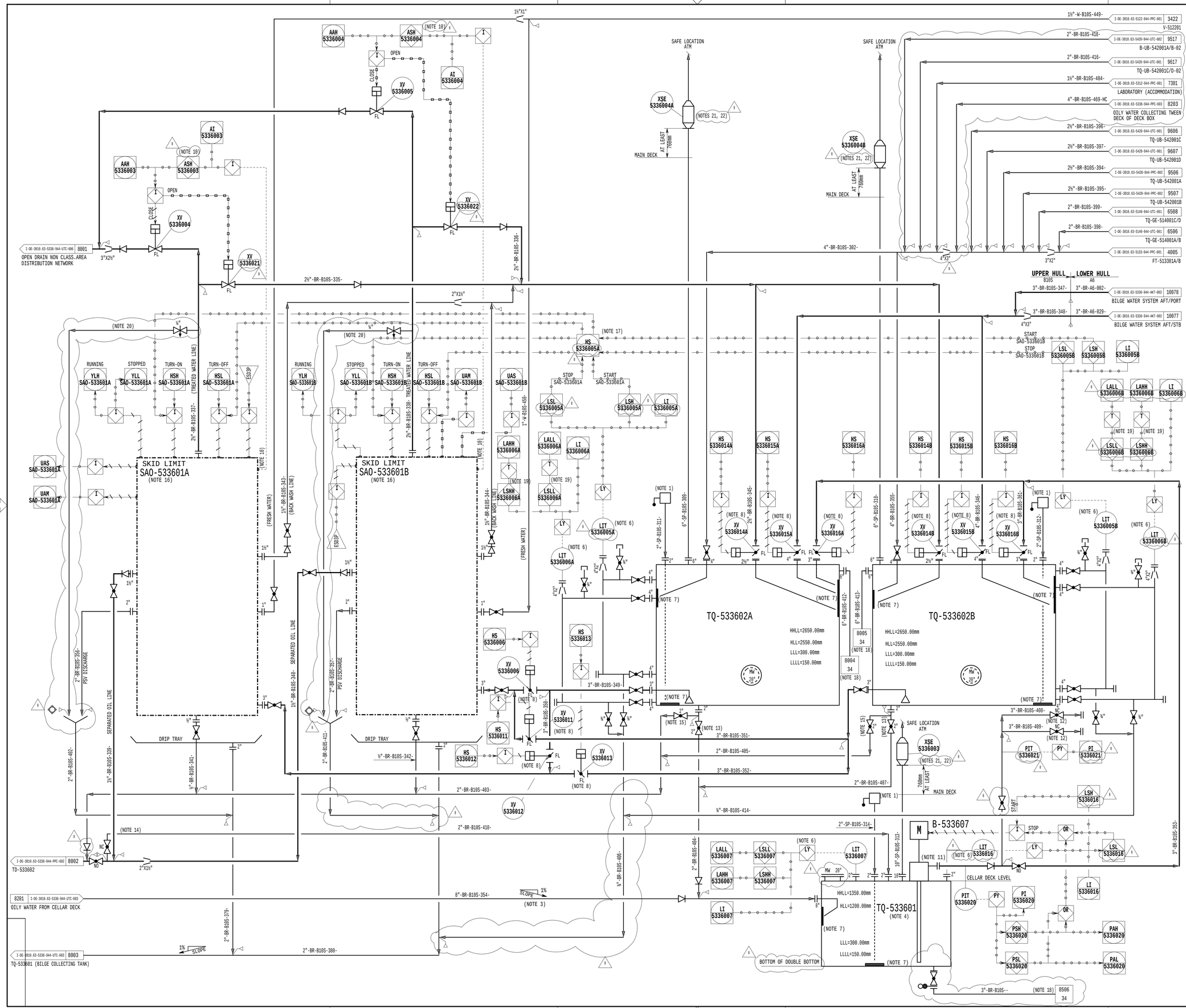

REFERENCE DOCUMENTS

ET PIPING SPECIFICATION
ET SYMBOLS AND ABBREVIATIONS
PIPING AND INSTRUMENT DIAGRAM - "GENERAL NOTES"
PIPING AND INSTRUMENT DIAGRAM (AKER) - "BILGE WATER SYSTEM FWD/PORT"
PIPING AND INSTRUMENT DIAGRAM (AKER) - "BILGE WATER SYSTEM FWD/STB"
EQUIPMENT LIST
GENERAL TECHNICAL DESCRIPTION
ET GENERAL TECHNICAL CRITERIA FOR DESIGN OF MARINE SYSTEMS

EQUIPMENT

TAG	DESCRIPTION	TYPE	CAPACITY
SAO-533601A/B (2x50%)	OILY WATER SEPARATOR	VACCUM	10 m³/h
TQ-533602A/B (2x50%)	BILGE TANK	STRUCTURAL	10 m^3
B-533607 (1x100%)	BILGE PUMP	(NOTE 11)	10 m^3/h
TQ-533601 (1x100%)	BILGE COLLECTING TANK	RECTANGULAR	2 m^3

GENERAL NOTES

1 - SOUNDING VALVE, QUICK ACTION, SELF CLOSING, CLASS 150, BRONZE, TAG-VS-01, ACCORDING TO I-ET-3010.63-1200-200-PPC-001.

