

5.2.3 Operating water drain plumbing

The water used as operating water flows out from the operating water drain outlet during the sludge discharge process. Therefore, the operating water drain plumbing must be laid.

1. Do not make the operating water drain plumbing a totally enclosed one by directly connecting it to the operating water outlet piping of the main body, but make it an "open to the atmosphere" piping by having the drain outlet received by a hopper. In this case, make sure that the drain outlet and hopper are centered to prevent scattering drain.
2. Regarding the dimensions of the operating water drain plumbing, please refer to Fig 5-5.(install it in a possible position for operating and maintenance of the solenoid valve unit.)
3. Do not connect directly the operating water drain plumbing to the sludge tank.

NOTE
If the operating water drain plumbing is directly connected to the sludge tank in a totally enclosed state, the vapor in the sludge tank may be forced up, and rust formation on the shaft system or premature deterioration of the gear oil could result.

5.2.3 工作水放泄配管

在油泥排出工序中被供给的工作水，会从分油机的工作水放泄出口排出，因此，需要装设配管。

1. 请不要将工作水放泄的配管作为与本体工作水放泄出口直接连接的密闭配管，而是先用水斗接在放泄出口，（向大气开放）再进行配管。在这种情况下，为了防止放泄水的飞溅，请将放泄出口与水斗的中心对准。
2. 有关工作水放泄配管的尺寸，请参照 Fig 5-5。（请设置在能够对电磁阀进行操作或维修的位置。）
3. 请不要将工作水放泄配管直接与油泥箱连接。

注
如果以密闭状态将工作水放泄配管直接与油泥箱连接，有可能因油泥箱内的废气喷出而造成分油机周围的污染、轴系统的生锈以及齿轮油过早地变脏。

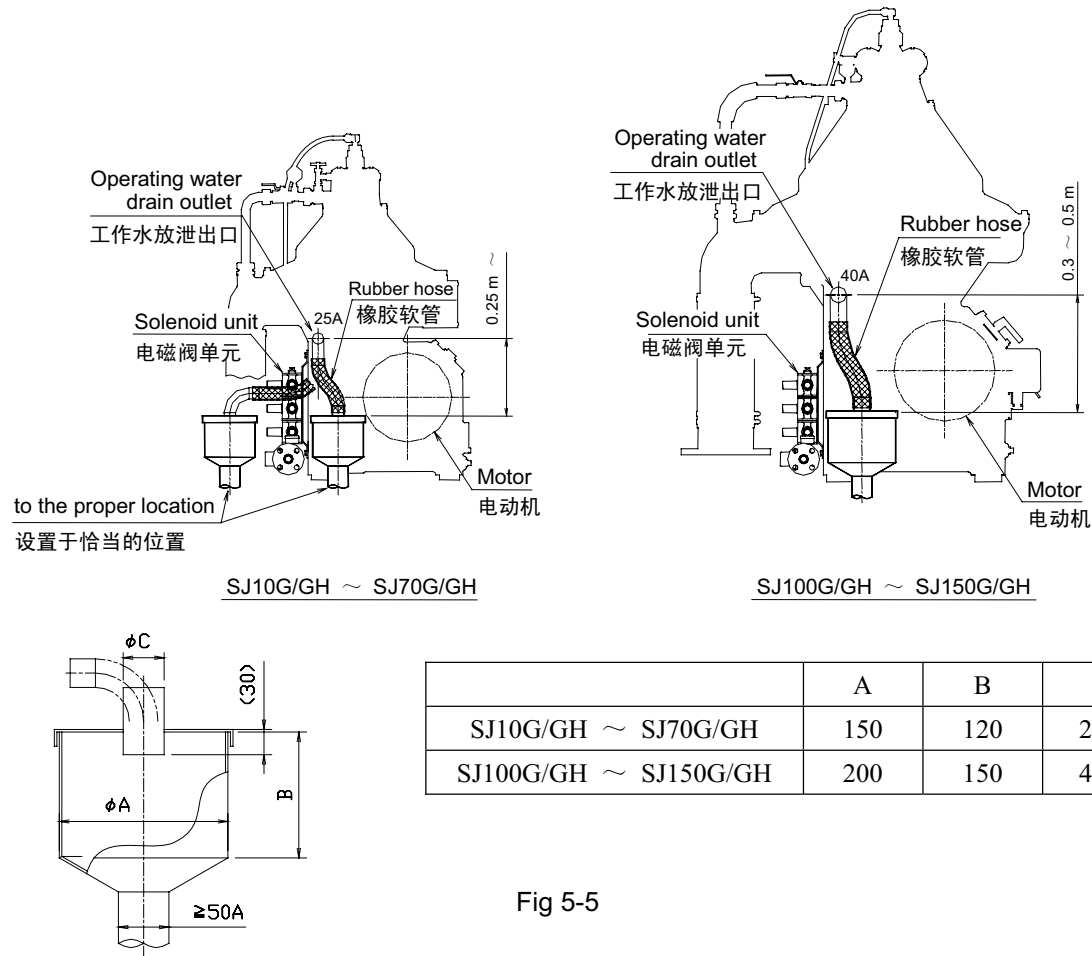


Fig 5-5

5.3 Air system

1. In the automatic or manual specifications provided with an emergency shut-off equipment, the following are supplied as standard accessories.
 - Feed valve
 - 3-way solenoid valve
2. Since the feed valve is an pneumatically controlled one, the 3-way solenoid valve is required.
3. Maintain the air pressure within the following range.
Required air pressure 0.5~0.9MPa { ≈ 5 to 9 kgf/cm²}
When the air pressure is over 0.9MPa { ≈ 9 kgf/cm²}, reduce it before use.



