PLAN HISTORY

REV. NO.	DATE	DESCRIPTION	REMARK
0	2023. 05. 19	Prepared by outfitting design.	

TOTAL (3) SHEETS WITH COVER

본 도면은 대한민국 정부의 "친환경중소형선박 기술역량 강화사업"의 일환으로 작성된 문서입니다.

MANAGER	K.D. OK	**DATE : 2023. 05. 19**	**SCALE**
APPROVED	S.S. SHIN	**13K급 PRODUCT/CHEMICAL TANKER**	NONE
CHECKED	S.M. JIN	**PRELIMINARY HEAT BALANCE CALCULATION**	**TEAM**
DRAWN	S.K. YOON		OUTFITTING DESIGN
TEL.	051-260-7813		**REV.** 0
KRISO		친환경선박설계기술사업단 ECO-FRIENDLY SHIP DESIGN ENGINEERING	

1. GENERAL

THIS HEAT BALANCE HAS BEEN PREPARED ACCORDING TO THE DATA SPECIFIED ON CONTRACT SPECIFICATION, MAKER'S RECOMMENDATION AND NORMAL PRACTICE OF OUR SHIPBUILDING.

2. CONSIDERED MAIN ENGINE AND GENERATOR ENGINE OPERATING CONDITION IN THIS CALCULATION.

NO.	CONDITION	S.W / F.W TEMP(℃)	LOAD		REMARK
			M/E(%)	G/E(% x Set)	
1	MAX. DESIGN CONDITION	32 / 38	100	70.5 x 1	
2	NORMAL SEA GOING (WITHOUT TK CLEAN)	32 / 38	90	69.4 x 1	
3	NORMAL SEA GOING (WITH TANK CLEAN)	32 / 38	90	70.5 x 1	
4	MANEUVERING(WITH THRUSTER)	32 / 38	50	61.3 x 2	
5	CARGO HANDLING	32 / 38	0	77.5 x 2	
6	IN HARBOR	32 / 38	0	54 x 1	

3. PUMP FOR ON-BOARD INSTALLATION

NO.	DESCRIPTION	Q'TY SHIP	CAPACITY (m^3/h)	TOTAL HEAD (mTH)	REMARK
1	MAIN C.S.W PUMP	2	630 (each 100%)	24	
2	L.T C.F.W PUMP	2	480 (each 100%)	25	
3					

4. COOLER AND A.T.M CONDENSER FOR ON-BOARD INSTALLATION

NO.	DESCRIPTION	Q'TY SHIP	HEAT DISSIPATION (Mcal/h)	FLOW (m3/h)	
1	L.T.F.W COOLER	1	3,155,000 (each 50%)	FW: SW:	240.0 315.0
2	ATM CONDENSER	1	741,000.0	FW: FW:	 47.0

Note : The capacity of L.T cooler is **100%** of system required.

5. MAIN EQUIPMENT

1) MAIN ENGINE

TYPE	:	WARTSLA 6L32M
NO. OF SET	:	ONE (1)
NCR(75% of SMCR	:	2,700 kW x 125.5 rpm
SMCR (83% of NM	:	3,000 kW x 130..0 rpm

2) DIESEL GENERATOR ENGINE

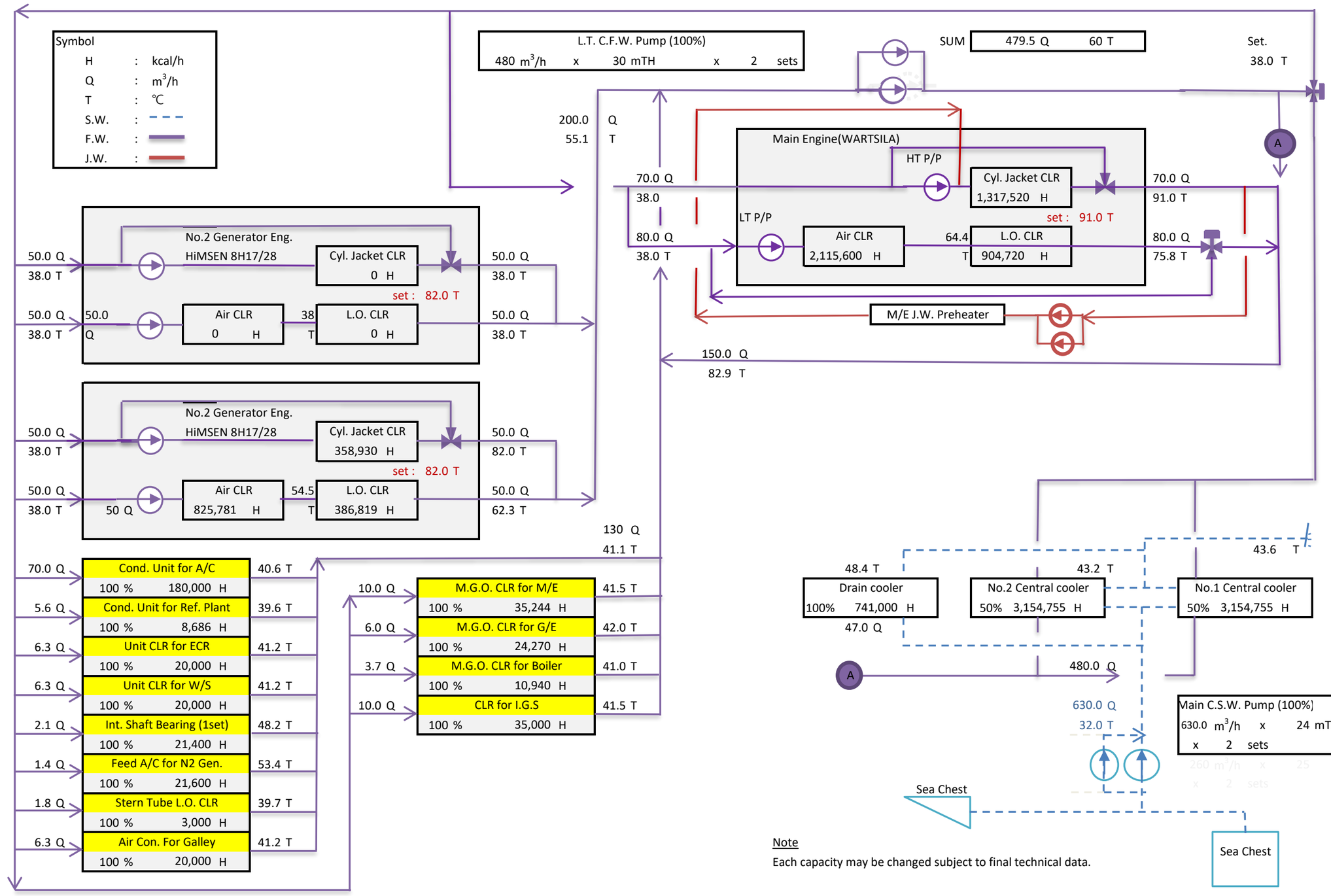
TYPE	:	HIMSEN 8H17/28
NO. OF SETS	:	TWO (2)
MCR	:	1,075 kW x 900 rpm

DESIGN FOR FULL LOAD CONDITION

(M/E MCR LOAD x 1SET & G/E 70.5% LOAD x 1SET)

PAGE : 3 / 3

13K Product Tanker



Note

Each capacity may be changed subject to final technical data.