PP-001	WASTE OIL TRANS. PUMP	MONO SCREW	5m³/h x 4.5bar
A81-PV-001	EMULSION SEPARATOR		5m³/h
A81-PP-004-A/B/C	MUD DRAIN TRANSFER PUMP A/B/C	MONO SCREW	5m³/h x 3bar
804-OA-001	OIL IN WATER ANALYZER		-
774-SE-001	SLUDGE BUOY		-

REV.	DATE	NOTE	DWN	CHK	CHIEF	APP.BY
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A	2010.06.18	ISSUED FOR APPROVAL	JYK	HSP		SDH

CHECK		TITLE : PIPING & INSTRUMENT DIAGRAM PID OF CONTAMINATED DRAIN SYSTEM		SHEET 2 / 6	
PROJ. NO. 3610	DWVN BY (TEL.7859) J.Y.KIM	DATE 2011.03.18	SCALE NONE	DWG. NO. DA804P001	REV. NO. A
DEPT OUTFITTING DESIGN TEAM 2		DAEWOO SHIPBUILDING & MARINE ENGINEERING CO., LTD.			



**GENERAL NOTES**

- G1) THE EXACT NUMBER OF DRAIN SCUPPER TO BE UPDATED WHEN THE PIPING ROUTING IS FIXED.
- G2) FOR LOCATION OF DRAIN SCUPPERS, PLEASE REFER TO PIPING ARRANGEMENT DRAWING AT DETAIL DESIGN STAGE.

**NOTES**

- 1) DRAIN FROM RAIL GUTTER WAY.

**REVISION HISTORY**

- 1) MODIFIED AS PER ACTUAL PIPE ARRANGE. (10.11.04)
- 2) MODIFIED AS PER ACTUAL PIPE ARRANGE. (10.11.24)
- 3) AS PER PUNCH OF PREVIOUS PROJECT.(2011.01.11)
- 4) REMOVED DRAIN FROM 65FT MOUSEHOLE.(2011.02.17)
- 5) AS BUILT.(2011.02.24)

TAGNO.	DESCRIPTION	TYPE	CAPACITY
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-	-	-	-

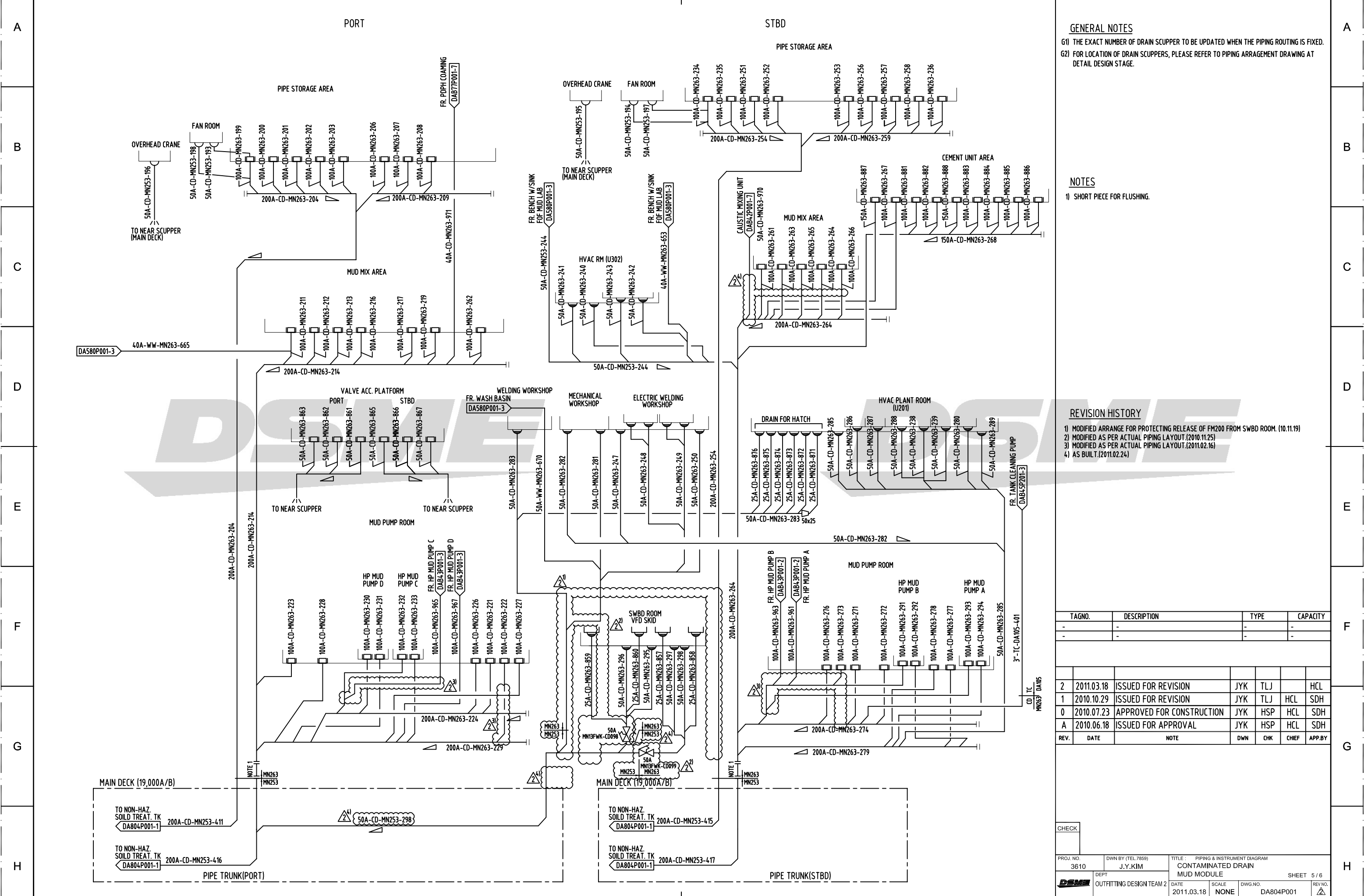
REV.	DATE	NOTE	DWN	CHK	CHIEF	APP.BY
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A	2010.06.18	ISSUED FOR APPROVAL	JYK	HSP	HCL	SDH