CAUTION

If piping is directly connected which supplies a compressed air pressure of over 0.9MPa { ≈ 9 kgf/cm²}, damage to the accessories of the air system could result. If the air pressure is lower than 0.5MPa { ≈ 5 kgf/cm²}, the accessories (feed valve) of the air system may fail to operate.

4. Lay piping by use of copper or Carbon steel pipes (galvanized) for compressed air.
For the piping procedures, refer to Fig 5-6.
5. Make sure that the compressed air to be supplied is whose dew point temperature is 5 to 10°C lower than the ambient temperature.

5.3 空气系统

1. 自动规格或者手动规格中带有危急切断装置时，可提供以下标准附件。
 - 原液阀
 - 三通电磁阀
2. 因使用空气操作式原液阀，因此，需要使用三通电磁阀作为控制用。
3. 请将空气压设定在以下范围。
规定空气压 0.5~0.9MPa {约 5~9kgf/cm²}
当空气压超过 0.9MPa {约 9kgf/cm²} 时，请预先减压后使用。



注意

如果直接配管使用 0.9MPa {约 9kgf/cm²} 以上的压缩空气，则有可能损坏空气系统的附件。另一方面，如果空气压小于 0.5MPa {约 5kgf/cm²} 时，则空气系统的附件（原液阀）有可能会不动作。

