


| Exec. code number | | Pos. code no | Article number | | Designation | Source of supply | Modifi- cation letter |
|-------------------|-----|-----------------|-----------------|--|-------------------------------------|------------------|-----------------------------|
| PER ENGINE | | | Drawing number | | Material and remarks | mass kg/piece | |
| Number of | 1 | 001 | 107.246.286.500 | | | 0.001 | |
| | | | 1-107.246.286 | | LEAKAGE COLLECT. AND WASHING SYSTEM | | |
| 1 | 002 | 107.425.369.500 | 1-107.425.369 | | SLUDGE OIL TRAP | 0.001 | a |
| | | | | | | | |
| kg | | 0.002 | | | | | |

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Free space for ITC.

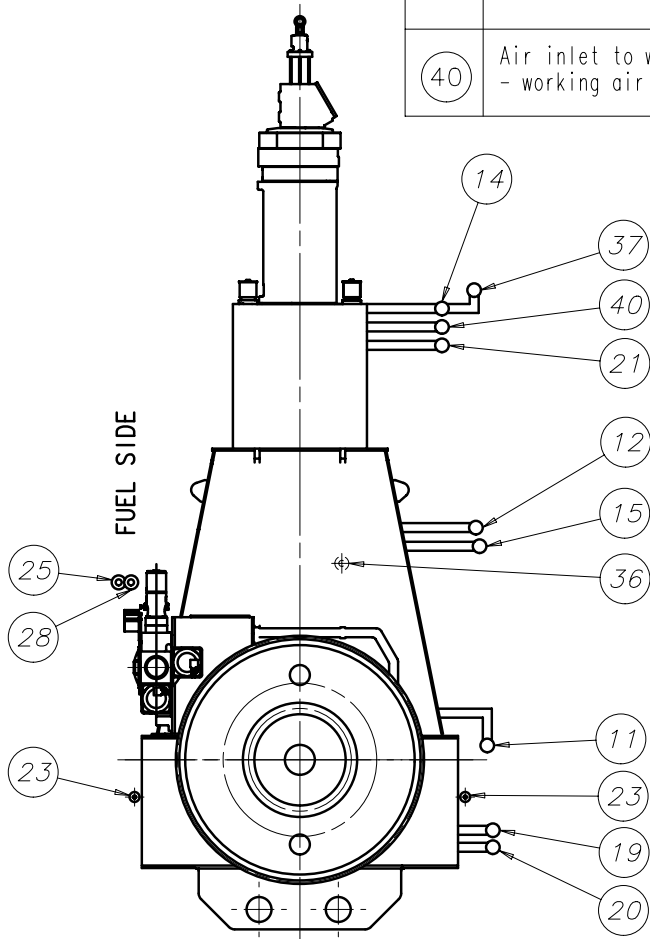
| | | | | | | | | | | | |
|---------------|-------------|-----|---|---|----------|----------|---------------------------|---|---|---------|--|
| Engine type | 5-8RTA48T-B | | Modifications | a | 7-77.597 | 25.11.09 | | | | | |
| Design group | ISO | JIS | Q-Code | X | X | X | X | X | Substitute for | Scale - | |
| 9724 | | | LEAKAGE COLLECTION/WASHING SYS. INSTALLATION DRAWINGS | | | | Drawn: T.LANDERT 14.05.98 | | Wartsila Switzerland Ltd | | |
| 3-107.246.285 | | | Page: | | | | H | |  | | |

SURFACE PROTECTION SEE GROUP 0344

GENERAL TOLERANCES ACCORDING TO ISO/2768-m

RTA48T-B
RT-flex48T-D

DRIVING END



RT-flex48T-D

| | |
|----|---|
| 36 | Venting pipe crankcase - venting to funnel, not connected to other venting pipes. |
| 37 | Venting pipe TC outlet. - Venting to funnel, minimum inclination according to TC maker spec. not connected to other venting pipes. |
| 40 | Air inlet to washing plants, distribution pipe - working air 7-8 bar. |