CHECK

PROJ. NO. 3610	DWN BY (TEL.7859) J.Y.KIM	TITLE : PIPING & INSTRUMENT DIAGRAM CONTAMINATED DRAIN DRILL MODULE (HAZ.)	DEPT OUTFITTING DESIGN TEAM 2	DATE 2011.03.18	SCALE NONE	DWG. NO. DA804P001	SHEET 3 / 6
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FILE NAME : 3 4 5 6 7 8 9 10





**GENERAL NOTES**  
 G1) THE EXACT NUMBER OF DRAIN SCUPPER TO BE UPDATED WHEN THE PIPING ROUTING IS FIXED.  
 G2) FOR LOCATION OF DRAIN SCUPPERS, PLEASE REFER TO PIPING ARRANGEMENT DRAWING AT DETAIL DESIGN STAGE.

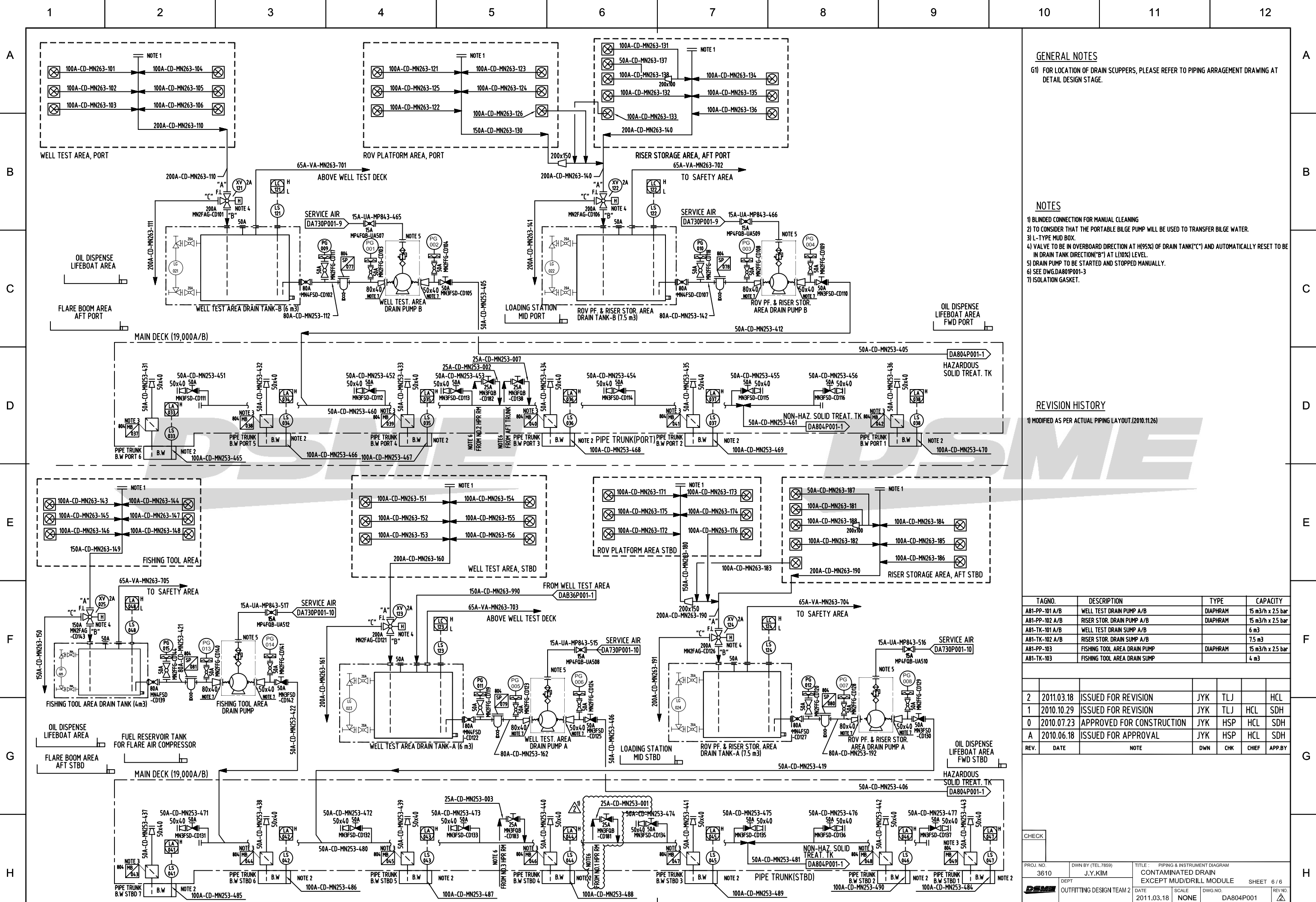
**NOTES**  
 1) SHORT PIECE FOR FLUSHING.