4. 当配管用于压缩空气时，请选用铜管或镀锌钢管。
配管要领如 Fig 5-6 所示。
5. 推荐使用露点温度低于环境温 5~10°C 的压缩空气。

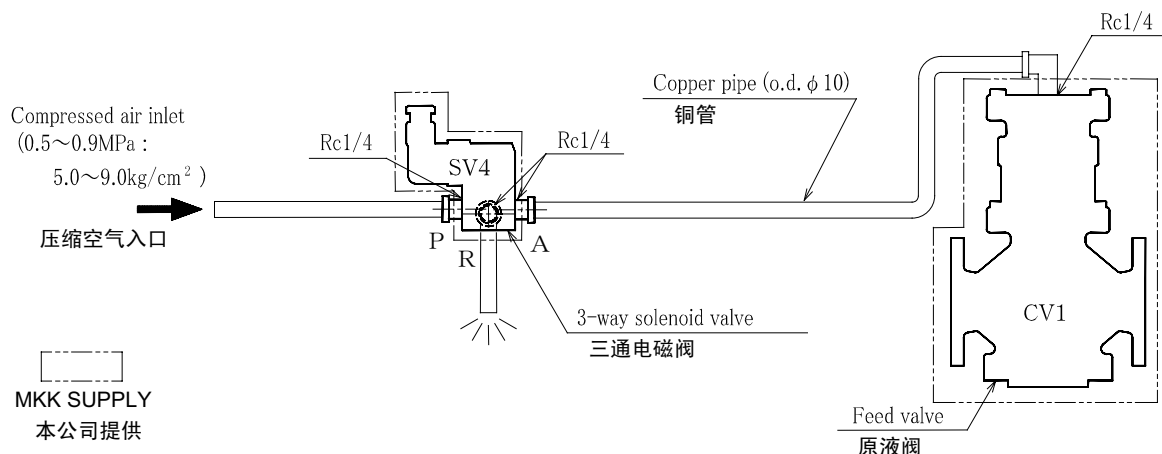


Fig 5-6

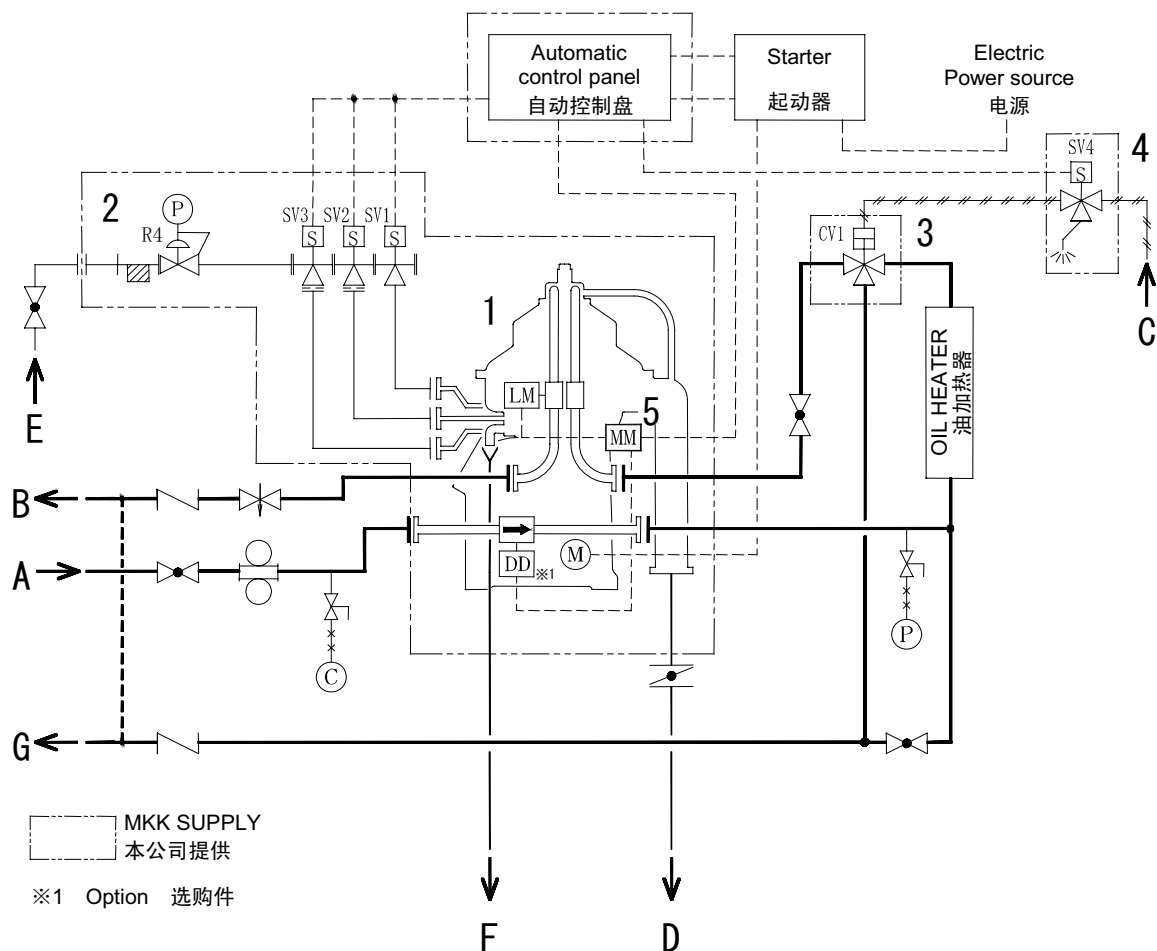
5.4 Flow diagram

The flow around the purifier varies to some extent, depending on the engine room design concept, application of the purifier, etc. For your reference, however, here is a flow diagram of the basic piping procedures put together on the basis of the details described in Sections 5.1 through 5.3.

5.4 流程图

分油机周边的流程因机仓设计上的考虑，分油机的用途等不同而略有差异，根据 5.1~5.3 项记载的内容，将基本的配管要领归纳为流程图，请参考。

1 Automatic Type : GBC-1 / GBC-2



NOTE

Circulation piping (G) may be connected to purified oil outlet (B) as shown in dotted line only for a Bypass purifying with Lubricating Oil Purifier.

注

利用润滑油分油机在旁通回路进行分油时，可将回流配管（G）如虚线所示，连接到分油机的出口配管（B）上。

1. Automatic Type : GBC-1 / GBC-2






1.1 Equipment

1	SELFJECTOR 分油机
2	Water valve unit (for sealing water, opening and closing bowl) 工作水电磁阀单元（封水用，开阀用，闭阀用）
3	Feed valve 原液阀
4	3-way solenoid valve 3 通电磁阀
5	Multi-Monitor 综合检测器（多功能检测显示器）