EXHAUST SIDE

Specifications that need to be met:

| | |
|----|---|
| 11 | Oily water drain from scavenge air receiver - Gravity flow to oily water drain tank. |
| 12 | Cylinder and turbocharger cooling water drain pipe - Gravity flow to water drain tank. |
| 14 | Washing water inlet to washing plants, distribution pipe - Fresh water from hydrophore system. |
| 15 | Venting pipe from condensation water system - Venting to funnel. |
| 19 | Condensate water from water separator and SAC - Gravity flow to bilge water tank. |
| 20 | Washing water outlet from scavenge air cooler. - Gravity flow to bilge water or chemical cleaning tank. |
| 21 | Washing water outlet from turbocharger - Gravity flow to bilge water tank. |
| 23 | Common dirty oil drain from engine (on exhaust & fuel pump side each) - Gravity flow to sludge or appropriate tank. |
| 25 | Dirty oil from piston underside (on fuel pump side) - Flow with SAC pressure to sludge oil trap or appropriate arrangement. - Min. inclination of drain pipe 60%. |
| 28 | Dirty oil from piston rod stuffing box (on fuel pump side) - Gravity flow to sludge or appropriate tank. |

| | | | | | | | | | | | | |
|------------------------|--------|----------|------------|--------|----------|------------|----------|------------|--------------|--------|------------|------------|
| Free space for lic. | | | | | | | Q-Code | XXXXX | Main Drw. | | | |
| | | | | | | | Standard | ISO JIS | | | | |
| Modif. | D | 7-58.734 | 02.11.2007 | E | 7-77.666 | 27.11.2009 | F | EAAD082835 | 07.04.2011 | G | EAAD084349 | 09.01.2013 |
| | Number | | Drawn date | Number | | Drawn date | Number | | Drawn date | Number | | Drawn date |



