第四港埠有限公司岸连船操作流程

设备联船及解列操作流程

一、高压岸电联船

序号NO	操作指令 Operating Instructions	具体操作步骤 Operating Instructions	操作单位 Operator
1	岸电电源上电启动，待输出状态 Energize the Shoreside Power and wait for output	按照操作顺序，依次合上岸电设备控制回路电源、打开空调系统 Power the equipment and the air conditioner	岸方 shore
		摇入601 岸电电源进线柜6kV进线柜断路器 Rotate the racking tool clockwise until the 601 breaker is in place	岸方 shore
		601 就地/远方旋钮设置为就地 Rotate 601 "LOCAL/REMOTE" switch to "LOCAL"	岸方 shore
		601断路器由分位变合位 Energize the shoreside 601 breaker	岸方 shore
		手动操作预冲柜合闸，降压变压器预冲上电，上电完成后确认预冲回路是否旁路 Send power to Step-down transformer by closing "预充柜KM1" manually at first,and verify that "KM2" is closed while Step-down transformer already working.	岸方 shore

		岸电电源启动，进入待输出状态 Energize the Shoreside Power and Prepare to Energize the Vessel	岸方 shore
		摇入 A601 6.6kV 系统输出柜断路器，断路器由分位变合位 Rotate the racking tool clockwise until the A601 breaker is in place and Energize the shoreside A601 breaker	岸方 shore
2	船方放下岸电连接电缆 Deploy and Connect Cable and Plugs	船方确认岸电连接电缆绝缘良好，船方放下岸电连接电缆 Deploy and Connect Cable and Plugs while confirming the Cable in good condition	☆船方 ☆ship
3	岸方固定、连接电缆 Connect the cable reel plugs to the shore power receptacles.	岸方固定连接电缆，并插入岸电接电箱，取下机械联锁钥匙 Connect the cable reel plugs to the shore power receptacles and remove the key between A611 and CAVOTEC’ SOCKET	岸方 shore
4	岸方确定安全回路接通 Test the interlocks	岸方确定安全回路接通 Make sure the interlocks is OK on the shoreside	岸方 shore
5	船方确定安全回路接通 Test the interlocks	船方确定安全回路接通 Make sure the interlocks is OK on the shipside	☆船方 ☆ship
6	船方确认状态，发送送电指令 Send power while Approved by the ship	船方确认船上联络柜接地刀合位变分位，只有 1 台发电机运行，通导设备已关闭，负载不大于 2000kW Verify that the earthing bar is opened , reduce to the capacity of one generator and the load less than 2000kw	☆船方 ☆ship
		船方发送送电指令 Verify that the earthing bar is opened , reduce to the capacity	

		of one generator and the load less than 2000kw	
7	岸方送电 power transmission	使用机械联锁钥匙打开 A611 6.6kV 岸电馈线柜接地刀锁，将接地刀由合位变分位 Open the Earthing bar of A611	岸方 shore
		摇入 A611 6.6kV 岸电馈线柜断路器至运行位置，断路器分位变合位 Rotate the racking tool clockwise until the A611 breaker is in place and Energize the shoreside A611 breaker	岸方 shore
8	安全回路测试（船方无要求可省略） Test the interlocks(it can be omitted if no requiretments)	船方按下船侧紧停按钮 Pull the emergency shoutdown on the shipside	☆船方 ☆ship
		岸方确认 A611 6.6kV 馈线柜断路器合位变分位 Confirm that breaker of A611/A612 is break	岸方 shore
		船方紧停按钮复位，恢复安全回路 Reset the enmergency shoutdown and Restore interlocks	☆船方 ☆ship
		等待船方送电指令 Waiting for ship's power transmission instruction	☆船方 ☆ship
		A611 6.6kV 馈线柜断路器分位变合位 Energize the shoreside A611/A612 breaker	岸方 shore
9	船方进行岸电并网操作 Prepare to Energize the Vessel	船上操作人员确定电压、频率、相序是否符合并网要求 Determine whether the voltage, frequency and phase sequence meet the requirements for grid connection	☆船方