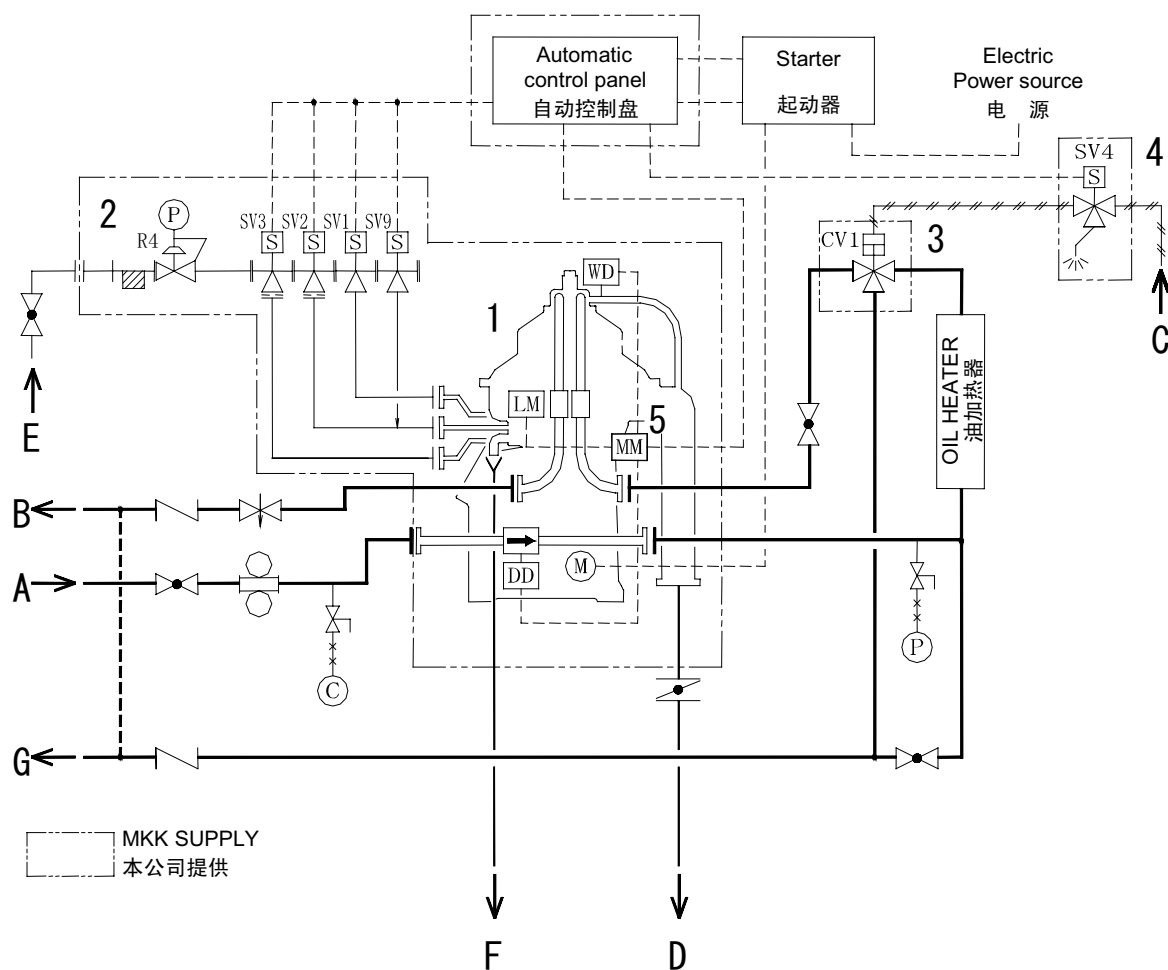
1.2 Connection

A	Dirty oil inlet (FO:from Settling tank LO:from Sump tank) 原液入口
B	Purified oil outlet (FO:to Service tank LO:to Sump tank) 净化液出口
C	Compressed air inlet 0.5~0.9MPa {5~9kgf/cm ² } 压缩空气入口
D	Sludge & water outlet 油泥，水出口
E	Water inlet 0.2~0.5MPa {2~5kgf/cm ² } 清水（高压水）入口
F	Operating water drain 工作水放泄口
G	Return (FO:to Settling tank LO:to Sump tank) 回流

1.3 Symbol

	Globe valve 球形阀		Multi-Monitor 综合检测器（多功能检测显示器）
	Cock 旋塞		Discharge detector (Option) 排出检测器（选配件）
	Check valve 止回阀		Leakage monitor 泄漏检测器
	Needle valve 针阀		Pressure gauge 压力表
	Pressure reducing regulator 减压阀		Compound gauge 复合-真空压力表
	Butterfly valve 蝶阀		Motor 电动机
	2-way solenoid valve 二通电磁阀		Oil line 油配管
	3-way solenoid valve 3 通电磁阀		Sludge & drain line 油泥，放泄配管
	3-way cylinder valve 3 通筒阀（原液阀）		Water line 水配管
	Strainer 过滤器		Air line 空气配管
	Duplex type strainer 复式过滤器		Capillary line 细管

2 Automatic Type : GSH-1



NOTE

Circulation piping (G) may be connected to purified oil outlet (B) as shown in dotted line only for a Bypass purifying with Lubricating Oil Purifier.

注

利用润滑油分油机在旁通回路进行分油时，可将回流配管（G）如虚线所示，连接到分油机的出口配管（B）上。

2. Automatic Type : GSH-1













2.1 Equipment

1	SELFJECTOR 分油机
2	Water valve unit (for sealing water, opening and closing bowl) 工作水电磁阀单元（封水用，开阀用，闭阀用）
3	Feed valve 原液阀
4	3-way solenoid valve 3 通电磁阀
5	Multi-Monitor 综合检测器（多功能检测显示器）