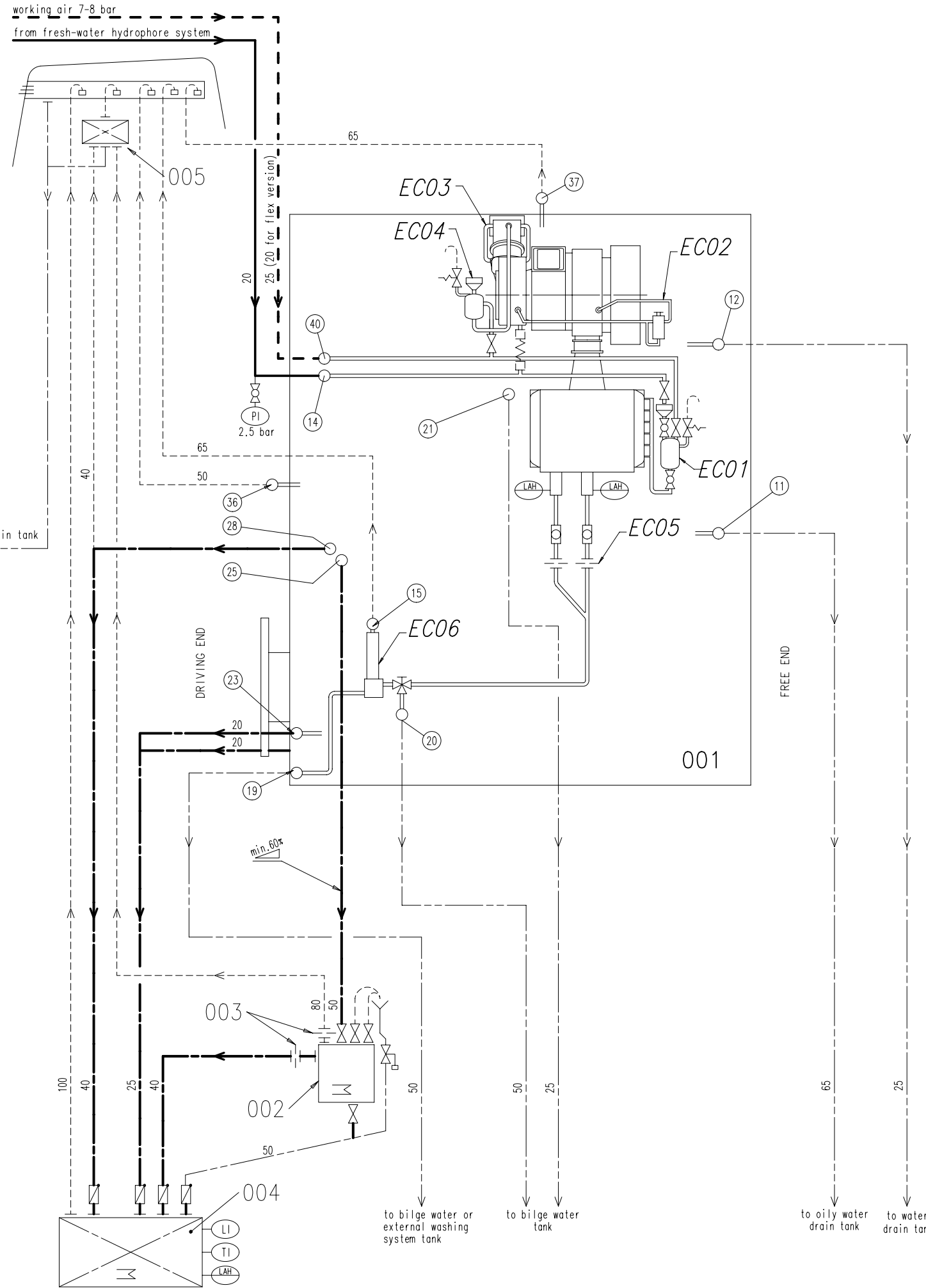
Product
W-2S

LEAKAGE COLLECT./ WASHING SYSTEM
SYSTEM DIAGRAM

| | | | | | | | | | | | |
|-------|--------------------------------|-----|--|----------------|---|------|----|------------|-------------|-------------|-----------------|
| Units | mm kg | IDE | | Basic Material | | | | Net Weight | 0.001 | | |
| Make | 22.06.1998 S. NATALI | | | Scale | - | Size | A3 | Page | 1/2 | Material ID | 107.246.286.500 |
| Chkd | | | | Design Group | | | | Drawing ID | 107.246.286 | Rev. | G |
| Appd | 08.09.1998 wdms2 Administrator | | | 9724 | | | | | | | |

| |
|--|
| SURFACE PROTECTION SEE GROUP 0344 |
| TOLERANCING PRINCIPLE ISO8015 |
| GENERAL TOLERANCES ACCORDING TO ISO2768-nK |

SYSTEM PROPOSAL



| TC type | B | Inclination |
|------------|----|-------------|
| 1x TPL73-B | 50 | >5° |
| 1x TPL77-B | 65 | >5° |
| 1x MET53MA | 65 | >3° |
| 1x MET60MA | 80 | >3° |

| Pos. | Description |
|------|---|
| 001 | Main engine RTA48T-B |
| 002 | Sludge oil trap, according to separate drawing |
| 003 | Throttling disc, |
| 004 | Sludge or appropriate tank |
| 005 | Air vent manifold |
| 11 | Oily water drain from scavenge air receiver |
| 12 | Cylinder and turbocharger cooling water drain pipe |
| 14 | Washing water inlet to washing plants, distribution pipe |
| 15 | Venting pipe from condensation water system |
| 19 | Condensate water from water separator and SAC #1) |
| 20 | Washing water outlet from scavenge air cooler |
| 21 | Washing water outlet from turbocharger #2) |
| 23 | Common dirty oil drain from engine (on exhaust & fuel pump side each) |
| 25 | Dirty oil from piston underside (on fuel pump side) |
| 28 | Dirty oil from piston rod stuffing box (on fuel pump side) |
| 36 | Venting pipe crankcase |
| 37 | Venting pipe TC outlet |
| 40 | Air inlet to washing plants, distribution pipe |

Remarks:

*1) The amount of condensate water drained off after SAC depends on the relative air humidity and on the scavenge air temperature before and after SAC. Under extreme ambient conditions a maximum condensate quantity of up to 0.16 kg/kWh may be produced.

*2) Not used for Mitsubishi MET Turbocharger

- Air vent and drain pipes must be fully functional at all inclination angles of the ship at which the engine must be operational.
- For "O" marked positions please refer to the pipe connection drawings.

