


FINAL DESIGN 完工图		63,600MT DWT PANAMAX BULKER WITH TRAINING PURPOSE		SC4622(WH)-521-01							
CURRENT REVISION 当前版本		A		CURRENT STATUS 当前状态		O		LAYOUT OF SHIP'S FIRE FIGHTING PIPING 全船消防管系布置图		HULL NO.:AVIC398	
DESIGNED 设计	肖海忠		DATE 日期			WEIGHT 重量	~9000 kg		SCALE 比例	1 : 200	
CHECKED 校对	郭林丽		DATE 日期			PAGE 页数	1 / 19		TOT. AREA 总面积	1.6875 m ²	
VERIFIED 审核	李鑫		DATE 日期			 SHANGHAI MERCHANT SHIP DESIGN & RESEARCH INSTITUTE 上海船舶研究设计院					
APPROVED 批准	陆利平		DATE 日期	2016.01.07							

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TECHNICAL REQUIREMENTS

1. ANNOTATED SIZES OF PIPES IN THE DRAWING TO BE NOM.DIA.(mm) OR OUT. DIAM. x THICKNESS (mmxmm).
2. WHERE PIPES PENETRATE THROUGH WATER TIGHT BULKHEADS,DECKS TO BE FITTED WITH PENETRATION PIECES ACCORDING TO CB/T3480-92 OR SHIPYARD STANDARD.
3. THE PIPES TO BE SUPPORTED SECURELY ACCORDING TO CB/T3780-97 OR SHIPYARD'S STANDARD IN ORDER TO PREVENT DAMAGES FROM VIBRATIONS OR OTHER CAUSES.
4. ALL PIPING TO BE CLEANED BY AIR BLOWING TO REMOVE THE WELDING SLAG AND EXCESSIVE DIRT BEFORE ASSEMBLY.
5. PIPE MUST TRY TO BE HORIZONTAL,AVOID TRAP.THE DRAIN VALVE SHOULD BE PLACED AT THE LOWEST.
6. HYDRAULIC TEST:

NAME	DESIGN PRESS. (MPa)	BEFORE INSTALLATION ON BOARD (MPa)	AFTER ASSEMBLY ON BOARD (MPa)
FIRE PIPING	1.0	-	1.5

7. TWE INTERNATIONAL SHORE CONNECTIONS SHALL BE PROVIDED ADJECENT TO UPPER DECK. (SEE 270-05)
8. A NOTICE PLATE INDICATING THAT "THE VALVES ARE TO BE KEPT IN CLOSED POSITION WHEN THEY ARE NOT IN USE."IS POSITED IN A CONSPICUOUS LOCATION FOR VALVE FFV229,FFV230,FFV225.

技 术 要 求

1. 图中所注管子尺寸均为公称通径 (mm)或外径 壁厚 (mmxmm)。
2. 管子通过水密舱壁,甲板或舱壁时,应按 CB/T3480-92 或船厂标准。设置相应的通舱管件。
3. 为了防止因振动及其它原因引起损坏,管子应按 CB/T3780-97 或船厂标准设置牢固支撑。
4. 所有管子安装前用压缩空气吹除焊渣及污垢。
5. 管子尽量水平,避免存水弯,放水阀应放在最低处。
6. 液压试验:

名称	设计压力 (MPa)	装船前 (MPa)	装船后 (MPa)
消防水管	1.0	-	1.5

7. 两个国际通岸接安装在上甲板附近(见 270-05)。
8. 件 FFV229,FFV230,FFV225 应在引人注意的地方放置带有如下指示的警告牌:"在不使用时,该阀应保持关闭"。

LAYOUT OF SHIP'S FIRE FIGHTING PIPING 全船消防管系布置图								SC4622(WH)-521-01		PAGE
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ITEM NO. 编号	STANDARD NO. OR DRAWING NO. 标准号或图号	NAME 名称	DN 通径 mm	PN 压力 MPa	MATERIAL 材料	QTY. 数量	WT. 重量 kg	WORDS ON NAME PLATE 铭牌刻字内容	DELIVERY 供货	REMARKS 备注
FFV201	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV202	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV203	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV204	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV205	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV206	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV207	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV208	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV209	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV210	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV211	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV212	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			

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FFV213	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV214	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV215	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV216	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3			
FFV217	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV218	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV219	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV220	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV221	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV222	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV223	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV224	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			

LAYOUT OF SHIP'S FIRE FIGHTING PIPING 全船消防管系布置图								SC4622(WH)-521-01		PAGE
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ITEM NO. 编号	STANDARD NO. OR DRAWING NO. 标准号或图号	NAME 名称	DN 通径 mm	PN 压力 MPa	MATERIAL 材料	QTY. 数量	WT. 重量 kg	WORDS ON NAME PLATE 铭牌刻字内容	DELIVERY 供货	REMARKS 备注
FFV225	AS10065 GB/T590-2008	STOP VALVE 截止阀	50	2.5	CAST IRON 铸铁	1	21.6	TO MOORINGS & FWD WINCHES HYDR. POWER UNIT OIL COOLER		
FFV226	AS10150 GB/T590-2008	STOP VALVE 截止阀	150	1.0	CAST IRON 铸铁	1	62.7	FIRE MAIN ISOLATION V.		
FFV227	AS25020 GB/T587-2008	STOP VALVE 截止阀	20	2.5	BRONZE 青铜	1	5.9	DRAIN		
FFV228	AS25020 GB/T587-2008	STOP VALVE 截止阀	20	2.5	BRONZE 青铜	1	5.9	DRAIN		
FFV229	AS16065 GB/T590-2008	STOP VALVE 截止阀	65	1.6	CAST IRON 铸铁	1		FOR HAWSE PIPE CLEANING(P)		
FFV230	AS16065 GB/T590-2008	STOP VALVE 截止阀	65	1.6	CAST IRON 铸铁	1		FOR HAWSE PIPE CLEANING(S)		
FFV231	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV232	BS10040 GB/T 2032-93	HYDRANT 消防阀	40	1.0	BRONZE 青铜	1	6.65			
FFV233	AS10065 CB/T3197-95	STOP CHECK VALVE 截止止回阀	50	2.5	CAST STEEL 铸钢	1	20	COOL. W. DISCH. OVBD.		CLASS CERT.
FFV234	AS10100 GB/T 590-2008	STOP VALVE 截止阀	100	1.0	CAST IRON 铸铁	1	35	FROM EMERG.FIRE PUMP		
FFV235	AS25040 GB/T587-2008	STOP VALVE 截止阀	40	2.5	BRONZE 青铜	1	10.8	PAINT STORE SPRINK.		
FFV236	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3	CONNECTING FOR WASHING NO.1 CARGO HOLD		