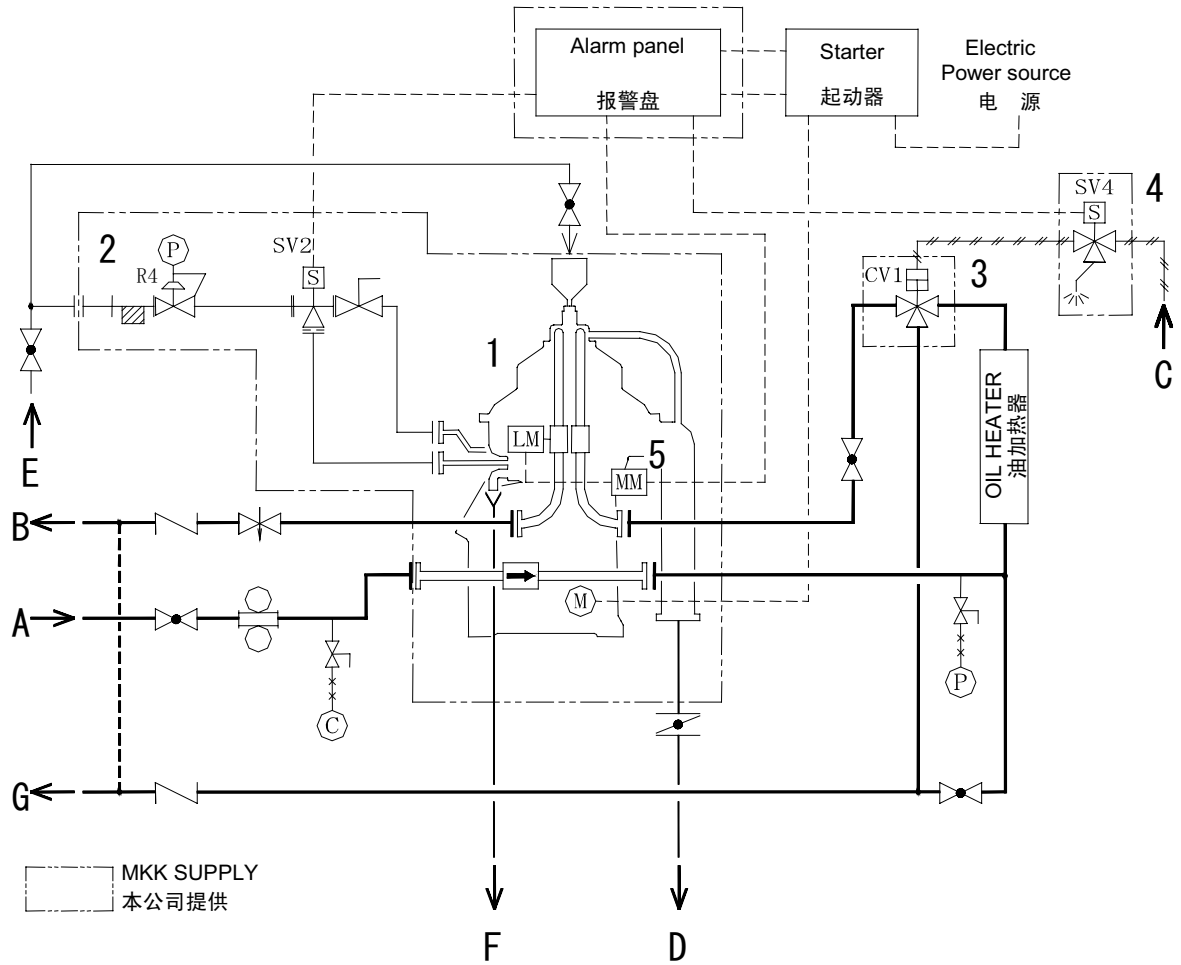
2.2 Connection

A	Dirty oil inlet (FO:from Settling tank LO:from Sump tank) 原液入口
B	Purified oil outlet (FO:to Service tank LO:to Sump tank) 净化液出口
C	Compressed air inlet 0.5~0.9MPa {5~9kgf/cm ² } 压缩空气入口
D	Sludge & water outlet 油泥，水出口
E	Water inlet 0.2~0.5MPa {2~5kgf/cm ² } 清水（高压水）入口
F	Operating water drain 工作水放泄口
G	Return (FO:to Settling tank LO:to Sump tank) 回流

2.3 Symbol

	Glove valve 球形阀		Multi-Monitor 综合检测器（多功能检测显示器）
	Cock 旋塞		Discharge detector 排出检测器（选配件）
	Check valve 止回阀		Leakage monitor 泄漏检测器
	Needle valve 针阀		Water detector 水分检测器
	Pressure reducing regulator 减压阀		Pressure gauge 压力表
	Butterfly valve 蝶阀		Compound gauge 复合-真空压力表
	2-way solenoid valve 二通电磁阀		Motor 电动机
	3-way solenoid valve 3 通电磁阀		Oil line 油配管
	3-way cylinder valve 3 通筒阀（原液阀）		Sludge & drain line 油泥，放泄配管
	Strainer 过滤器		Water line 水配管
	Duplex type strainer 复式过滤器		Air line 空气配管
			Capillary line 细管

3 Manual Type with Alarm Device : GAP-11



NOTE

Circulation piping (G) may be connected to purified oil outlet (B) as shown in dotted line only for a Bypass purifying with Lubricating Oil Purifier.

