

|          |  |
|----------|--|
| CUSTOMER |  |
| SHIP NO. |  |
| BUILDER  |  |

| Mark | Engine Type                              | Turbocharger Type | X: Apply |               |
|------|--|-------------------|----------|---------------|
|      |  |                   | Tier2    | Tier3 (LPSCR) |
| 01   | 6UEC35LSE-B2<br>6UEC35LSE-C1             | MET 42MB/-EGB×1   | x        |               |
|      |  | MET 37MB/-EGB×1   | x        |               |
|      |  | MET 33MB/-EGB×1   | x        |               |
| 02   | 6UEC35LSE-B2-LPSCR<br>6UEC35LSE-C1-LPSCR | MET 42MB-EGB×1    |          | x             |
|      |  | MET 37MB-EGB×1    |          | x             |
|      |  | MET 33MB-EGB×1    |          | x             |

電子ガバナ用  
For Electric Governor Type  
機械式注油用  
For Mechanical Lubricator Type  
CW/CCW回転用  
For CW/CCW rotating engine Type

|             |                                   |                         |                  |           |
|-------------|-----------------------------------|-------------------------|------------------|-----------|
| DESTINATION | SERIAL NO.                        | MODEL                   | 6UEC35LSE/-LPSCR |           |
|             | ORDER NO.                         | 諸管線図集<br>PIPING DIAGRAM |                  |           |
|             | ENGINEERING DEPARTMENT            |                         |                  |           |
|             | APPROVED<br>M.Sugihara N.Kunihiro |                         |                  |           |
|             | CHECKED<br>K.Edo S.Yoshikawa      |                         |                  |           |
|             | DRAWN<br>K.Imanaka                |                         |                  |           |
| DATE        | Nov.11, 2011                      | DRAWING NO.             |                  |           |
| SHEETS      | 21 (with cover)                   | SHEETS                  | U7-0E051         | REV.<br>F |
| Total       |                                   |                         |                  |           |

# 改訂来歴表

文 書 番 号

U7-0E051

| 改訂番号 | 項 目 ・ 内 容 等  | 年 月 日      | 承 認          | 審 査                       | 担 当                     |
|------|--|------------|--------------|---------------------------|-------------------------|
| O    | 新規作成した。 2011.Nov.4<br>-----<br>田中、板垣   | 2011.11.8  | M.Sugihara   | K.Edo                     | S.Yosikawa<br>K.Imanaka |
| A    | $\frac{1}{14}$ $\frac{3}{14}$ $\frac{4}{14}$ $\frac{9}{14}$ $\frac{12}{14}$ $\frac{13}{14}$ の線図を変更する。<br>-----<br>2013.Jun.3 河本,岡村,田中,板垣         | 2013.6.17  | M.Sugihara   | K.Edo                     | T.Kozuki                |
| B    | 全頁見直し。<br>-----  | 2018.6.1   | A.Aota       | Y.Kinoshita               | S.Yoshikawa             |
| C    | MET33MB追加, EGB追加 $\frac{6}{14}$ $\frac{8}{14}$ $\frac{13}{14}$<br>-----<br><span style="border: 1px solid black; padding: 2px;">UC12724</span>   | 2020.10.9  | K.Imanaka    | S.Yoshikawa               | S.Yoshikawa             |
| D    | $\frac{4}{14}$ $\frac{6}{14}$ $\frac{13}{14}$ の線図を変更する。 UC12809<br>-----   | 2021.01.22 | K.Imanaka    | S.Yoshikawa               |                         |
| E    | Revised for cover page and 6/14page.<br>-----<br>UC13945   | 2022.7.1   | Y. Kinoshita | H. Okamura<br>S.Yoshikawa | K. Amari                |
| F    | $\frac{1}{14}$ : Added CCW rotation.<br>-----<br>$\frac{2}{14}$ $\frac{4}{14}$ $\frac{9}{14}$ $\frac{12}{14}$ $\frac{13}{14}$ : Revised. UC14119 | 2022.10.25 | Y. Kinoshita | H. Okamura                | D. Ikeda                |
|      | -----<br>-----<br>-----<br>-----<br>-----<br>-----<br>-----<br>-----<br>-----  |            |              |                           |                         |



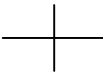
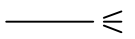
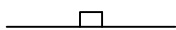

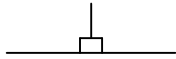
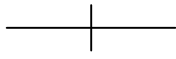
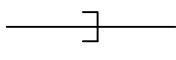
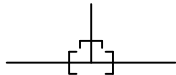
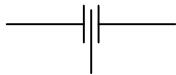
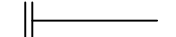
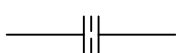






# 諸管線図名称

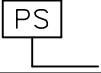
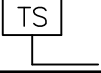

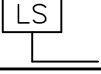
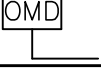
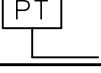
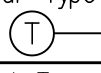
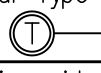
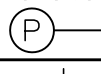
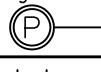
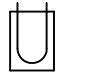
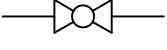

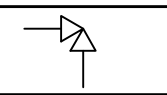

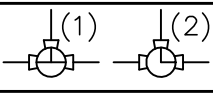

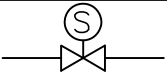
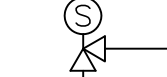
Name of piping diagram



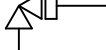






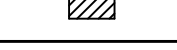


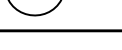
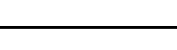
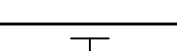
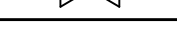
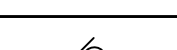
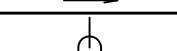

|          |         |   |
|----------|---------|---|
| U7-0E051 | ①<br>14 | Starting air<br>始動空気管線図                                 |
| " "      | ②<br>14 | Fuel oil<br>燃料油管線図                                      |
| " "      | ③<br>14 | Fuel oil steam<br>燃料油加熱蒸気管線図                            |
| " "      | ④<br>14 | Lubricating oil<br>潤滑油管線図                               |
| " "      | ⑤<br>14 | Piston cooling oil<br>ピストン冷却油管線図                        |
| " "      | ⑥<br>14 | Actuator oil for exhaust valve<br>排気弁駆動油管線図             |
| " "      | ⑦<br>14 | Cylinder lubricating oil<br>シリンダ注油管線図                   |
| " "      | ⑧<br>14 | Turbocharger lubricating oil<br>過給機潤滑油管線図               |
| " "      | ⑨<br>14 | Cylinder cooling water<br>シリンダ冷却水管線図                    |
| " "      | ⑩<br>14 | Air cooler cooling water<br>空気冷却器冷却水管線図                 |
| " "      | ⑪<br>14 | Piston rod stuffing box drain<br>ピストン棒パッキン箱ドレン管線図       |
| " "      | ⑫<br>14 | Scavenging air trunk drain<br>掃気トランクドレン管線図              |
| " "      | ⑬<br>14 | Turbocharger and air cooler washing<br>過給機, 空気冷却器洗浄水管線図 |
| " "      | ⑭<br>14 | Fire extinguishing<br>掃気室火災消火装置管線図                      |
|          |         |   |
|          |         |   |
|          |         |   |
|          |         |   |
|          |         |   |


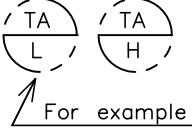

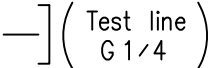
## SYMBOLS FOR MAIN ENGINE PIPING DIAGRAM