2 - ACCORDING TO I-ET-3010.63-1200-200-PPC-001, PIPING SPECIFICATION. ALL BR PIPE LINES SHALL BE INTERNALLY COATED WITH POLYETHYLENE.

3 - PIPE LINES LOCATED INSIDE THE DOUBLE BOTTOM OF THE CELLAR DECK AND THE BILGE OIL DRAIN HEADERS SHALL HAVE A SLOPE OF 1% TO PREVENT BACK FLOW TO THE CELLAR DECK.

4 - LOCATED INSIDE THE DOUBLE BOTTOM OF THE CELLAR DECK.

5 - THE OILY WATER SEPARATOR SHALL BE ACCORDING TO MARPOL REGULATION-13 (15 PPM OF OIL CONTENT IN WATER).

6 - RADAR TYPE LEVEL TRANSMITTER.

7 - SOUNDING RODS STRIKING PLATE WITH MINIMUM THICKNESS OF 15MM SHALL BE INSTALLED TO AVOID DAMAGE ON TANK BULKHEAD AND BOTTOM (QNV-OS-D-101,CH.2 SEC. 2, E-508).

8 - SEE P&ID GENERAL NOTES ITEM 1.C.

9 - CANCELLED.

10 - SIGNAL FROM BILGE ALARM MONITOR. THIS SIGNAL SHALL CLOSE THE VALVE LOCATED IN THE TREATED WATER LINE TO THE CAISSON TD-533602, AND OPEN THE VALVE LOCATED IN THE TREATED WATER LINE TO THE BILGE TANKS TQ-533602A/B, TO GUARANTEE THAT THE BILGE WATER IS RECIRCULATED TO FURTHER TREATMENT BEFORE BEING DISCHARGED TO THE SEA. MAXIMUM OIL CONTENT SHALL BE 15 PPM.

11 - POSITIVE DISPLACEMENT PUMP WITH SUBMERGED SUCTION.

12 - MARPOL STANDARD CONNECTION FOR OIL DISCHARGE, ONE LOCATED AT PORTSIDE, ANOTHER AT STARBOARD, SIDE CLOSE TO THE BUNKERING STATION (CELLAR DECK LEVEL).

13 - THESE DRAIN LINES SHALL BE USED TO COLLECT CLEAN OIL FROM MOTOR CARTERS DRAINAGE OPERATION, TO AVOID SENDING SUCH OILS TO THE SAO'S PRIOR TO DISCHARGE.

14 - THESE LINES SHALL BE USED TO DIRECT THE SEPARATED OIL FROM THE SAO'S TO THE BILGE COLLECTING TANK TQ-533601, WHEN THE PROCESS PLANT IS OUT OF OPERATION.

15 - THESE LINES SHALL BE USED TO DIRECT CLEAN OIL TO THE CAISSON TD-533602, WHEN THE PROCESS PLANT IS IN OPERATION.

16 - EACH OILY WATER SEPARATOR (SAO-533601A/B) UNIT SHALL INCLUDE A DUPLEX BASKET TYPE FILTER AT THE OILY WATER INLET LINE.

17 - THIS SWITCH SHALL BE USED TO STABLISH WHICH BILGE TANK TQ-533602A/B WILL BE ALIGNED TO EACH SAO-533601A OR B.

18 - TO OPEN DRAIN COLLECTING HEADER OF NON-CLASSIFIED AREA (TD-533602).

19 - PROGRAMMABLE TIME DELAY.

20 - IMO SAMPLE CONNECTION

21 - THE HEIGHT OF THE AIR PIPES, MEASURED FROM THE DECK TO THE POINT WHERE WATER MAY HAVE ACCESS BELOW, SHALL NOT BE LESS THAN 760 MM ON FREEBOARD DECK, ACCORDING TO DNV-OS-C-301, CH.2, SEC.2,E-107.

22 - THE END OF THE AIR PIPES SHALL BE DESIGNED OR SO LOCATED THAT THE INGRESS OF WATER IS PREVENTED. AUTOMATIC VENT HEADS WITH BALL FLOATS OR SIMILAR DEVICESSHALL BE OF APPROVED DESIGN BY CLASS. SOCIETY, ACCORDING TO DNV-OS-D101,CH.2, SEC.3, E-107. IN ADDITION FLAME ARRESTER SCREEN SHALL BE PROVIDE.

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AREA OR UNIT: PETROBRAS 51 (P-51)

DRAWING TITLE: PIPING AND INSTRUMENT DIAGRAM BILGE OILY WATER SYSTEM

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