注

利用润滑油分油机在旁通回路进行分油时，可将回流配管（G）如虚线所示，连接到净化机的出口配管（B）上。

3. Manual Type with Alarm Device : GAP-11




















3.1 Equipment

1	SELFJECTOR 分油机
2	Water valve unit (for opening and closing bowl) 工作水电磁阀单元（开阀用，闭阀用）
3	Feed valve 原液阀
4	3-way solenoid valve 3 通电磁阀
5	Multi-Monitor 综合检测器（多功能检测显示器）

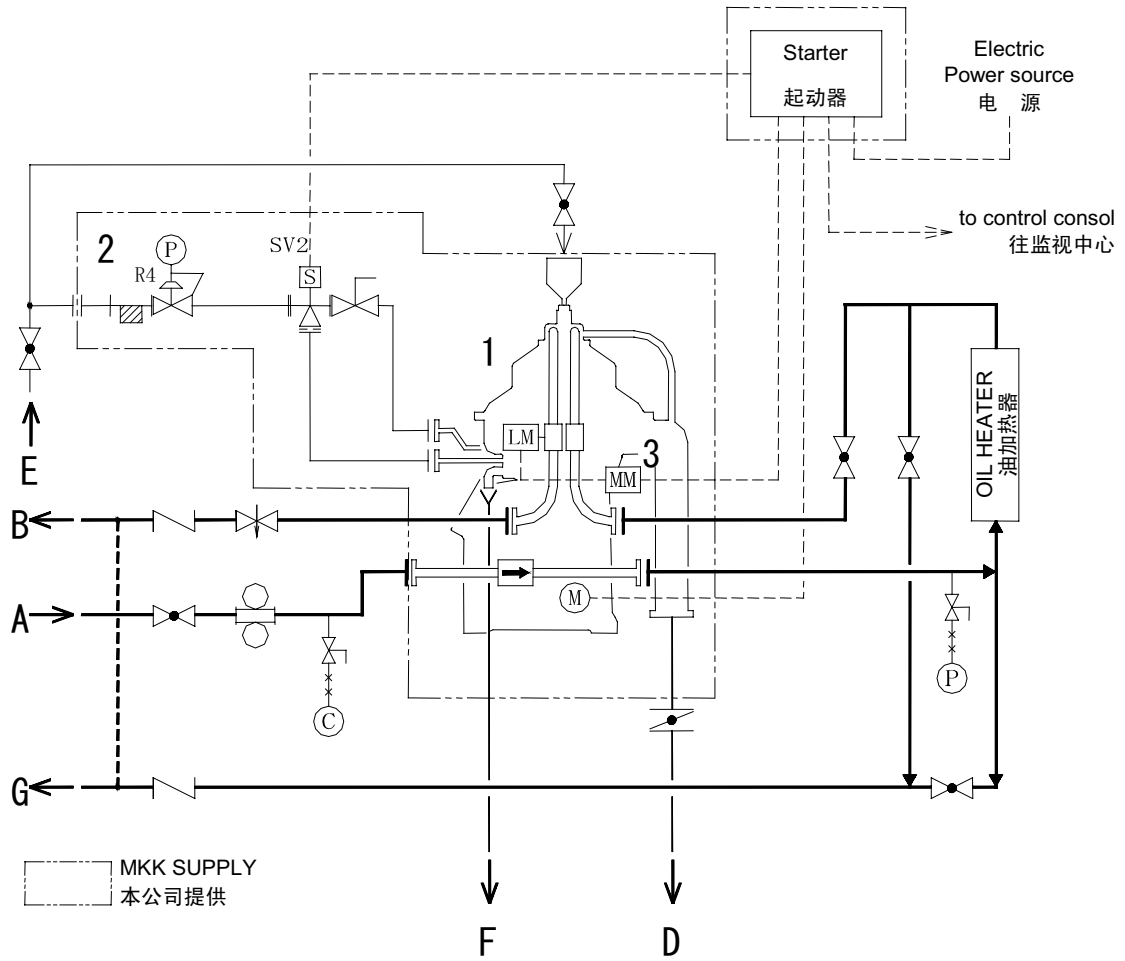
3.2 Connection

A	Dirty oil inlet (FO:from Settling tank LO:from Sump tank) 原液入口
B	Purified oil outlet (FO:to Service tank LO:to Sump tank) 净化液出口
C	Compressed air inlet 0.5~0.9MPa {5~9kgf/cm ² } 压缩空气入口
D	Sludge & water outlet 油泥，水出口
E	Water inlet 0.2~0.5MPa {2~5kgf/cm ² } 清水（高压水）入口
F	Operating water drain 工作水放泄口
G	Return (FO:to Settling tank LO:to Sump tank) 回流

3.3 Symbol

	Globe valve 球形阀		Multi-Monitor 综合检测器（多功能检测显示器）
	Cock 旋塞		Leakage monitor 泄漏检测器
	Check valve 止回阀		Pressure gauge 压力表
	Needle valve 针阀		Compound gauge 复合-真空压力表
	Pressure reducing regulator 减压阀		Motor 电动机
	Butterfly valve 蝶阀		Oil line 油配管
	2-way solenoid valve 二通电磁阀		Sludge & drain line 油泥，放泄配管
	3-way solenoid valve 3 通电磁阀		Water line 水配管
	3-way cylinder valve 3 通筒阀（原液阀）		Air line 空气配管
	Strainer 过滤器		Capillary line 细管
	Duplex type strainer 复式过滤器		

4 Manual Type



NOTE

Circulation piping (G) may be connected to purified oil outlet (B) as shown in dotted line only for a Bypass purifying with Lubricating Oil Purifier.