**REVISION HISTORY**

REV.	DATE	NOTE	DWN	CHK	CHIEF	APP.BY
2	2011.03.18	ISSUED FOR REVISION	JYK	TLJ		HCL
1	2010.10.29	ISSUED FOR REVISION	JYK	TLJ	HCL	SDH
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TAGNO.	DESCRIPTION	TYPE	CAPACITY
-	-	-	-
-	-	-	-

CHECK		PROJ. NO. 3610		DWN BY (TEL 7859) J.Y.KIM		TITLE : PIPING & INSTRUMENT DIAGRAM CONTAMINATED DRAIN MUD MODULE		SHEET 5 / 6	
DEPT. OUTFITTING DESIGN TEAM 2		DATE 2011.03.18		SCALE NONE		DWG. NO. DA804P001		REV. NO.	



**GENERAL NOTES**

- G1) FOR LOCATION OF DRAIN SCUPPERS, PLEASE REFER TO PIPING ARRANGEMENT DRAWING AT DETAIL DESIGN STAGE.

**NOTES**

- 1) BLINDED CONNECTION FOR MANUAL CLEANING
- 2) TO CONSIDER THAT THE PORTABLE BILGE PUMP WILL BE USED TO TRANSFER BILGE WATER.
- 3) L-TYPE MUD BOX.
- 4) VALVE TO BE IN OVERBOARD DIRECTION AT (95%) OF DRAIN TANK("C") AND AUTOMATICALLY RESET TO BE IN DRAIN TANK DIRECTION("B") AT L(10%) LEVEL.
- 5) DRAIN PUMP TO BE STARTED AND STOPPED MANUALLY.
- 6) SEE DWG.DA801P001-3
- 7) ISOLATION GASKET.

**REVISION HISTORY**

- 1) MODIFIED AS PER ACTUAL PIPING LAYOUT.(2010.11.26)

TAGNO.	DESCRIPTION	TYPE	CAPACITY
A81-PP-101 A/B	WELL TEST DRAIN PUMP A/B	DIAPHRAM	15 m <sup>3</sup> /h x 2.5 bar
A81-PP-102 A/B	RISER STOR. DRAIN PUMP A/B	DIAPHRAM	15 m <sup>3</sup> /h x 2.5 bar
A81-TK-101 A/B	WELL TEST DRAIN SUMP A/B		6 m <sup>3</sup>
A81-TK-102 A/B	RISER STOR. DRAIN SUMP A/B		7.5 m <sup>3</sup>
A81-PP-103	FISHING TOOL AREA DRAIN PUMP	DIAPHRAM	15 m <sup>3</sup> /h x 2.5 bar
A81-TK-103	FISHING TOOL AREA DRAIN SUMP		4 m <sup>3</sup>

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A	2010.06.18	ISSUED FOR APPROVAL	JYK	HSP		SDH

CHECK			
PROJ. NO.	DA804P001-1	DWNN BY (TEL.7859)	J.Y.KIM
DEPT	OUTFITTING DESIGN TEAM 2	TITLE	PIPING & INSTRUMENT DIAGRAM CONTAMINATED DRAIN EXCEPT MUD/DRILL MODULE
DATE	2011.03.18	SCALE	DWG. NO. DA804P001
		REV. NO.	SHEET 6 / 6