## 主 機 関 諸 管 線 図 記 号

| SYMBOLS<br>記 号  | N A M E                          | 名 称                           | R E M A R K S<br>備 考 |
|---|----------------------------------|-------------------------------|----------------------|
|    | Nominal inner diameter           | 称 呼 口 径                       |                      |
|    | Crossing pipes,<br>connected     | 連 結 管                         |                      |
|    | Crossing Pipes, not<br>connected | 不 連 結 管                       |                      |
|    | To bilge                         | ビ ル ジ ヘ                       |                      |
|    | Boss                             | ボ ス                           |                      |
|    | Boss and plug                    | プ ラ グ 付 ボ ス                   |                      |
|   | Joint, bossed                    | ボ ス 継 手                       |                      |
|  | Joint, flanged                   | フ ラ ン ジ 継 手                   |                      |
|  | Joint, screwed                   | ね じ 継 手                       |                      |
|  | Tee joint, screwed               | T 形 ね じ 継 手                   |                      |
|  | Spectacle flange                 | め が ね フ ラ ン ジ                 |                      |
|  | Blind flange                     | 閉 止 フ ラ ン ジ                   |                      |
|  | Orifice                          | オ リ フ ィ ス                     |                      |
|  | Flexible pipe                    | フ レ キ シ ブ ル パ イ プ             |                      |
|  | Hopper                           | ホ ッ パ ー                       |                      |
|  | Hopper with cover                | ふ た 付 ホ ッ パ ー                 |                      |
|  | Air pipe                         | 空 気 抜 管                       |                      |
|  | Loop seal pipe siphon            | ル ー プ シ ール<br>パ イ プ サ イ フ ォ ン |                      |
|  | Siphon                           | サ イ フ ォ ン                     |                      |

| SYMBOLS<br>記号   | NAME                                     | 名称              | REMARKS<br>備考                      |
|---|--|-----------------|------------------------------------|
| -----   | Elect. cable                             | 電気配線            |                                    |
| -----   | Outfit line<br>(to be delivered by yard) | 造船所掌配管          |                                    |
|                      | Pressure switch                          | 圧力スイッチ          |                                    |
|                      | Temperature switch                       | 温度スイッチ          |                                    |
|                      | Float switch                             | フロートスイッチ        |                                    |
|                      | Limit switch                             | リミットスイッチ        |                                    |
|                      | Oil mist detector                        | オイルミストディテクター    |                                    |
|                      | Pressure transmitter                     | 圧力トランスミッター      |                                    |
| Bar Type<br>        | Thermometer                              | 温度計             |                                    |
| Dial Type<br>      |  |                 |                                    |
| engine side<br>    | Pressure gauge                           | 圧力計             |                                    |
| on Gauge board<br> |  |                 |                                    |
|                    | U Tube manometer                         | U字管式圧力計         |                                    |
|                    | Cock                                     | コック             |                                    |
|                    | Stop valve                               | 止め弁             | Globe valve<br>玉形弁                 |
|                    |  |                 | Angle valve<br>アングル弁               |
|                    | Thermometer pocket                       | 温度計座<br>(ポケット付) |                                    |
|                    | Three-way cock                           | 三方コック           | (1) T形 (T-PORT)<br>(2) L形 (L-PORT) |
|                    | Butterfly valve                          | バタフライ弁          |                                    |
|                    | Solenoid operated valve                  | 電磁弁             |                                    |
|                    | Solenoid operated valve<br>(angle)       | 電磁弁             |                                    |

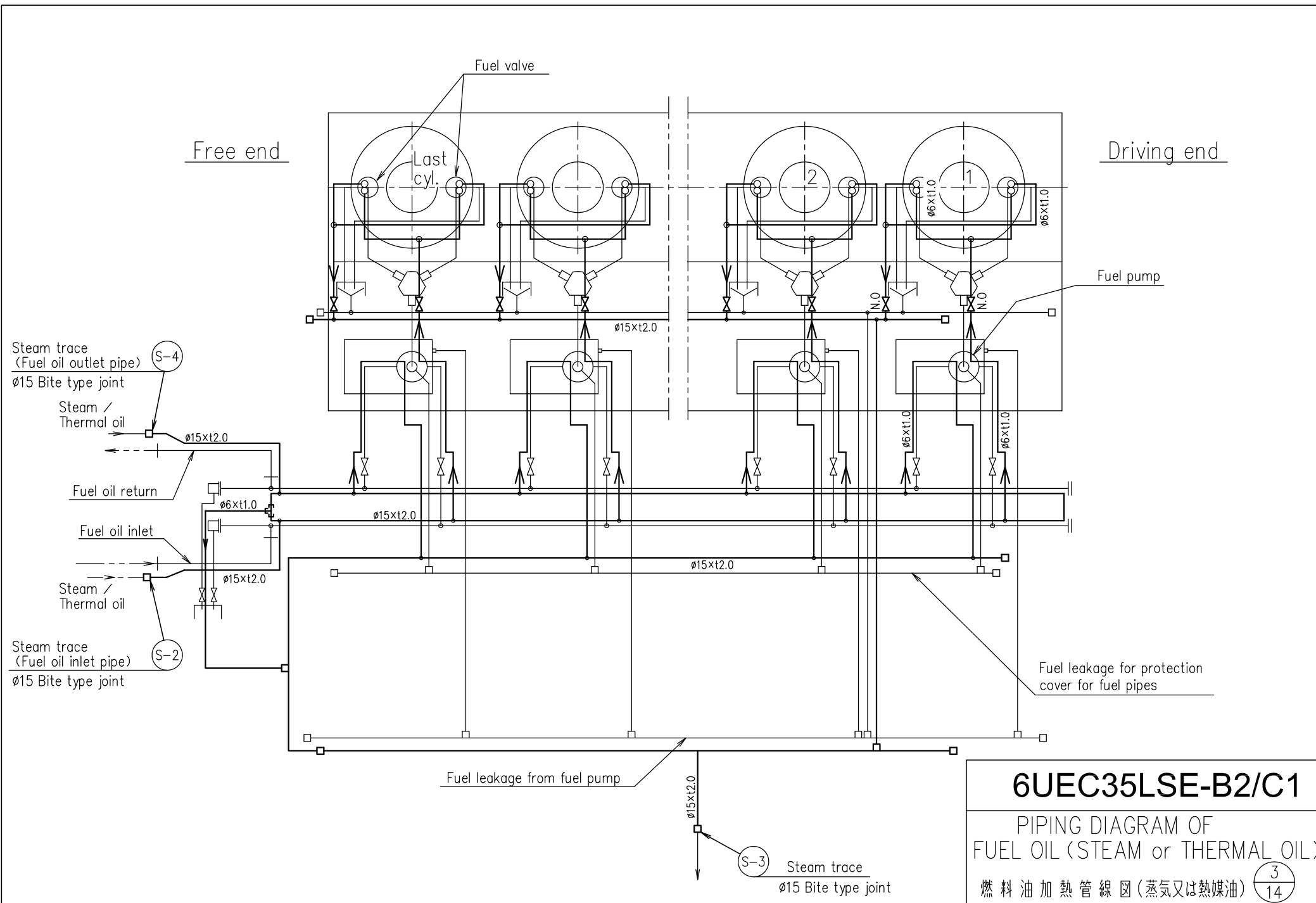
| SYMBOLS<br>記号   | NAME   | 名称                          | REMARKS<br>備考 |
|---|--|-----------------------------|---------------|
|    | Gate valve   | 仕切弁                         |               |
|    | Hose valve   | ホース弁                        |               |
|    | Hose valve<br>(angle)                                  | ホース弁<br>(アングル)              |               |
|    | Safety valve   | 安全弁                         |               |
|    | Swing check valve                                      | スイング逆止め弁                    |               |
|    | Swing check valve<br>(angle)                           | スイング逆止め弁<br>(アングル)          |               |
|    | Lift check valve                                       | リフト逆止め弁                     |               |
|    | Diaphragm operated valve<br>(with positioner & handle) | ダイヤフラム操作弁<br>(ポジショナ及びハンドル付) |               |
|  | Sight glass  | サイトグラス                      |               |
|  | Simplex strainer                                       | 単式コシ                        |               |
|  | Duplex strainer  | 複式コシ                        |               |
|  | Y type strainer  | Y形ストレーナ                     |               |
|  | Differential<br>pressure gauge                         | 差圧計                         |               |
|  | Reducer  | レジューサ                       |               |
|  | Hose coupling  | ホース継手                       |               |
|  | Regulating valve                                       | 自動調整弁                       |               |
|  | Ball valve   | ボール弁                        |               |
|  | Check valve  | 逆止め弁                        |               |
|  | Seal pot   | シールポット                      |               |
|   |  |                             |               |
|   |  |                             |               |