注

利用润滑油分油机在旁通回路进行分油时，可将回流配管（G）如虚线所示，连接到净化机的出口配管（B）上。

4. Manual Type




















4.1 Equipment

1	SELFJECTOR 分油机
2	Water valve unit (for opening and closing bowl) 工作水电磁阀单元（开阀用，闭阀用）
3	Multi-Monitor 综合检测器（多功能检测显示器）

4.2 Connection

A	Dirty oil inlet (FO:from Settling tank LO:from Sump tank) 原液入口
B	Purified oil outlet (FO:to Service tank LO:to Sump tank) 净化液出口
C	—
D	Sludge & water outlet 油泥，水出口
E	Water inlet 0.2~0.5MPa {2~5kgf/cm ² } 清水（高压水）入口
F	Operating water drain 工作水放泄口
G	Return (FO:to Settling tank LO:to Sump tank) 回流

4.3 Symbol

	Globe valve 球形阀		Multi-Monitor 综合检测器（多功能检测显示器）
	Cock 旋塞		Leakage monitor 泄漏检测器
	Check valve 止回阀		Pressure gauge 压力表
	Needle valve 针阀		Compound gauge 复合-真空压力表
	Pressure reducing regulator 减压阀		Motor 电动机
	Butterfly valve 蝶阀		Oil line 油配管
	2-way solenoid valve 二通电磁阀		Sludge & drain line 油泥，放泄配管
	Strainer 过滤器		Water line 水配管
	Duplex type strainer 复式过滤器		Air line 空气配管
			Capillary line 细管

5.5 Parallel operation, series operation

Basically, under the present situations, if feed rate is within the actual capacity, SELFJECTOR is fully capable in a one-unit one-stage purifying operation.

However, when it is required to raise the purification effect (as in the case of low grade fuel oil), a spare unit may also be utilized.

Available as such mode of operation are parallel operation and series operation and, with regard to the separating performance, normally the parallel operation is better, but it is safe to provide such piping as makes possible both parallel and series operations. These operating procedures will be described here and for details refer to our Company.

5.5.1 Parallel operation

The parallel operation refers to the mode of operation in which two or more units of SELFJECTORs are arranged and operated in parallel, in which case feed rate to each machine will be throttled. The plumbing aperture before the branching of feed plumbing and after the confluence of return/exit plumbing etc., uses larger bore, and please decide bore in consideration of the speed of a running fluid and piping resistance. Also, please do such piping layout that flows evenly to each machine.

NOTE

In case of parallel operation with 2 units of SELFJECTOR, feed rate to each machine will be 1/2 of the required quantity, respectively.
An example of piping in parallel operation is shown in Fig 5-7.

5.5 并联运行及串联运行

一般来说, SELFJECTOR 如果现状的通油量为实容量以内时, 1 台设备 1 级分油运转便完全能够满足需要。

但是, 如果需要进一步提高净化效果时(例如低质重油等情形), 有时还要使用备用机。

作为其运行模式, 可分为并联运行和串联运行, 从分离性能来看, 通常并联运转比较好, 但如果配管时使并联和串联两种模式都能运转更为万全。下面, 将说明其运转要领, 详细内容请向本公司咨询。

5.5.1 并联运行

并联运行就是将 2 台或者 2 台以上 SELFJECTOR 并列配置而运转的方法, 在这种情况下, 各机的通油量为分流量。对于入口配管的分支部前的总供油管及回流、出口配管的合流部以后的配管, 请考虑流速、配管阻力后确定尺寸, 如使用大 1 号口径的管子等。同时, 在进行配管布局时, 请力求使其能均匀地流向各机。