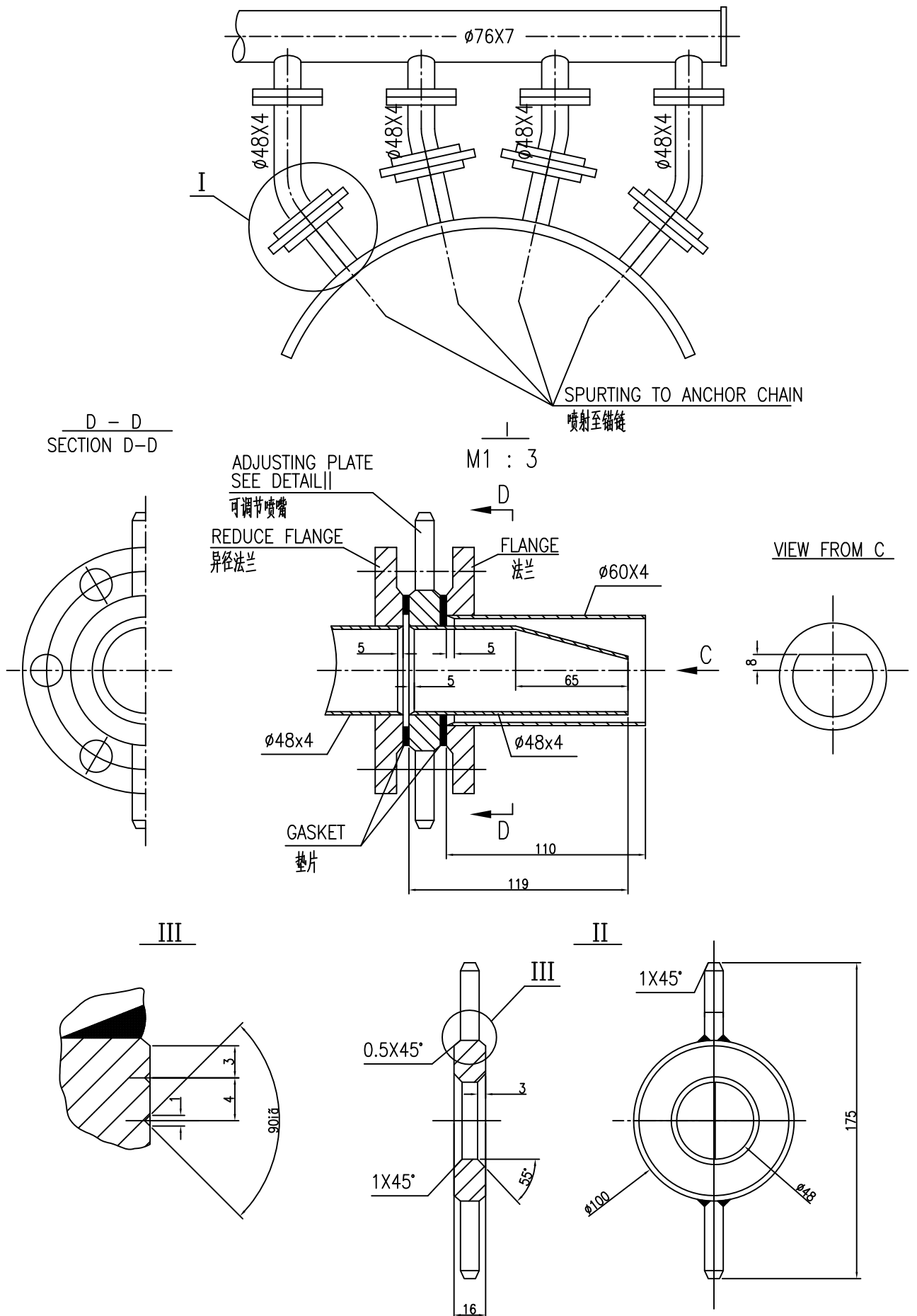
LAYOUT OF SHIP'S FIRE FIGHTING PIPING 全船消防管系布置图								SC4622(WH)-521-01		PAGE
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ITEM NO. 编号	STANDARD NO. OR DRAWING NO. 标准号或图号	NAME 名称	DN 通径 mm	PN 压力 MPa	MATERIAL 材料	QTY. 数量	WT. 重量 kg	WORDS ON NAME PLATE 铭牌刻字内容	DELIVERY 供货	REMARKS 备注
FFV237	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3	CONNECTING FOR WASHING NO.2 CARGO HOLD		
FFV238	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3	CONNECTING FOR WASHING NO.3 CARGO HOLD		
FFV239	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3	CONNECTING FOR WASHING NO.4 CARGO HOLD		
FFV240	BS10065 GB/T 2032-93	HYDRANT 消防阀	65	1.0	BRONZE 青铜	1	10.3	CONNECTING FOR WASHING NO.5 CARGO HOLD		
							331.4			