| SYMBOLS<br>記号   | NAME  | 名称                 | REMARKS<br>備考   |
|---|---|--------------------|---|
|    | Remotely indicated<br>(to be delivered by yard)     | 遠隔指示計              |   |
| PI  | Pressure indication                                 | 圧力指示               |   |
| PSD   | Pressure slow down                                  | 圧力減速               |   |
| PA  | Pressure alarm                                      | 圧力警報               |   |
| TI  | Temperature indication                              | 温度指示               |   |
| TA  | Temperature alarm                                   | 温度警報               |   |
| TSD   | Temperature slow down                               | 温度減速               |   |
| LI  | Level indication                                    | 液面指示               |   |
| LA  | Oil or water level alarm                            | 液面警報               |   |
| FI  | Flow indication                                     | 流れ指示               |   |
| FA  | Flow alarm  | 流れ警報               |   |
| FSD   | Flow slow down                                      | 流れ減速               |   |
| DPA   | Differential pressure alarm                         | 差圧警報               |   |
| H   | High (high press.,high temp .,high level,high flow) | 高圧, 高温, 高液面<br>高流量 |  |
| L   | Low (low press.,low temp .,low level,low flow)      | 低圧, 低温, 低液面<br>低流量 |   |
| D   | Deviation (Deviation temp)                          | 温度偏差大              |   |
|  | Fire alarm<br>(Scavenging air trunk)                | 掃気室火災警報            |   |
| TR  | Temperature sensor                                  | 温度センサー             |   |
|  | For Test line                                       | テスト用               |   |
| N.O.  | Normal open   | 常時開                |   |
| N.C.  | Normal close  | 常時閉                |   |