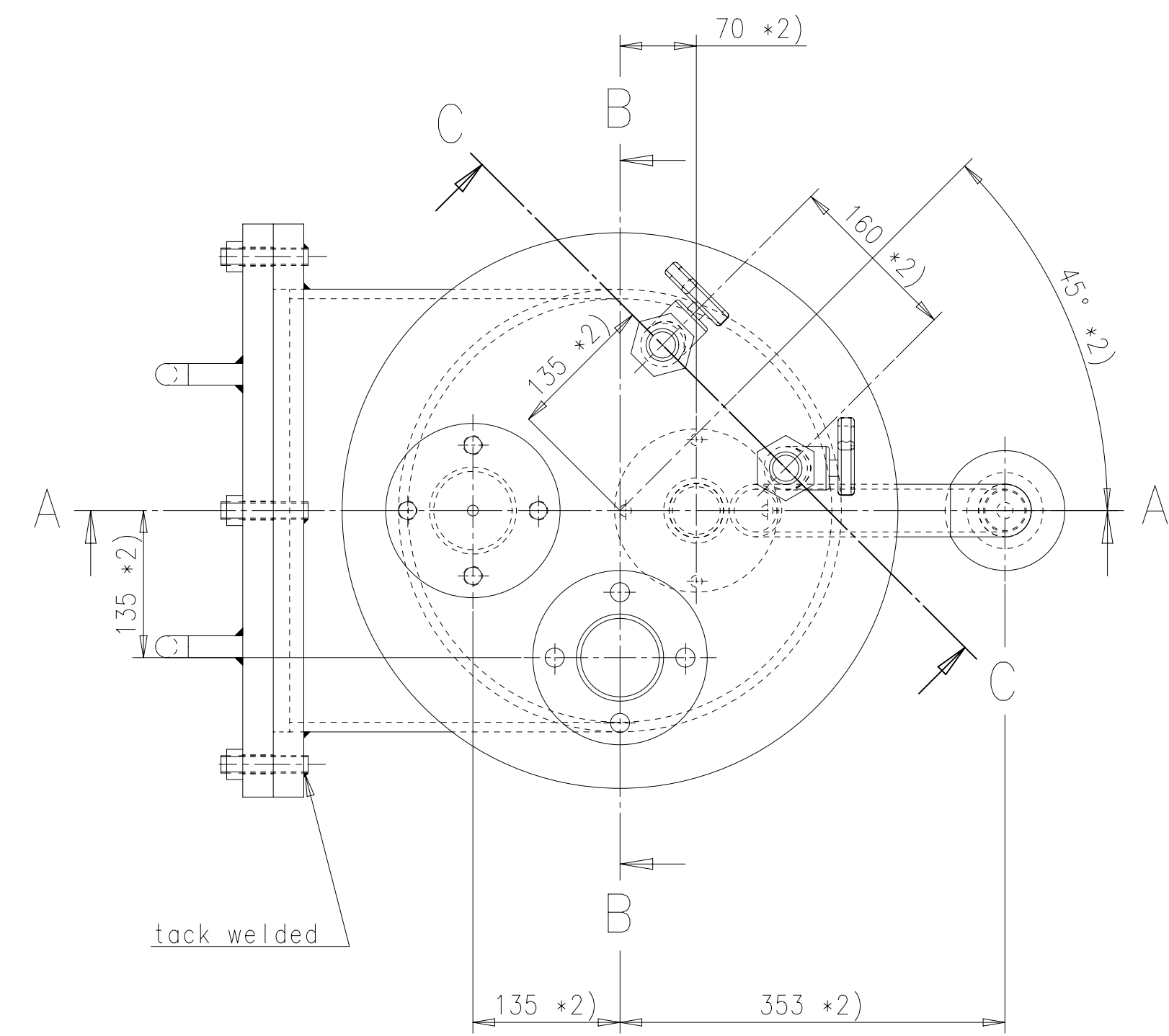
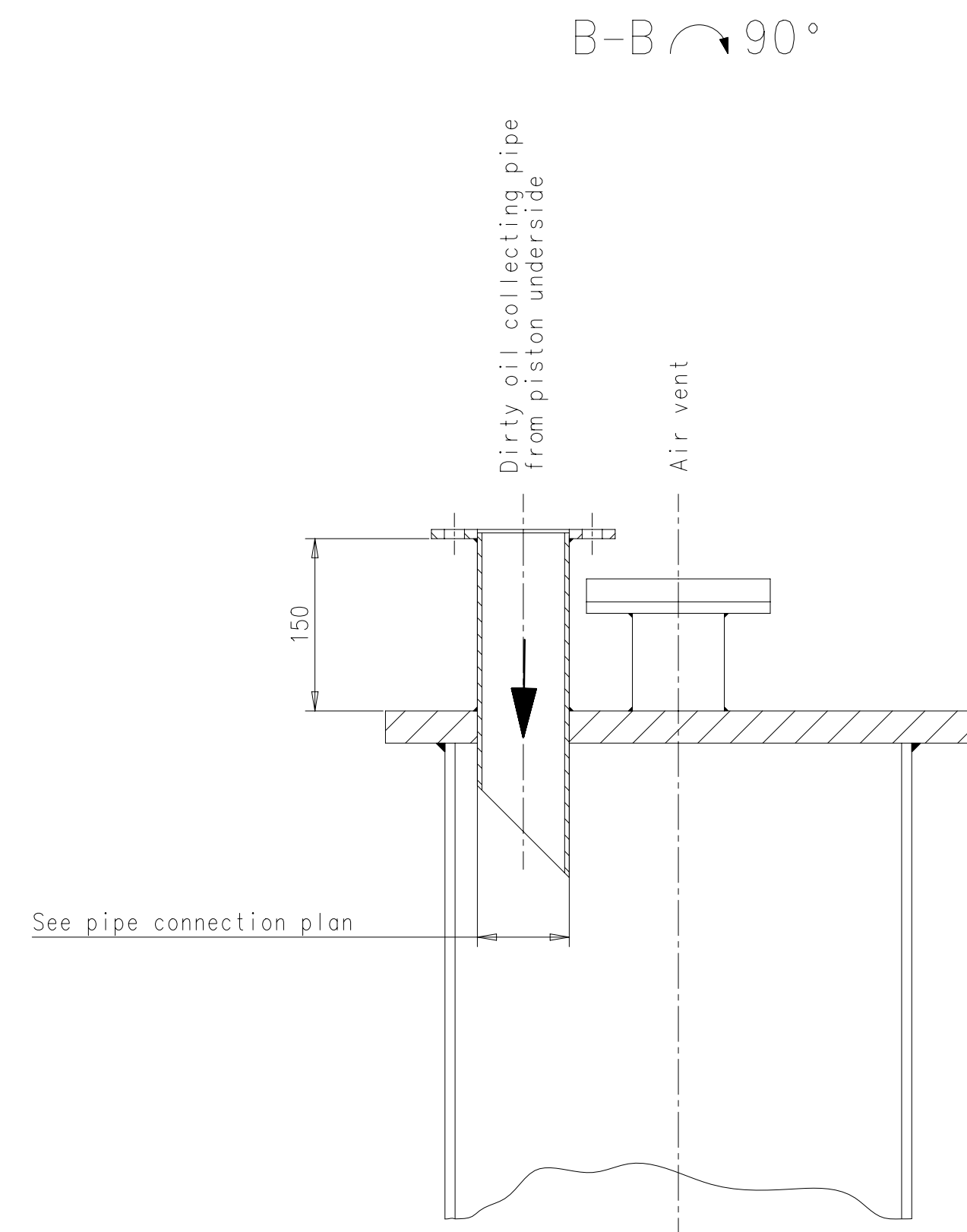
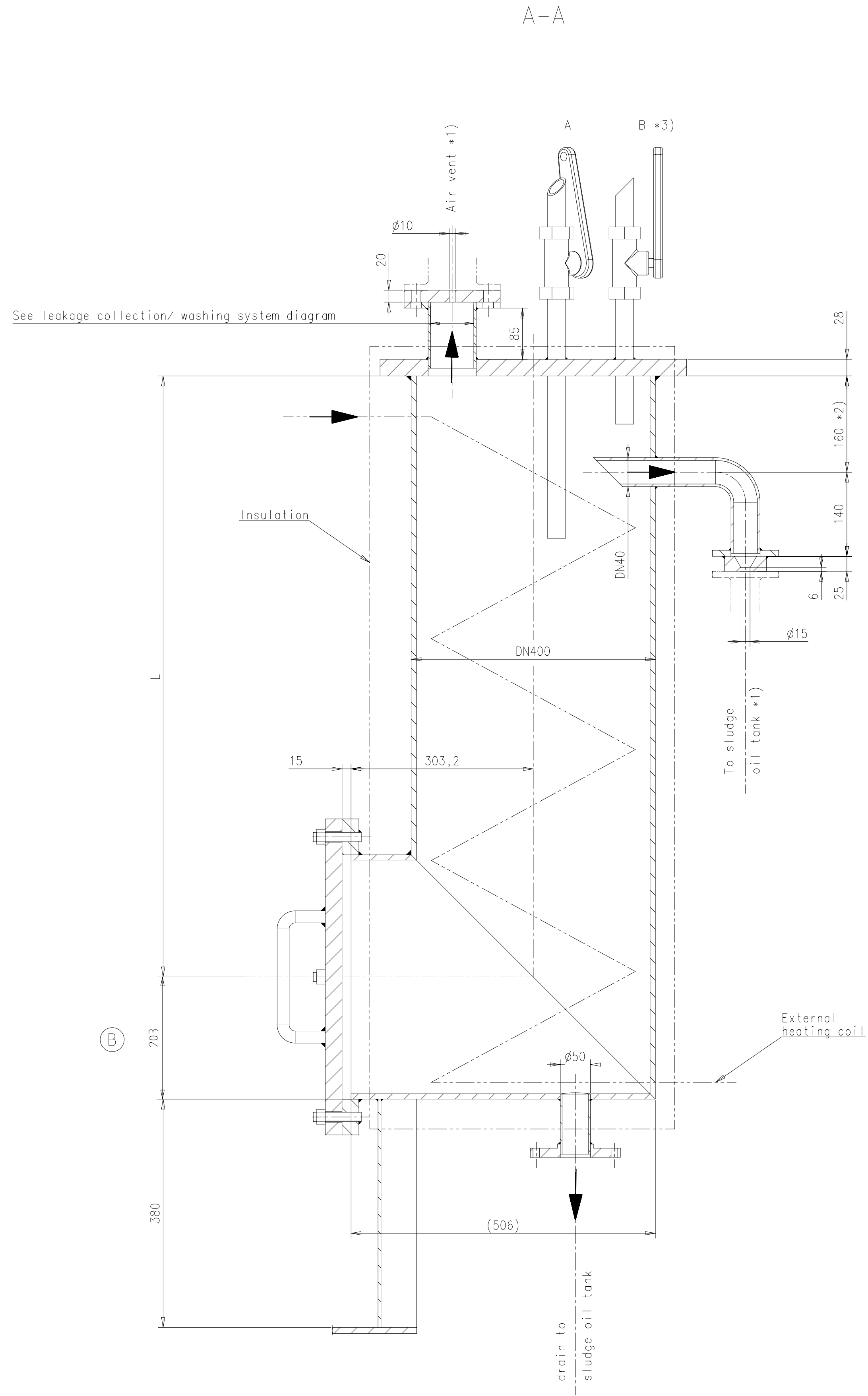
For info:
 Engine equipped with following leakage collect./ washing system components.