LAYOUT OF SHIP'S FIRE FIGHTING PIPING 全船消防管系布置图								SC4622(WH)-521-01	PAGE	
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ITEM NO. 编号	STANDARD NO. OR DRAWING NO. 标准号或图号	NAME 名称	DN 通径 mm	PN 压力 MPa	MATERIAL 材料	QTY. 数量	WT. 重量 kg	WORDS ON NAME PLATE 铭牌刻字内容	DELIVERY 供货	REMARKS 备注
FFF201	B10150QL GB/T 12465-2004	COMPENSATOR 伸缩接头	150	1.0	ASSEMBLY 组合件	1				CLASS APPROVED TYPE
FFF202	B10150QL GB/T 12465-2004	COMPENSATOR 伸缩接头	150	1.0	ASSEMBLY 组合件	1				CLASS APPROVED TYPE
FFF203	B10150QL GB/T 12465-2004	COMPENSATOR 伸缩接头	150	1.0	ASSEMBLY 组合件	1				CLASS APPROVED TYPE
FFF204	B10150QL GB/T 12465-2004	COMPENSATOR 伸缩接头	150	1.0	ASSEMBLY 组合件	1				CLASS APPROVED TYPE
FFF205		HAWSE PIPE FLUSHING NOZZLE 锚链筒冲洗喷头				4				
FFF206		HAWSE PIPE FLUSHING NOZZLE 锚链筒冲洗喷头				4				
FFF207		FRESS. GAUGE & VALVE 压力表及阀			ASSEMBLY 组合件	1				0-1.0MPa
FFF208		FRESS. GAUGE & VALVE 压力表及阀			ASSEMBLY 组合件	1				0-1.0MPa
FFF209		FRESS. GAUGE & VALVE 压力表及阀			ASSEMBLY 组合件	1				0-1.0MPa
FFF210		NOZZLE 喷嘴			STEEL 钢	2				
FFF211		BLANK FLANG 盲板法兰	65	1.0	STEEL 钢	5				

LAYOUT OF SHIP'S FIRE FIGHTING PIPING 全船消防管系布置图					SC4622(WH)-521-01			PAGE
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NO. 序号	APPLICATION OF PIPES 管子用途	NOM. DIA. 通径 mm	O.D. & THK. 外径x壁厚 mmxmm	MATERIAL 材料	TYPE 牌号	ABOUT LENGTH 近似长度 m	WEIGHT 重量 kg	REMARKS 备注
1	FIRE PIPE 消防水管	40	48 x 4	SEAMLESS STEEL 无缝钢管		20	86.8	HOT GALV. 热镀锌
2	FIRE PIPE 消防水管	50	60 x 4	SEAMLESS STEEL 无缝钢管		10	55.2	HOT GALV. 热镀锌
3	FIRE PIPE 消防水管	65	76 x 5	SEAMLESS STEEL 无缝钢管		125	1094.3	HOT GALV. 热镀锌
4	FIRE PIPE 消防水管	65	76 x 7	SEAMLESS STEEL 无缝钢管		65	774.2	HOT GALV. 热镀锌
5	FIRE PIPE 消防水管	80	89 x 5.5	SEAMLESS STEEL 无缝钢管		15	169.9	HOT GALV. 热镀锌
6	FIRE PIPE 消防水管	100	114 x 6	SEAMLESS STEEL 无缝钢管		35	559.3	HOT GALV. 热镀锌
7	FIRE PIPE 消防水管	125	140 x 6.5	SEAMLESS STEEL 无缝钢管		20	428.0	HOT GALV. 热镀锌
8	FIRE PIPE 消防水管	150	168 x 7	SEAMLESS STEEL 无缝钢管		200	5558.4	HOT GALV. 热镀锌
							8726.0	

NOZZLE DETAIL (FFF205, FFF206)

喷嘴详图



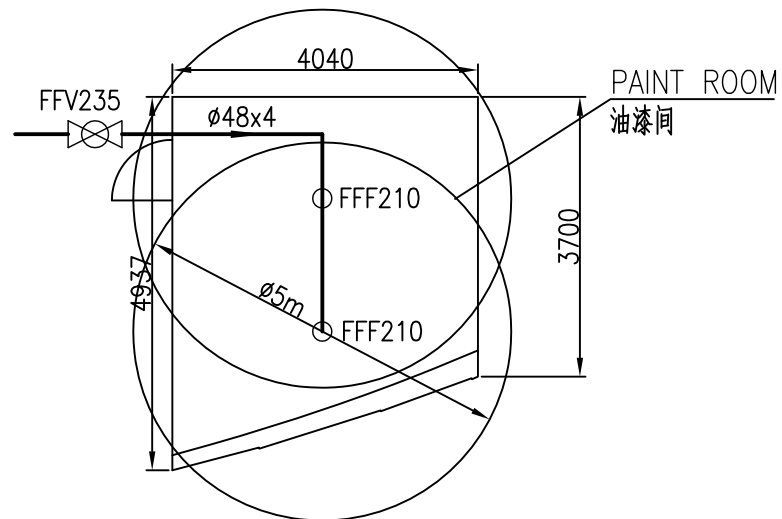
SPRINKLING WATER FIRE FIGHTING IN PAINT STORE