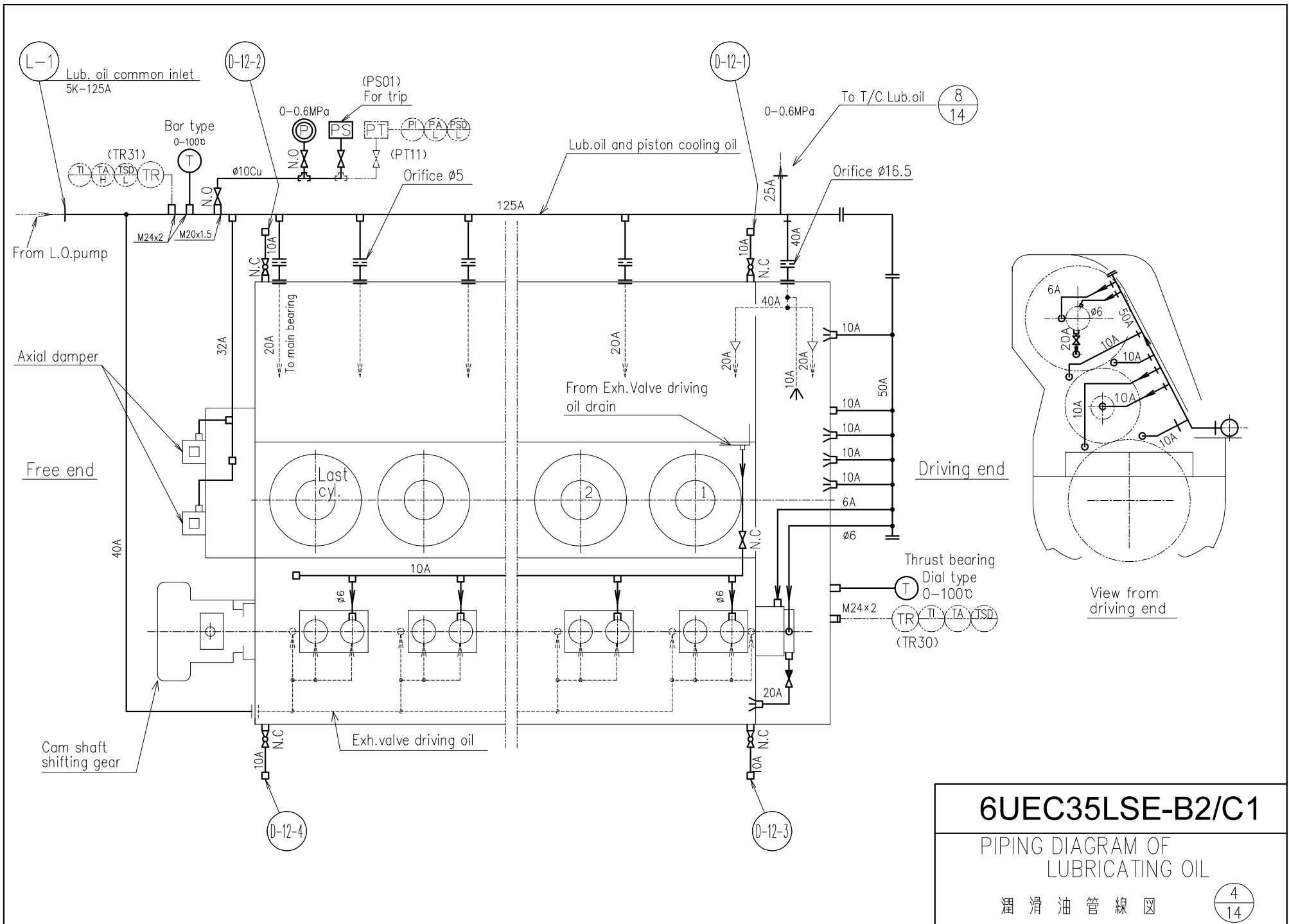


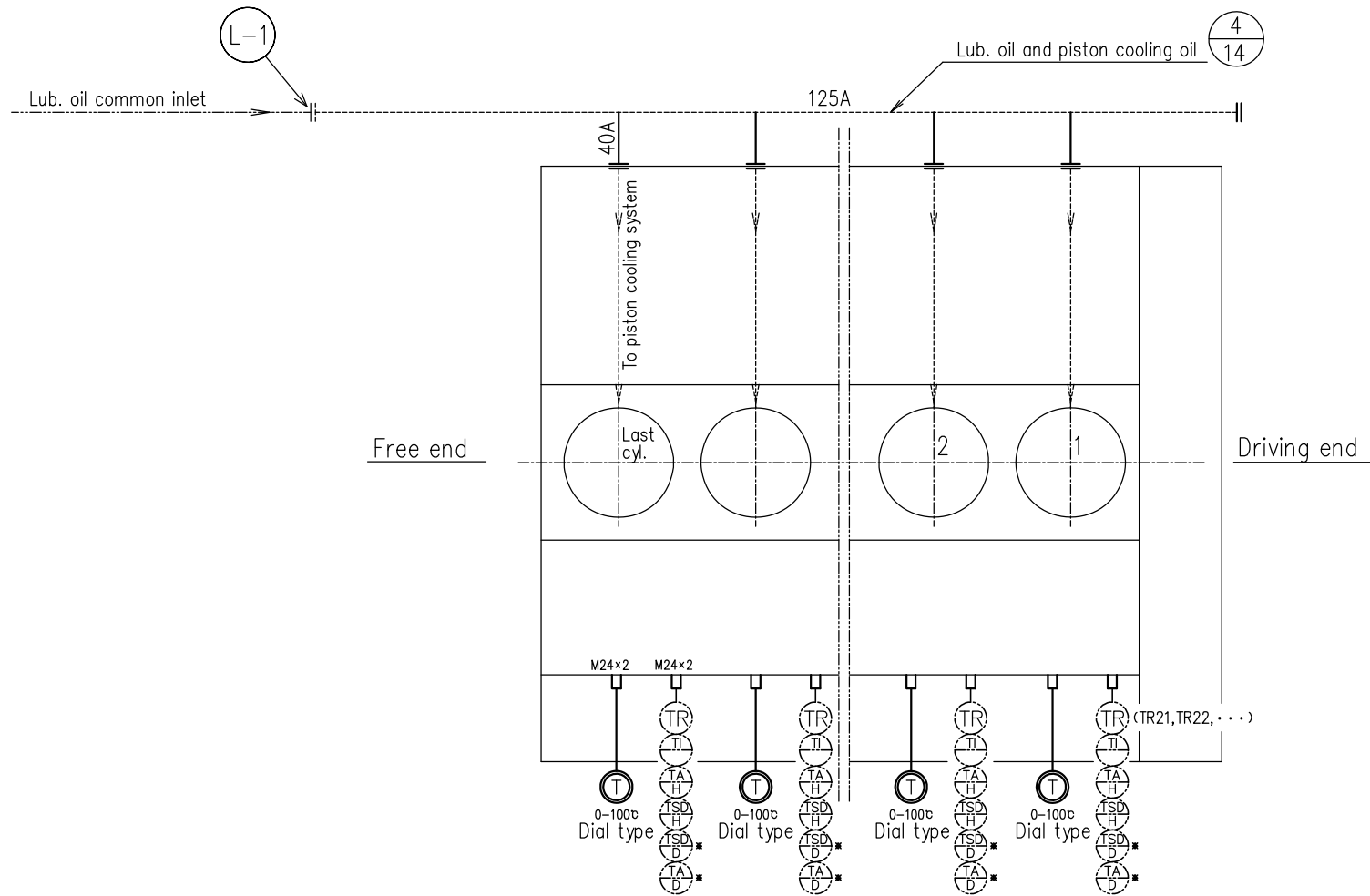






**6UEC35LSE-B2/C1**  
 PIPING DIAGRAM OF  
 FUEL OIL (STEAM or THERMAL OIL)  
 燃料油加熱管線図(蒸気又は熱媒油) 3 / 14



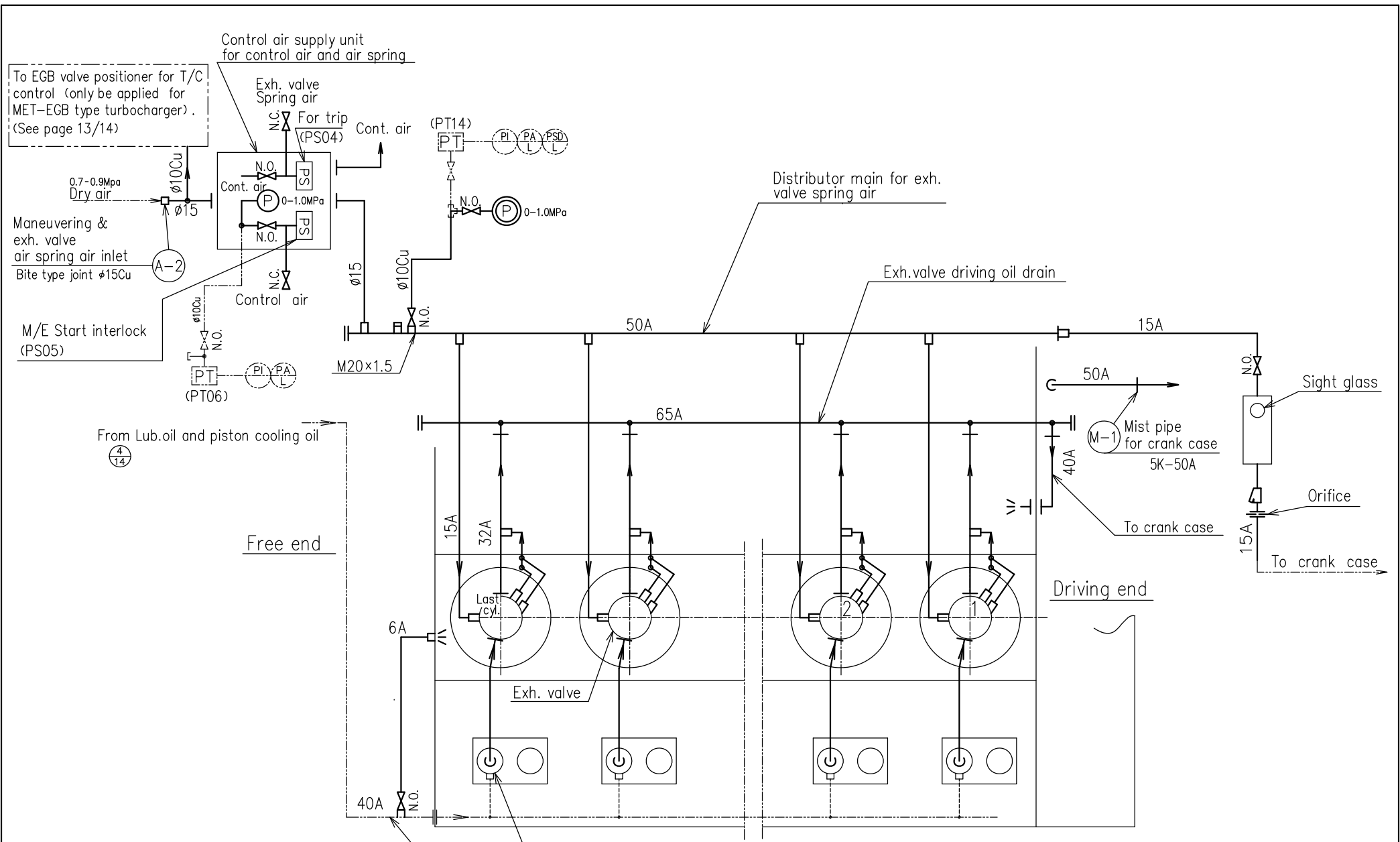


\* As alternative to piston coolant flow sensor of each piston.