EC01 Scavenge air cooler washing plant
 EC02 Turbocharger compressor wheel washing plant #1)
 EC03 Turbocharger turbine washing plant #1)
 EC04 Turbocharger turbine dry cleaning plant (optional) #1)
 EC05 Throttling disc
 EC06 Venting unit

— Washing water pipes
 - - - Compressed air pipes
 . . . Air vent pipes
 = Pipes on engine
 — Water drain pipes
 O Pipe connections

| | | | |
|----------------------------------|--------------|------------------|----------------|
| Q-Code | XXXXX | Main | Drw. |
| Standard | ISO | | |
| | JIS | | |
| Modif. | D 7-58.734 | 02.11.2007 | E 7-77.666 |
| | Number | Drawn date | Number |
| | | | Drawn date |
| | F EAAD082835 | 07.04.2011 | G EAAD084349 |
| | Number | Drawn date | Number |
| | | | Drawn date |
| Product | | W-2S | |
| LEAKAGE COLLECT./ WASHING SYSTEM | | SYSTEM DIAGRAM | |
| Units | mm kg | IDE | Basic Material |
| | | Net Weight 0.001 | |

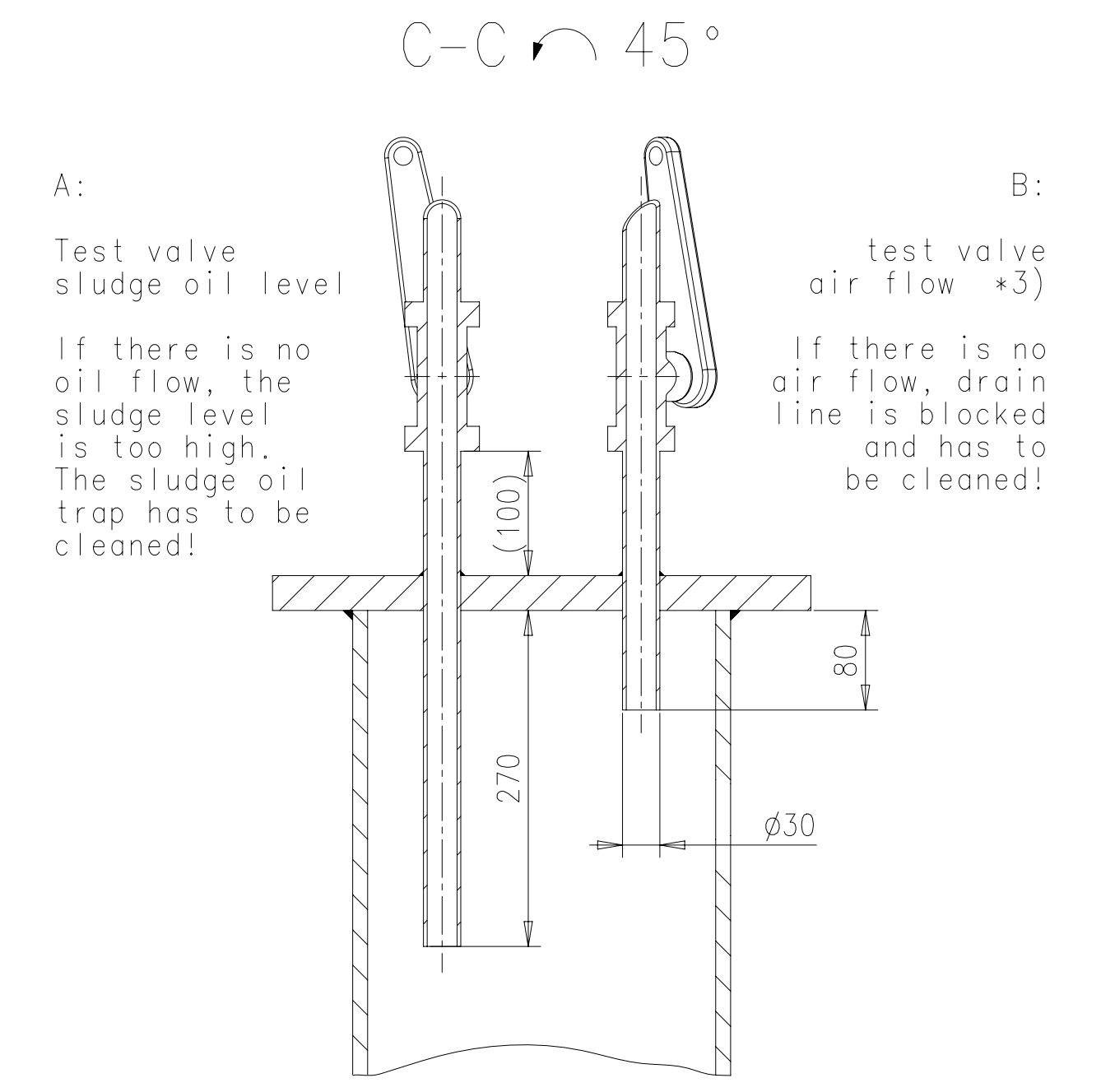
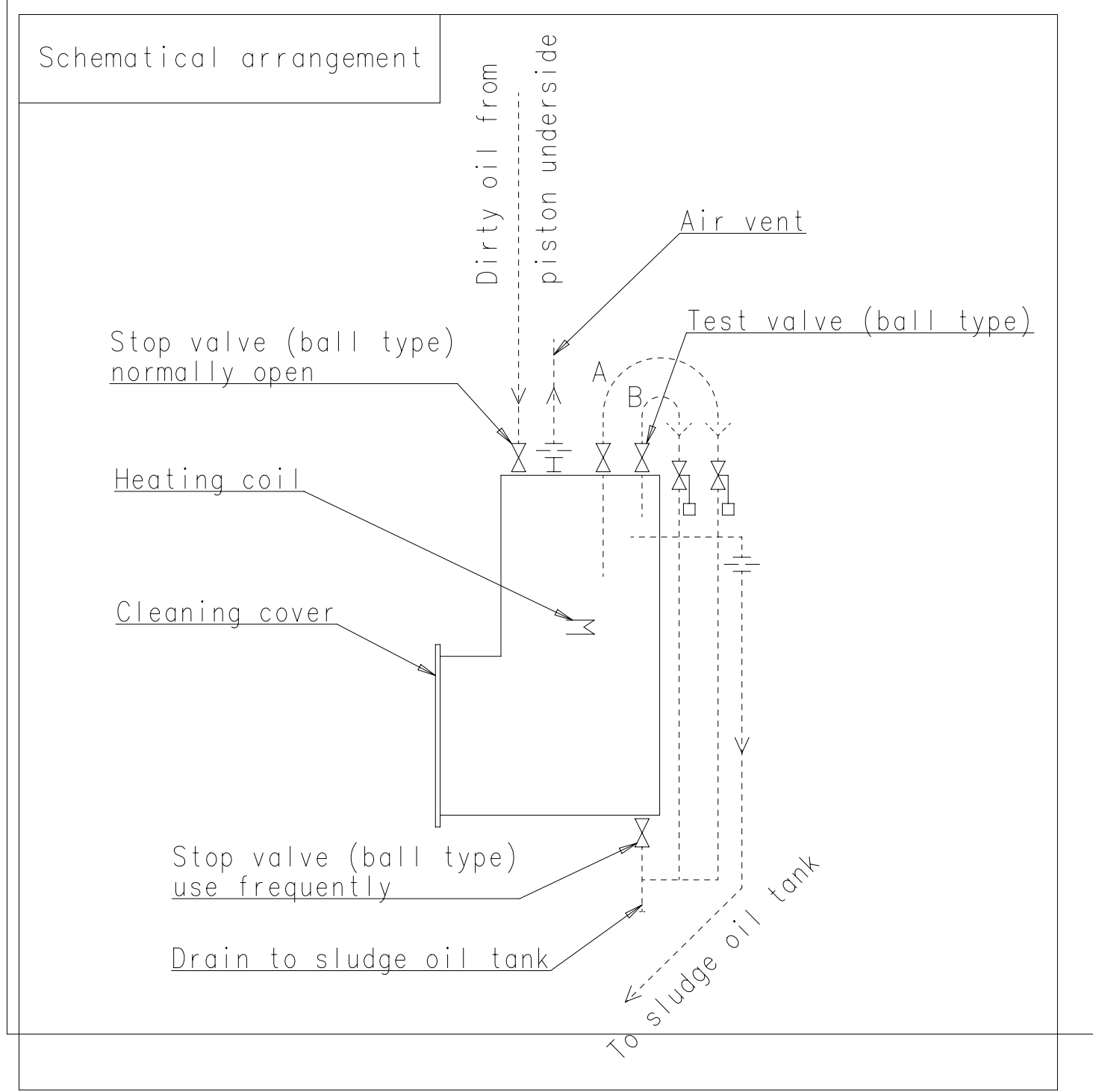
| | | | | | | | | | | | |
|--|------|------------|---------------------|--------------|---|------|----|------|-----|-------------|-----------------|
| SURFACE PROTECTION SEE GROUP 0344 | Made | 22.06.1998 | S. NATALI | Scale | - | Size | A1 | Page | 2/2 | Material ID | 107.246.286.500 |
| TOLERANCING PRINCIPLE ISO8015 | Chkd | | | Design Group | | | | | | | |
| GENERAL TOLERANCES ACCORDING TO ISO2768-mK | Appd | 08.09.1998 | wams2 Administrator | 9724 | | | | | | | |
| | | | | | | | | | | | Rev. G |