油漆间喷淋灭火布置图

PAINT STORE

油漆间

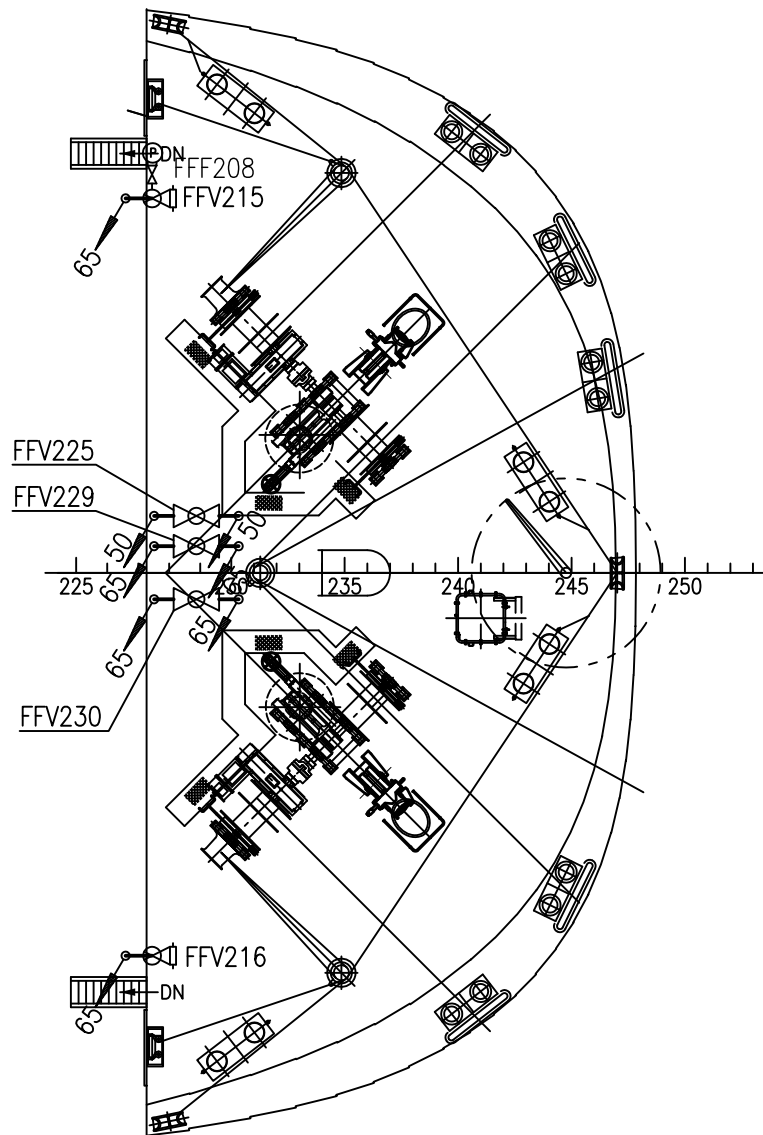
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油漆间面积 AREA OF PAINT STORE	$A=17.6\text{m}^2$
平均供水率 THE AVERAGE WATER SUPPLY RATIO	$R=5\text{l}/\text{min}\cdot\text{m}^2$
需要水量 REQUIRED RATE OF WATER FLOW	$Q=R\cdot A=5.28\text{m}^3/\text{h}$
每个喷水器出水量 RATE OF WATER FLOW FOR EACH NOZZLE	$a=50\text{l}/\text{min}\cdot(0.5\text{MPa})$
需要的喷水器数量 REQUIRED NUMBER OF NOZZLE	$N=Q/a=1.76$ (IN FACT TAKE 2)