## 6UEC35LSE-B2/C1

PIPING DIAGRAM OF  
PISTON COOLING OIL

ピストン冷却油管線図



To EGB valve positioner for T/C control (only be applied for MET-EGB type turbocharger). (See page 13/14)

Control air supply unit for control air and air spring

Maneuvering & exh. valve air spring air inlet  
Bite type joint  $\phi 15\text{Cu}$

M/E Start interlock (PS05)

Control air

Exh. valve Spring air  
For trip (PS04)

Distributor main for exh. valve spring air

Exh. valve driving oil drain

From Lub. oil and piston cooling oil

Free end

Driving end

Actuator pump for exhaust valve drive

Exh. valve driving oil inlet

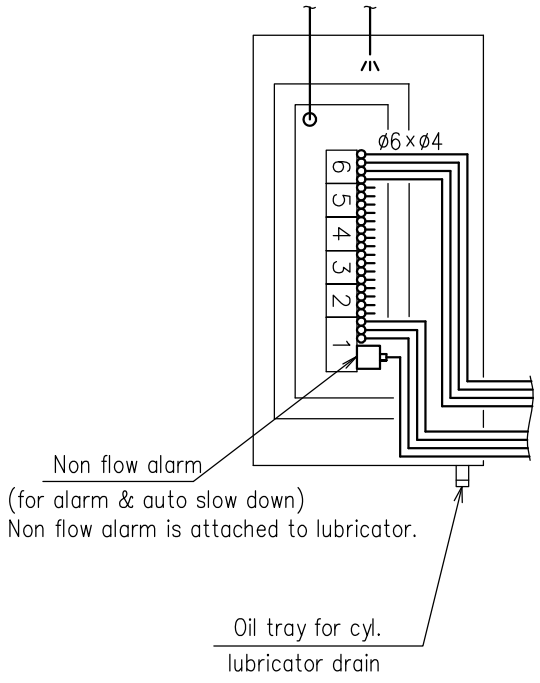
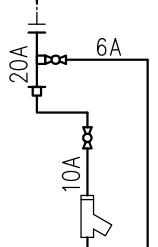
# 6UEC35LSE-B2/C1