注

使用 2 台 SELFJECTOR 进行并联运行时, 向各机的通油量分别取必需量的 1/2。
Fig 5-7 为并联运转的配管 1 例。

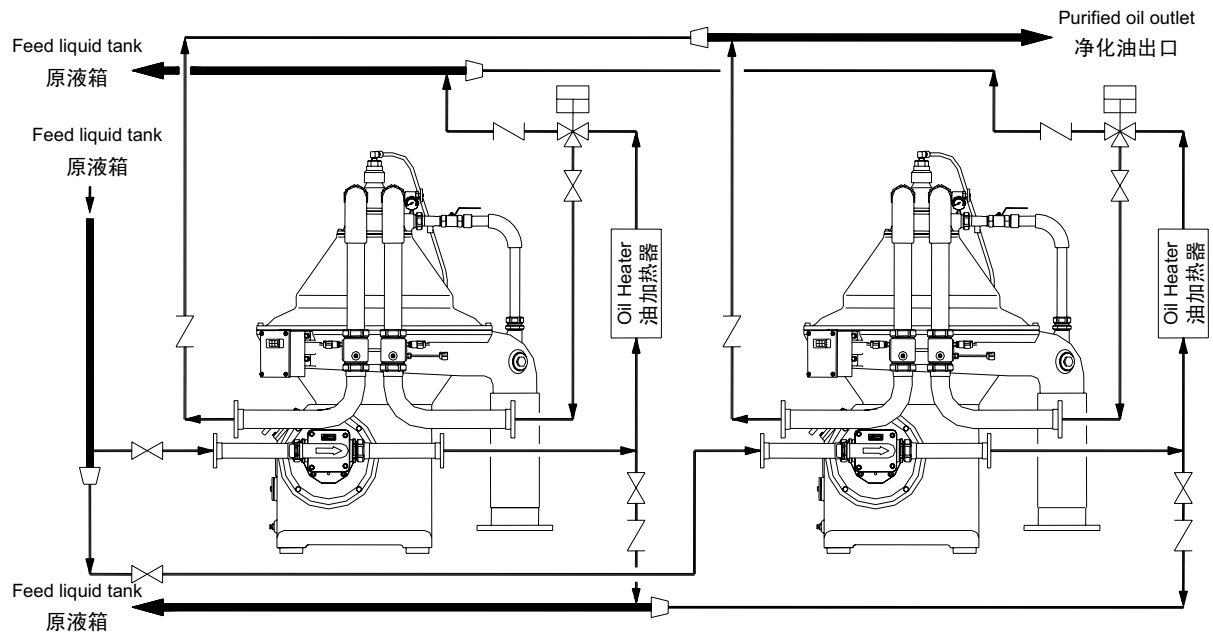


Fig 5-7

5.5.2 Series operation

The series operation refers to the mode of operation in which two or more units of SELFJECTOR are arranged in series and operated, in which case the feed rate will be that in the case of one-unit one-stage purification. Further, sealing water and replacement water will not be supplied to the second stage SELFJECTOR, in the case that the first stage will be purifying operation and the second stage, clarifying operation.

NOTE

In case of series operation with 2 units of SELFJECTOR, the safety joint for the second stage SELFJECTOR shall be removed.
An example of piping in series operation is given in Fig 5-8.

5.5.2 串联运行

串联运行就是将 2 台或者 2 台以上 SELFJECTOR 串列配置而运转的方法，在这种情况下，通油量为 1 台 SELFJECTOR 1 级分油时的通油量。另外，当前级为净化运转、后排为澄清运转时，封水及置换水不会供给后级的 SELFJECTOR。

注

使用 2 台 SELFJECTOR 进行串联运行时，请事先拆下后级 SELFJECTOR 的安全接头。

Fig 5-8 为串联运转的配管 1 例。

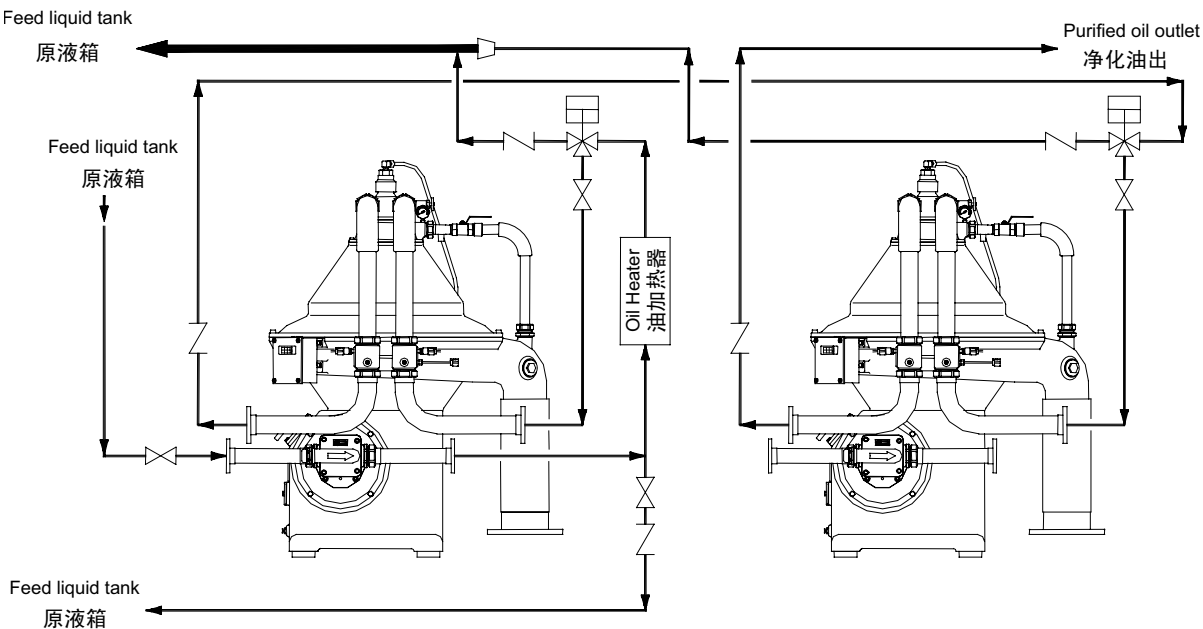


Fig 5-8