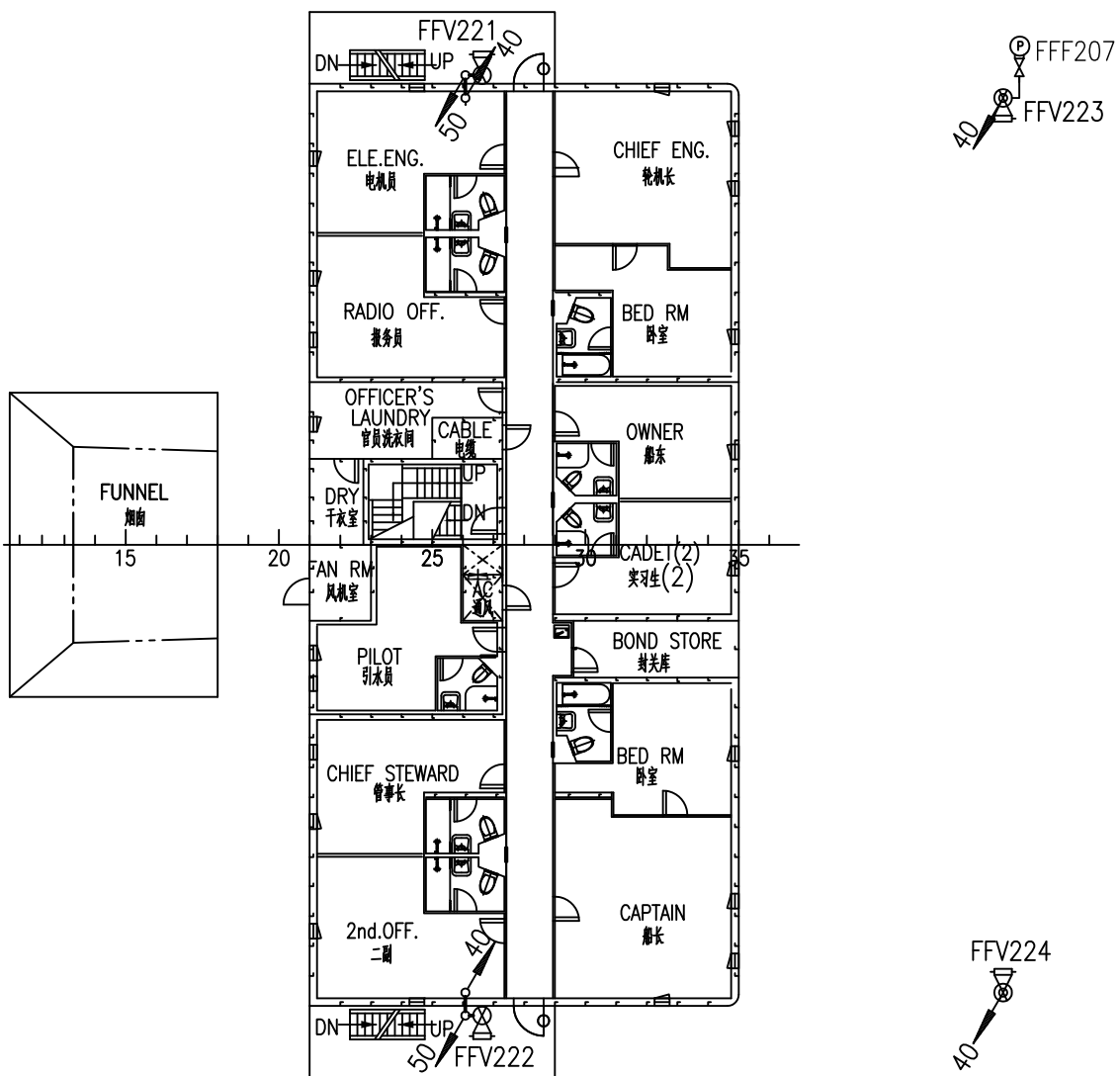
F'CLE DECK

首楼甲板

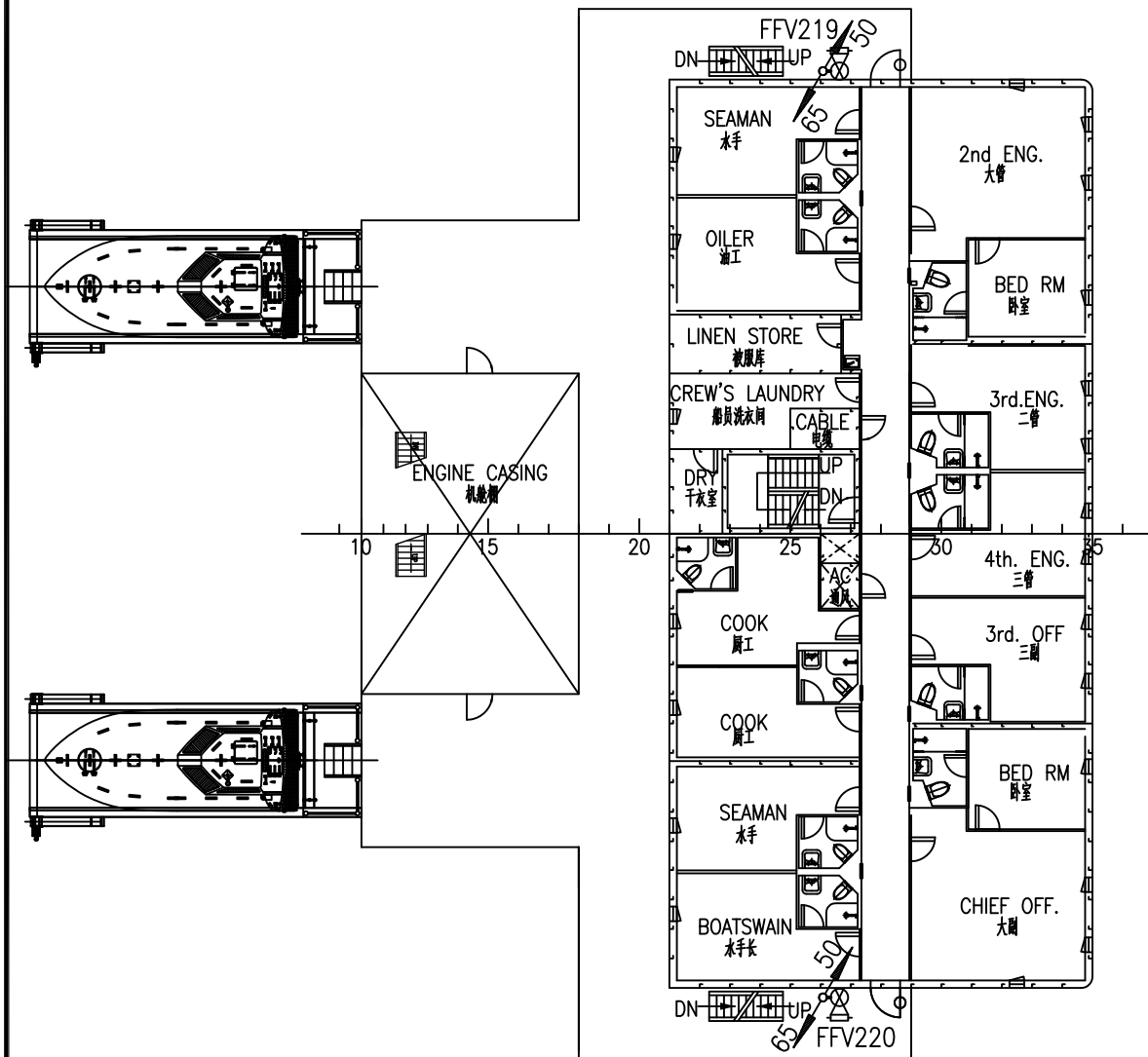


D DECK
D 甲板

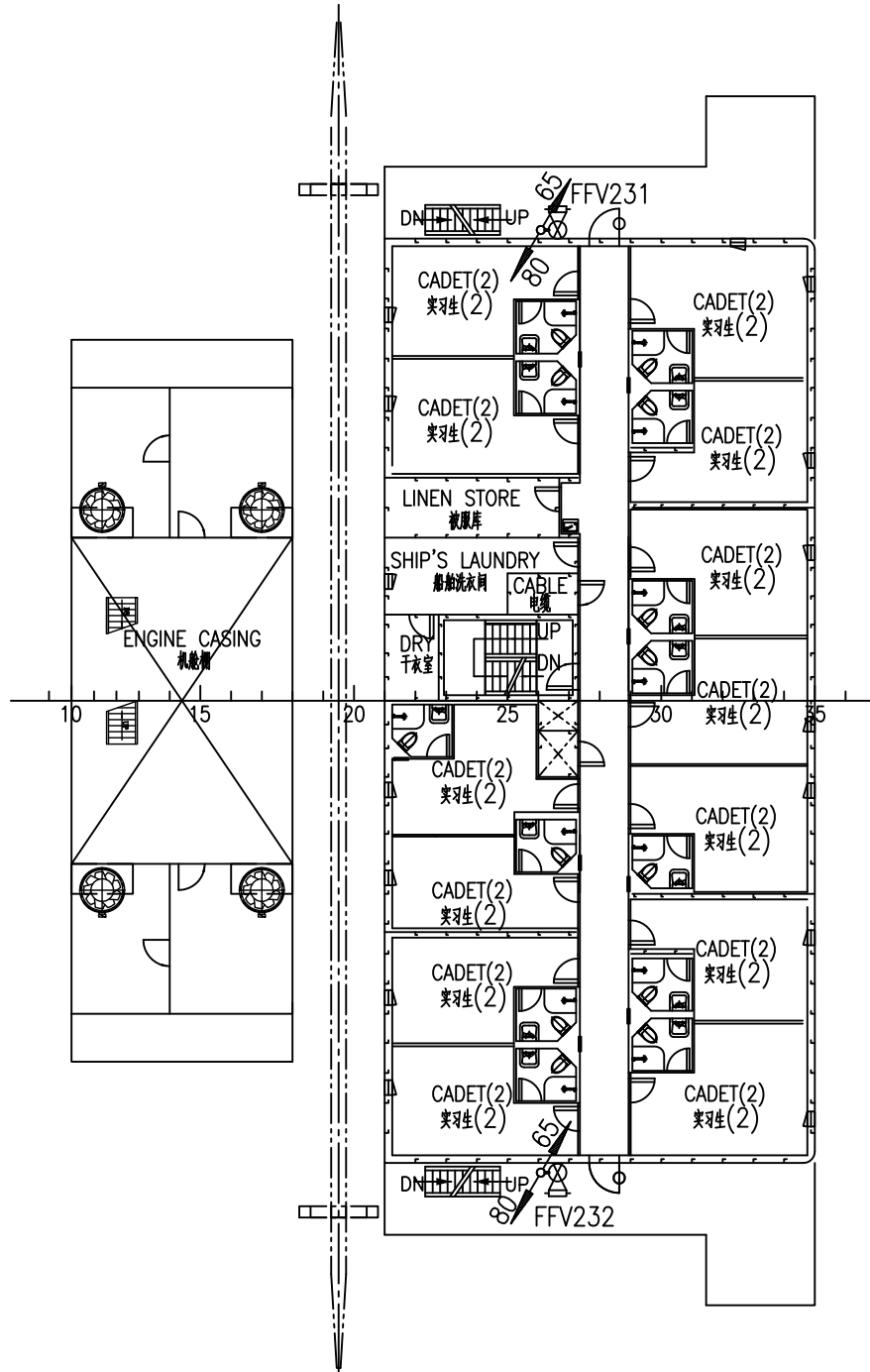
BRIDGE DECK
桥楼甲板



C DECK
C 甲板