PIPING DIAGRAM OF ACTUATOR OIL FOR EXH. VALVE

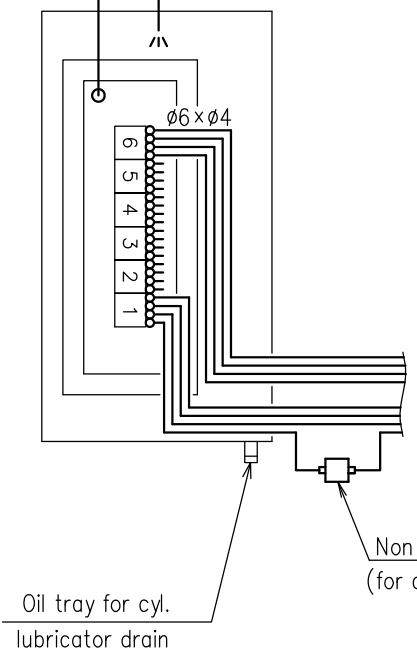
排气弁駆動油管線図

Cylinder lubricator inlet  
5K-20A

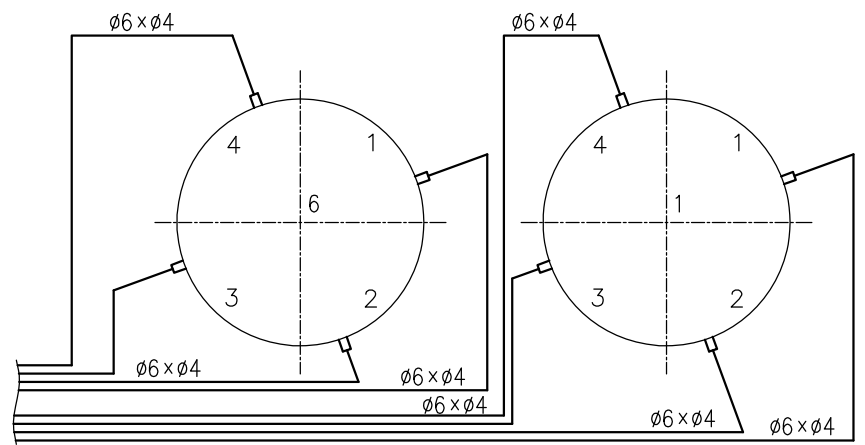
L-3



Non flow alarm with proximity switch



Non flow alarm with flow switch

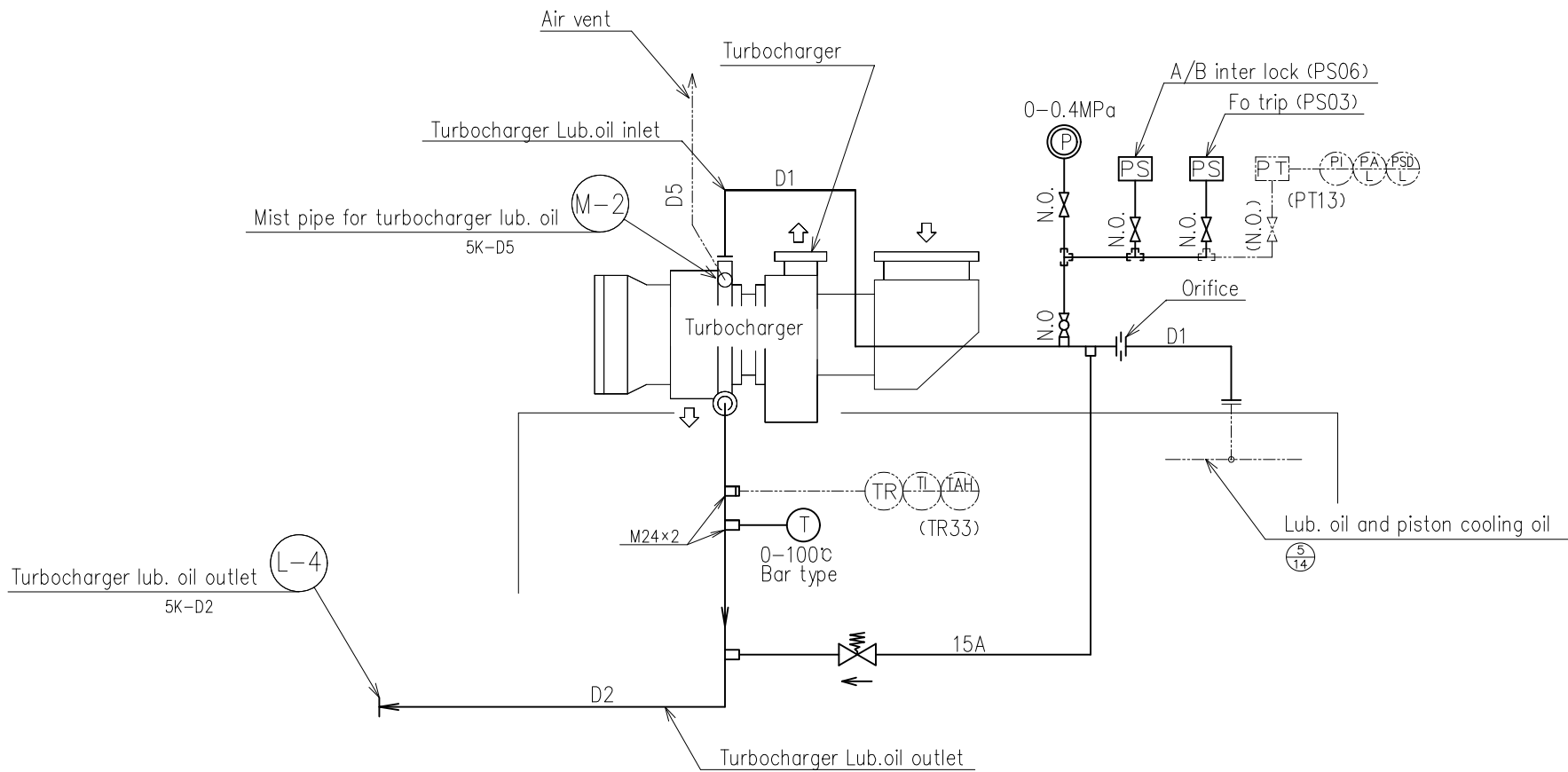


**6UEC35LSE-B2/C1**

PIPING DIAGRAM OF  
CYLINDER LIBRICATING OIL

シリンダ注油管線図

7/14

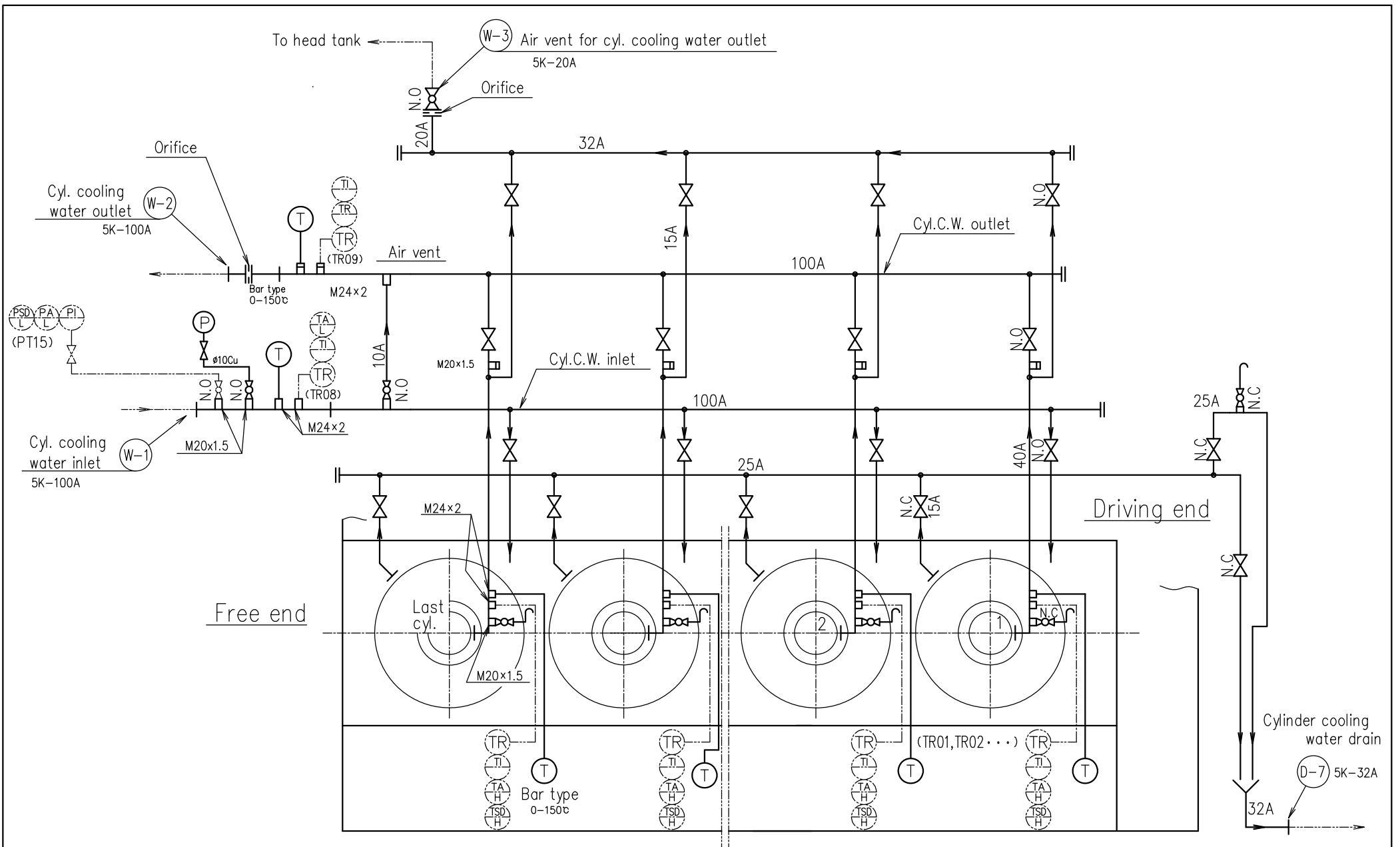


| Turbocharger type | Pipe sizes |     |     |
|-------------------|------------|-----|-----|
|                   | D1         | D2  | D5  |
| MET42MB×1         | 25A        | 50A | 50A |
| MET37MB×1         | 25A        | 50A | 50A |
| MET33MB×1         | 20A        | 40A | 32A |