Remarks:

- *1) Orifice to be as shown
- *2) Observe location of pipes with regard to each other
- *3) Optional - Alternatives, such as level sensors, are possible

| | | | | |
|----------|---|---------------------|----------|---------|
| Details: | ⓑ | Cylinder bore size: | L = 1000 | L = 550 |
| | | Capacity: | 150 l | 100 l |
| | | Working pressure: | 4 bar | |
| | | Testing pressure: | 6 bar | |
| | | Temperatur: | 80°C | |



| | | | | | |
|-----------------------|-------------------------|------------------|--------------|------------------|---|
| Free space for file | | O-Code XXXXXX | | Main Drw. | |
| Standard ISO, JIS | | | | | |
| Modif. A | EAAD084051 | 22.01.2013 | Modif. B | EAAD087849 | 07.06.2017 |
| Number | EAAD084051 | Drawn date | Number | EAAD087849 | Drawn date |
| Product W-2S | | SLUDGE OIL TRAP | | | |
| Units: mm kg NX | | Basic Material | | Net Weight 0.001 | |
| Surface Protection | SEE GROUP 0344 | Made | 31.08.2009 | J.BAUMANN | Scale 1:5 |
| Tolerancing Principle | ISO8015 | Chkd | Design Group | | Size A1 Page 1/1 Material 107.425.369.500 |
| General Tolerances | ACCORDING TO ISO2768-mK | Appd | 13.11.2009 | JBA029 Baumann | 9724 Drawing ID 107.425.369 Rev. B |

MIDS_WinGD-RT-flex48T-D_LEAKAGE-COLLECTION_and_WASHING-SYSTEM

TRACK CHANGES

| DATE | SUBJECT | DESCRIPTION |
|------------|-------------|------------------|
| 2017-08-22 | DRAWING SET | First web upload |

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