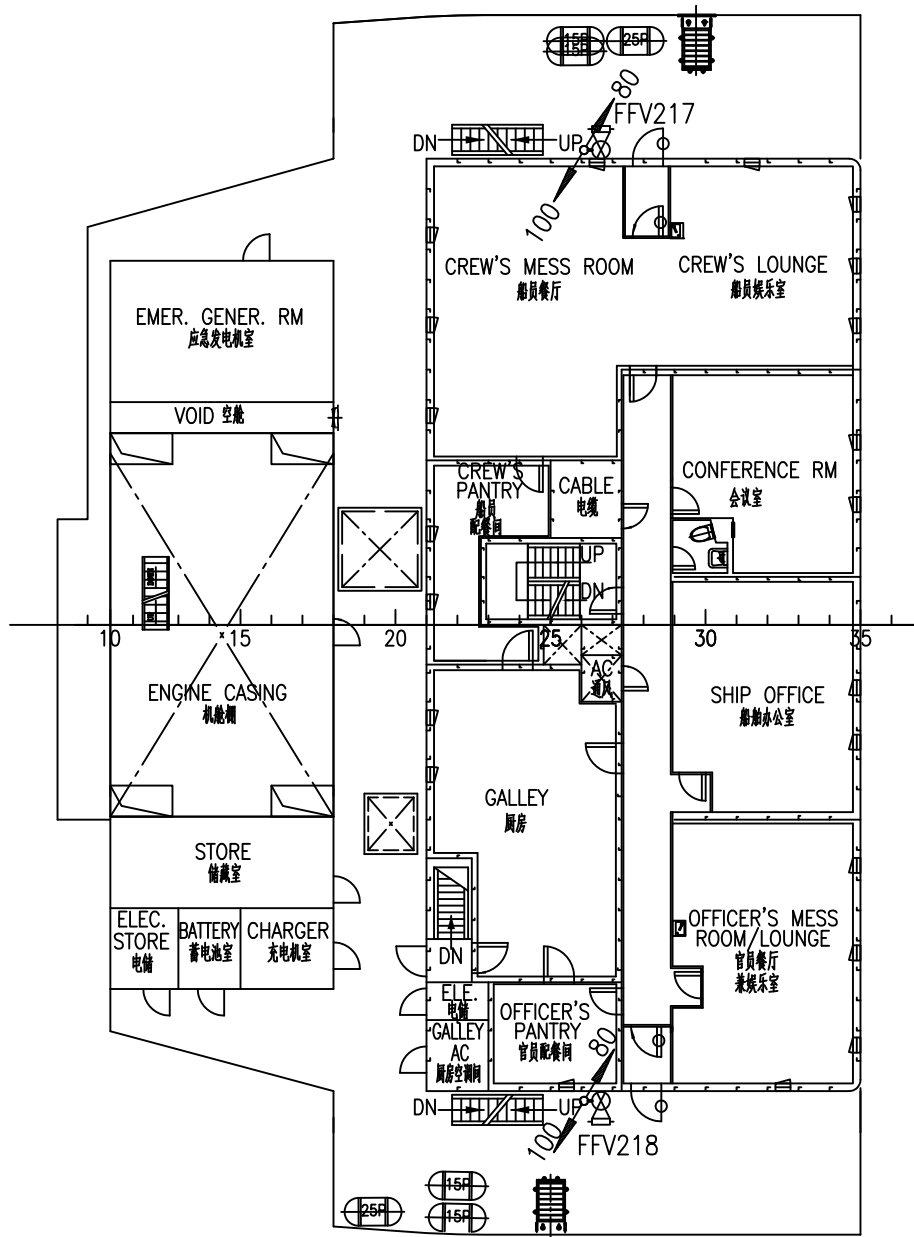


B DECK
B 甲板



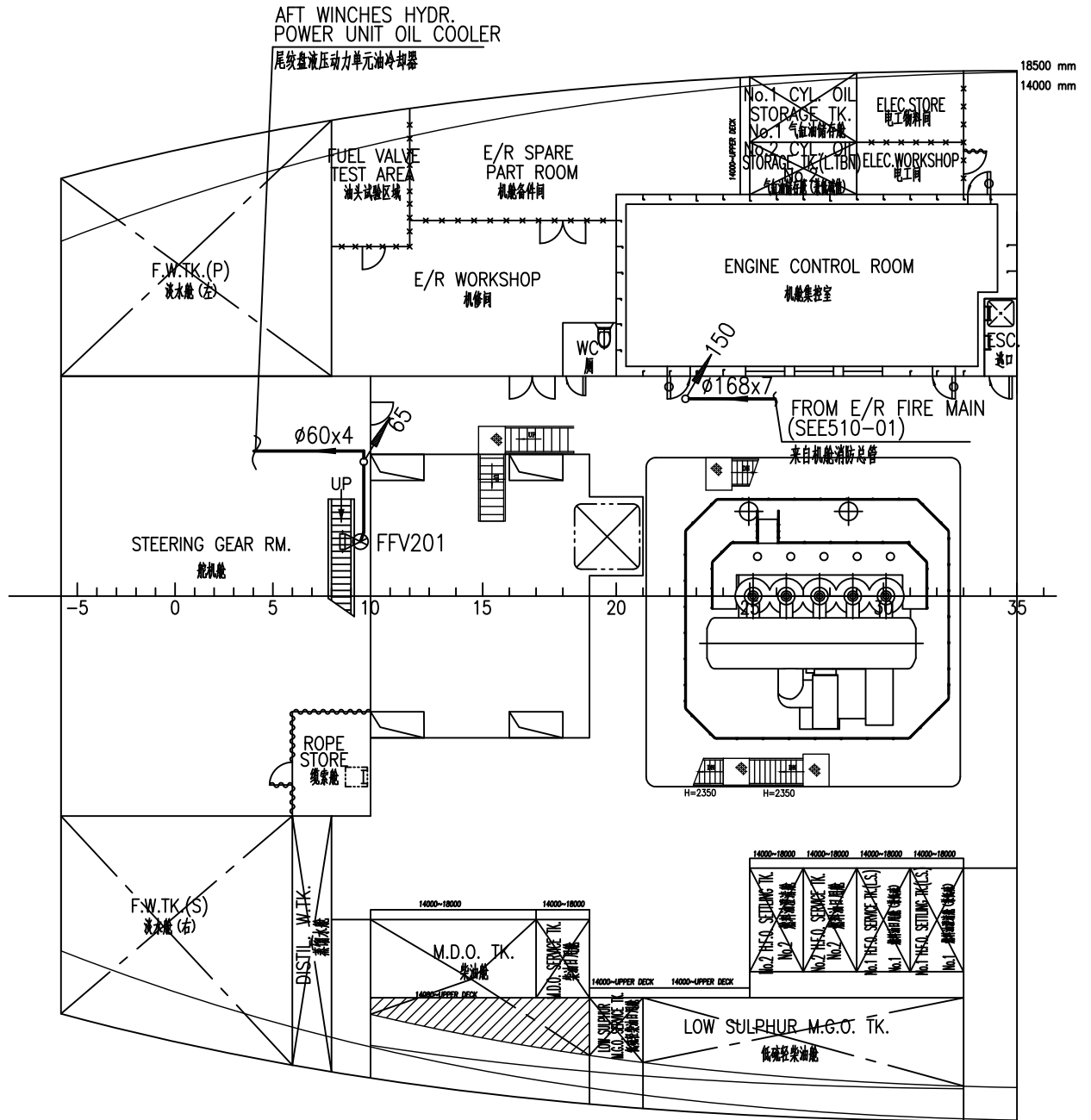
A DECK

A 甲板

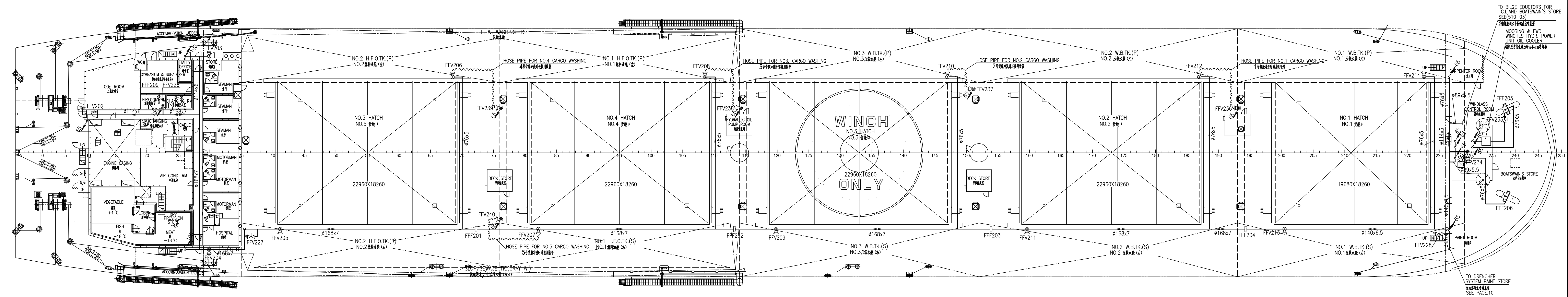


E/R UPPER PLATFORM

机舱上平台



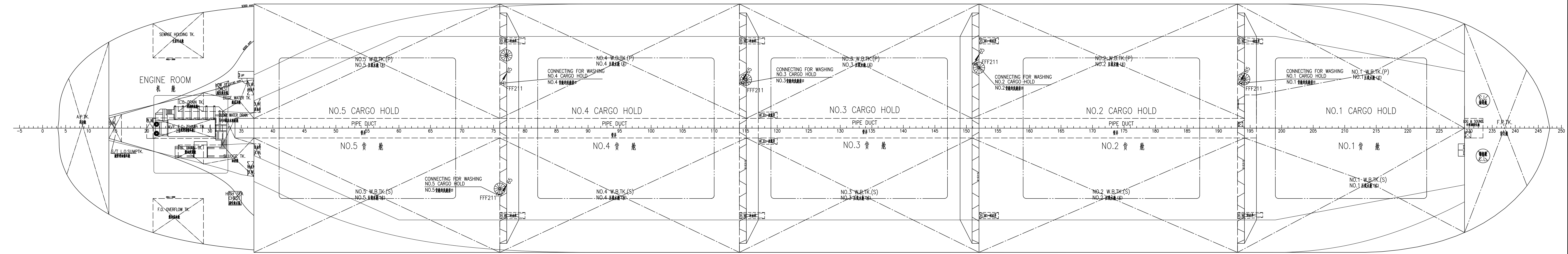