**6UEC35LSE-B2/C1**

PIPING DIAGRAM OF  
TURBO CHARGER LUB. OIL

過給機潤滑油管線図



# 6UEC35LSE-B2/C1

PIPING DIAGRAM OF  
CYLINDER COOLING WATER

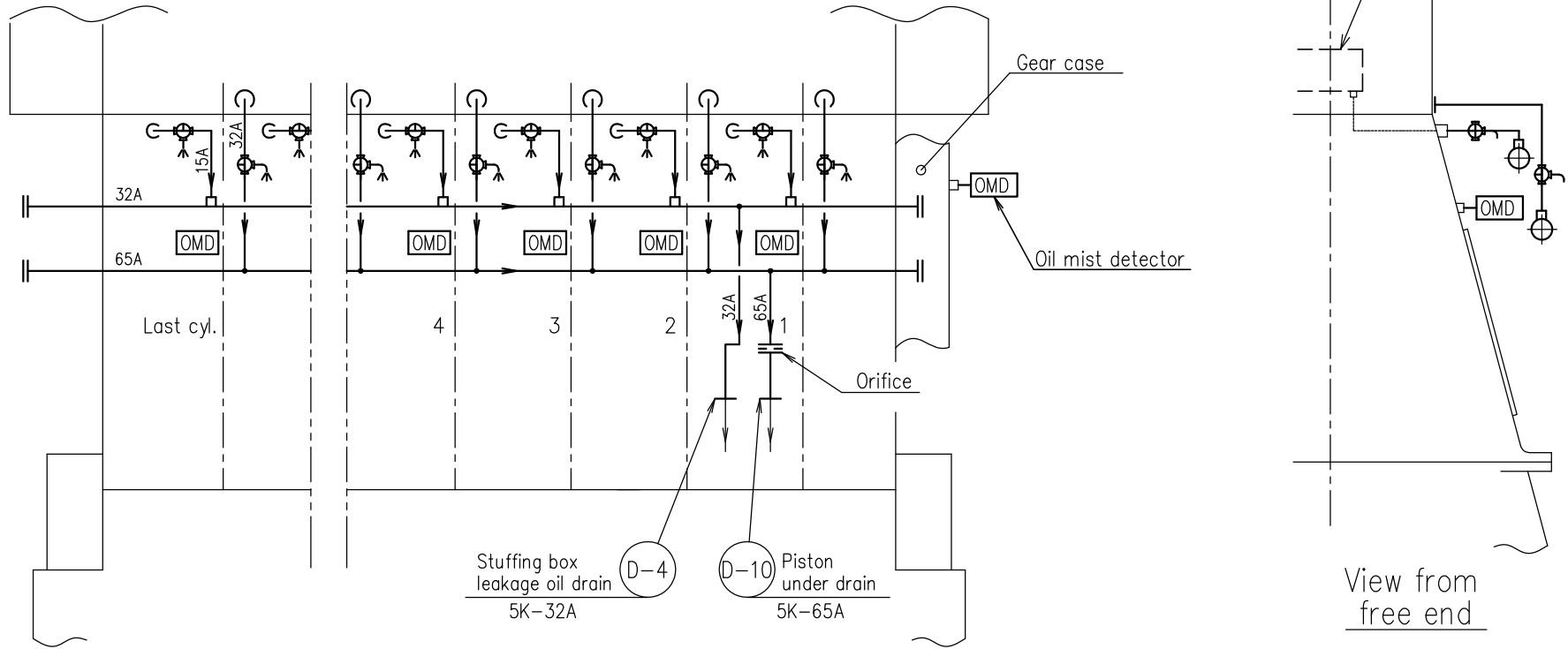
シリンダ冷却水管線図





Free end

Driving end

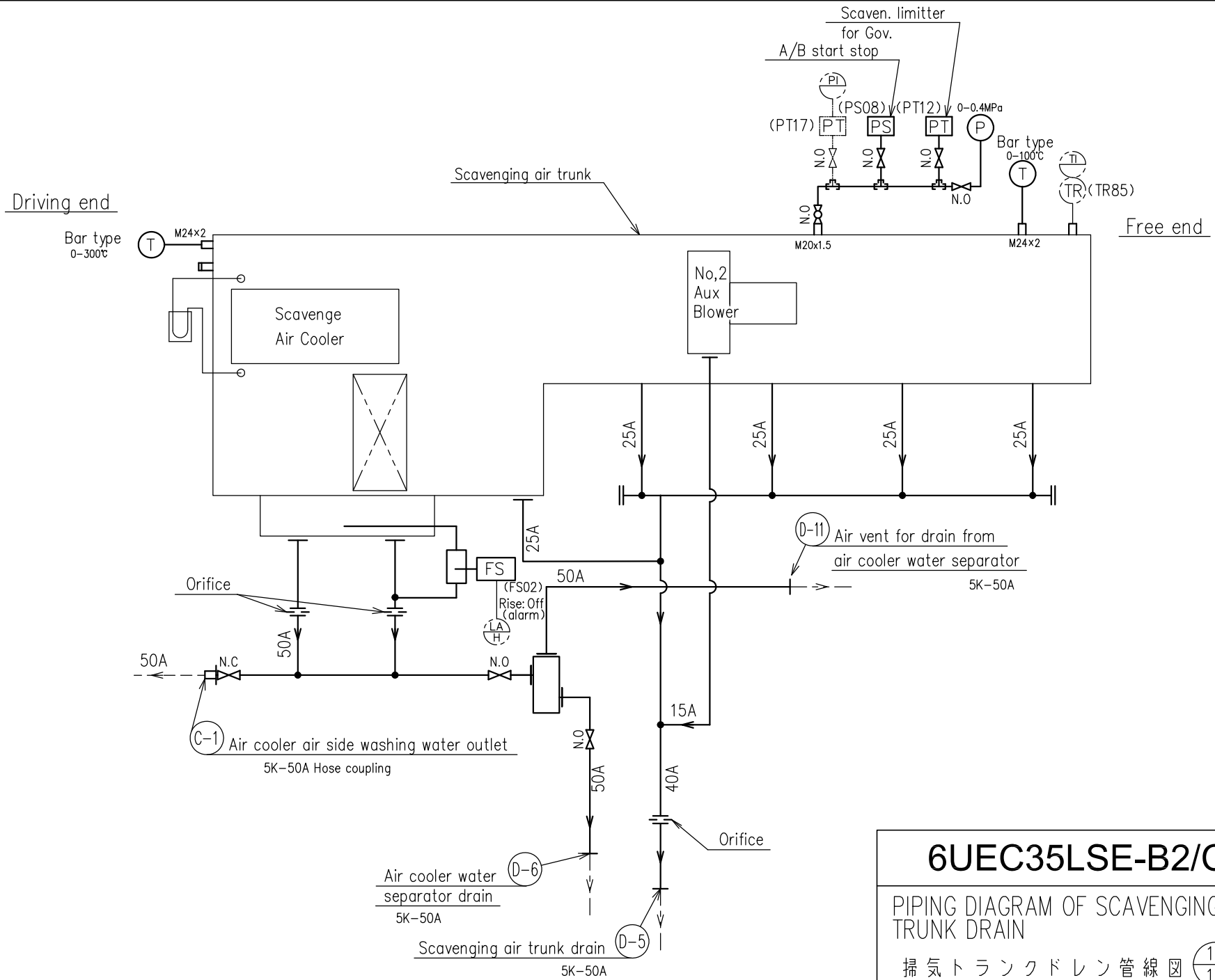


View from free end

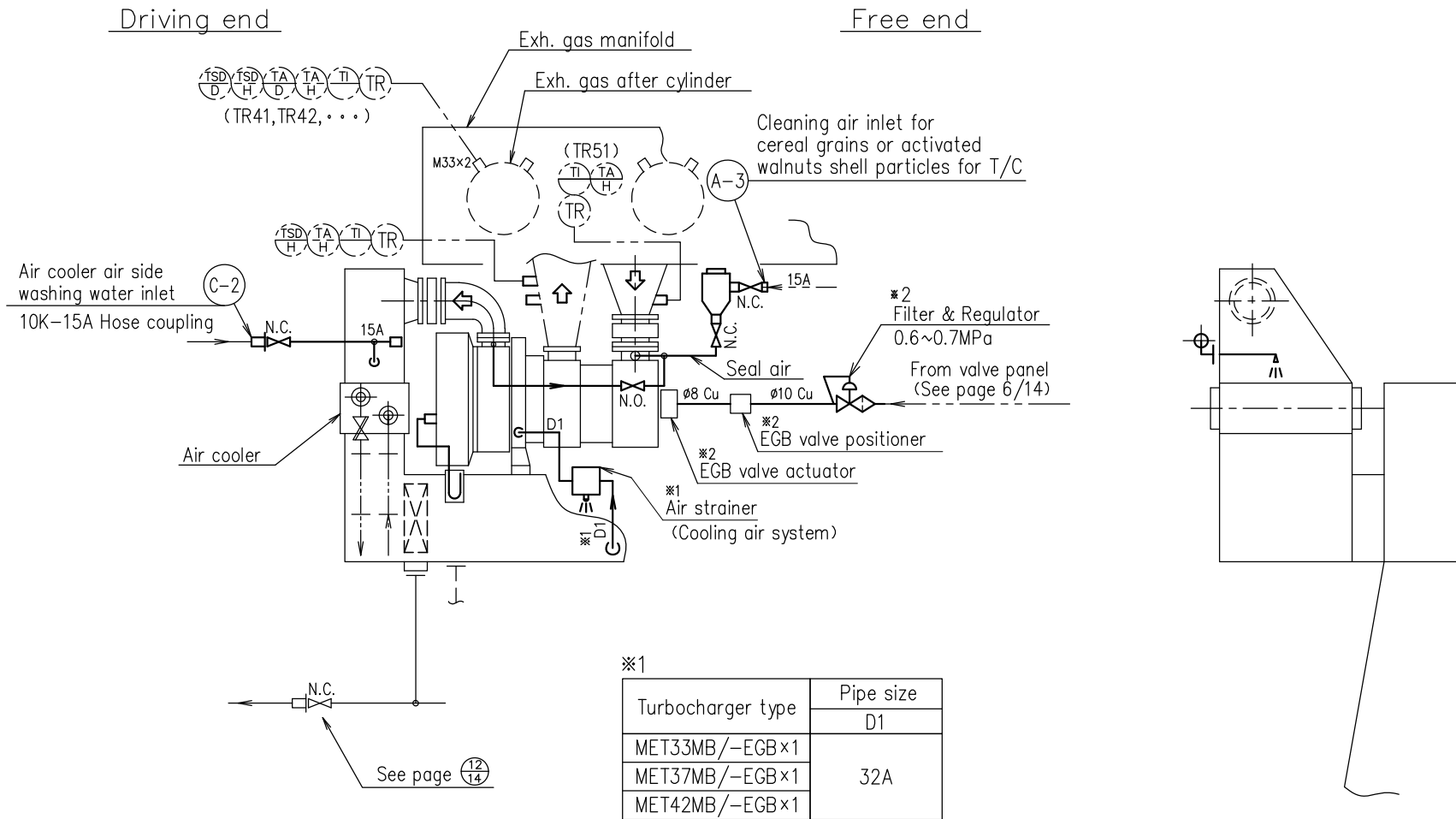
## 6UEC35LSE-B2/C1

PIPING DIAGRAM OF STUFFING BOX  
LEAKAGE DRAIN AND PISTON UNDER DRAIN  
ピストン棒パッキン箱ドレン管  
及びシリンダ下部ドレン管線図

11  
14



**6UEC35LSE-B2/C1**  
 PIPING DIAGRAM OF SCAVENGING AIR TRUNK DRAIN  
 掃気トラシクドレン管線図 12 / 14



※1

| Turbocharger type | Pipe size |
|-------------------|-----------|