		如不符合并网要求，由岸电电源进行调整 Be adjusted by shoreside if the power is not available	岸方 shore
		如符合并网要求，由船方操作人员按岸电船基操作流程进行岸电并网，船电解列 Operators of ship connect shore power according to arrangements while meeting requirements for AMP	☆船方 ☆ship
10	记录电度表数据 Recording power consumption	记录电度表 Recording power consumption by Watt-hour meter	岸方 shore
11	岸电为船舶供电 Send Power to the ship	对岸电设备各相关数据进行监测 Monitor the relevant data of shore power equipment	岸方 shore

二、高压岸电解列

序号 NO	操作指令 Operating Instructions	具体操作步骤 Operating Procedures	操作单位 Operator
1	船方进行岸电电源解列 Prepare to Disconnection	船方通知岸方准备进行岸电解列 Ship noticed the shoreside to prepare to disconnect the shore power	☆船方 ☆ship
		船方按照岸电船基操作流程进行船电并网，岸电解列 Electrical load transfers from the shore power to the oncoming	

		generat	
		岸电解列成功后，通知岸方停止岸电供电 Disconnect from shore power	
2	岸方停止岸电电源供电 Stop sending power	A611 6.6kV 岸电馈线柜断路器由合位变分位，摇出至试验位置 A611 circuit breaker is open and the circuit breaker is racked out	岸方 shore
		确认码头岸电接电箱无来电显示 Confirm that the shoreside has been poweroff	岸方 shore
		A611 6.6kV 岸电馈线柜接地刀分位变合位，并将接地刀锁住，取下机械联锁钥匙 Open earthing bar of A611 and lock it ,take the key away	岸方 shore
		A601 6.6kV 系统输出柜断路器由合位变分位，摇出至试验位置 A601 circuit breaker is open and the circuit breaker is racked out	岸方 shore
		停止岸电电源输出 Turn off the AMP system	岸方 shore
		601 6kV 进线柜断路器由合位变分位，摇出至试验位置 601 circuit breaker is open and the circuit breaker is racked out	岸方 shore
		按照操作顺序依次关闭岸电设备的控制回路电源 Take turns to turn off LV power of the equipment	岸方 shore

		记录电度表读数 Recording Value of Watt-hour meter	岸方 shore
3	岸方拆除连接电缆 Disconnect the plugs	岸电断电 15 分钟后，将机械联锁钥匙插入接线箱，拔出岸电连接电缆，解除电缆固定 Prepare the plugs for retrieval by re-installing the plug covers and pulling the protective sleeves back over the plugs after 15min later.	岸方 shore
4	船方收回岸电电缆 Retrieve Shore Power Cables	船方收回岸电连接电缆 Retrieve Shore Power Cables	☆船方 ☆ship

三、低压岸电的供电及断电

1.准备

1.1岸方人员接到供电工作票后 ,按照岸方制定的岸基供电工作程序进行操作。

1.2 由岸方提供低压供电电缆的， 岸方负责将上船电缆吊至船上，船方负责固定电缆并将插头插入插座内。

1.3由船方提供低压供电电缆的,船方负责将电缆放至岸上,岸方负责固定电缆并将插头插人插座内。

1.4 岸上应预留适当长度的电缆余量。

1.5 检查供电电缆及插头/插座是否完好。

2.供电

2.1 按下急停按钮，保证操作前转接箱处于无电状态。

2.2 岸方、船方应校核相序。

2.3 岸方、船方确认具备供电条件,岸方启动安全警示装置。

2.4 岸方收到船方“准备就绪"指示信号后,向右拧开急停按钮，接通岸基供电设备主电源。

2.5 送电后，观察报警指示灯是否工作正常。若工作正常说明用电正常。

2.6 供电期间,值班人员应对船舶岸基供电系统进行巡视,并做好记录。

3.离港断电

3.1 停止船舶岸基供电前，船方应提前通知岸方，双方确认后,岸方方可切断船舶岸基供电系统电源。

3.2 断电前应观察报警指示灯是否停止工作，确认无电 10 分钟后再拔出插头（需解锁插座上的机械锁）。盖好插座盖（严禁不盖或未盖严密插座盖，防止插座进水）。

3.3 岸方确认岸基供电系统停止供电后,通知船方。由岸方提供低压上船电缆的,船方负责解除电缆连接，岸方负责回收电缆;由船方提供低压供电电缆的,岸方负责解除电缆连接.船方负责回收电缆。

3.4 岸方、船方按要求将各自的船舶岸基供电受电设备收起,做好防护。