UPPER DECK
上甲板



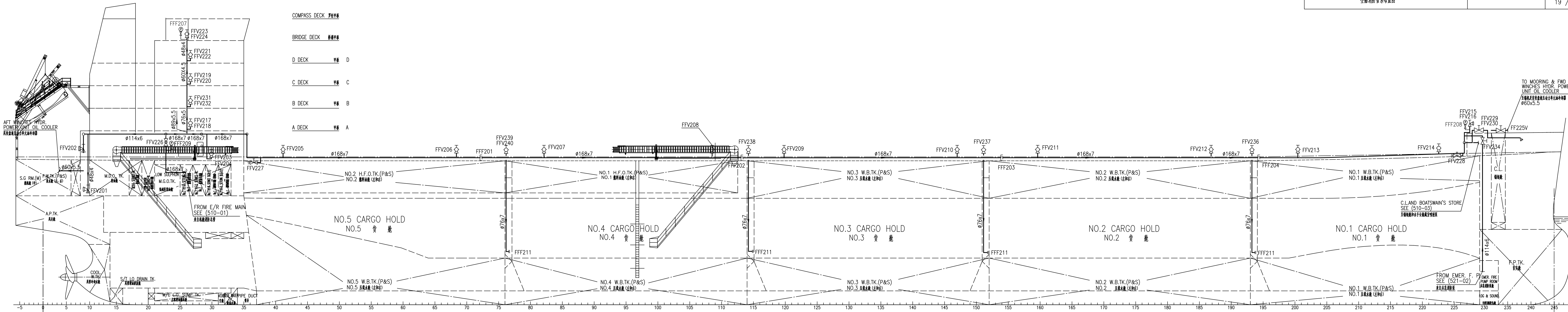
TO BILGE EDUCTORS FOR C.L. AND BOATSWAIN'S STORE SEE (510-03)
至舷边舱和手车舱真空抽排器
MOORING & FWD WINCHES HYDR. POWER UNIT OIL COOLER
锚链及首缆液压动力单元油冷却器

TO DRENCHER SYSTEM PAINT STORE SEE PAGE.10
至油漆间喷淋系统

TANK TOP
舱顶



- COMPASS DECK 罗经甲板
- BRIDGE DECK 桥楼甲板
- D DECK 甲板 D
- C DECK 甲板 C
- B DECK 甲板 B
- A DECK 甲板 A



A.P.

F.P.