|                   |           |
| MET33MB/-EGB×1    | 32A       |
| MET37MB/-EGB×1    |           |
| MET42MB/-EGB×1    |           |

※1 クーリングエアシステムは、機関の仕様により必要となる場合があります。お問い合わせください。

Depending on the engine specification, cooling air system may be required.

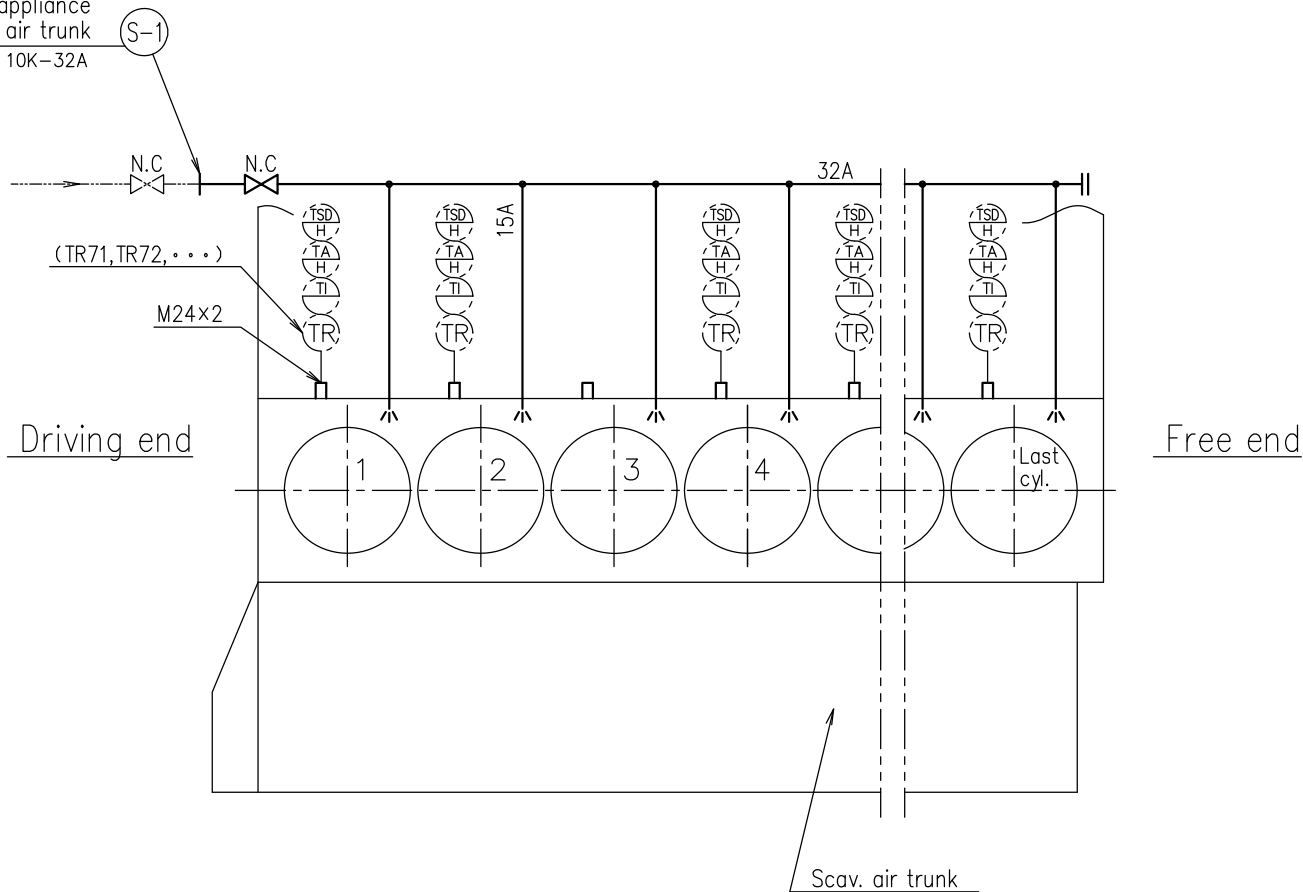
※2 MET-EGB 過給機のみ

Only for MET-EGB type turbocharger.

## 6UEC35LSE-B2/C1

PIPING DIAGRAM OF TURBO-CHARGER  
AND AIR COOLER WASHING  
WATER, AND EXHAUST GAS SYSTEM (13)  
過給機空気冷却器洗浄水管及び排気ガス線図 (14)

Inlet for fire extinguishing appliance  
for scavenging air trunk  
10K-32A



### 6UEC35LSE-B2/C1

PIPING DIAGRAM OF  
FIRE EXTINGUISHING

掃氣室火災消火装置管線図