



# Design Appraisal Document

**Lloyd's Register EMEA**  
**Global Technical Support Office**  
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Date  
**04 May 2026**

Please quote this reference number on all future communications  
**TSO-26-056073-VSZ**

## Machinery General Design Appraisal

Client : CC Jensen A/S, Svendborg, Denmark  
Manufacturer : CC Jensen A/S, Svendborg, Denmark  
Subject : Type HDU 27 – Hydraulic/Lube Oil Purifier

This Machinery General Design Appraisal is valid for a period of 5 years from the date of issue or until a change of the Rules, whichever comes first.

This Design Appraisal Document supersedes the previous Document No. CTS-M/1108300, Issue No. 2 dated 23 May 2025.

1. The Documents listed in paragraph 1 of the appendix have been examined for compliance with **LR Rules and Regulations for the Classification of Ships July 2025 incorporating Notice No. 1, 2, 3 and 4, Part 5, Chapters 11, 12, 13 and 14** as applicable and have been assigned an appraisal status as indicated subject to the following:

2. **Product Description**

Makers Designation : CJC HDU 27  
Class : II (piping)  
Design Pressure :  $\leq 0.6$  MPa  
Design Temperature :  $\leq 120$  °C  
Function : Lube and Hydraulic Oil Purification

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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### 3. Comments

- 3.1. Lloyd's Register must be advised of any design or material modifications. Failure to do so will render this general approval invalid.
- 3.2. Please observe that the requirements of the European Directive "The Marine Equipment Directive" will be applicable for installations on board all EU Flag vessels.
- 3.3. The items referred to in this document are approved for installation on a ship which is classed by Lloyd's Register.
- 3.4. The filter dome is considered as a Class 3 pressure vessel according to Part 5 Chapter 11 1.5.3, although it is not subject to plan approval according to 1.6.1.
- 3.5. It is assumed that piping joints, valves, flanges and other fittings are suitable for the application. For details please refer to Part 5, Ch. 12, as they will be subject to inspection by the attending surveyor
- 3.6. With reference to Part 5, Ch. 12, 4.2 concerning the material of the filter base, it has been noted that substantial positive functional experience has been recorded by the client and therefore the use of grey cast iron, GG20, has been accepted. Part 5, Ch. 12, 4.2.3 is to be considered for pipes, valves and fittings only.
- 3.7. Although the piping system is designated as Class II, Manufacturers material certificates will be accepted in lieu of LR materials certificates, providing that maximum conditions are in accordance with Part 5 Ch. 12, Table 12.1.2.
- 3.8. It has been noted that part of the piping system has open ended piping, attention is therefore drawn to Part 5, Ch. 12, 1.5.3 concerning the use of Class III piping.

Vishal Shenoy  
Lead Specialist- Piping Systems  
Global Technical Support Office

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## Appendix

1. The documents listed below have been examined

| Document No.       | Rev. | Title                                                            | Status | Date        |
|--------------------|------|------------------------------------------------------------------|--------|-------------|
| 4602001 (2 sheets) | R    | CJC Fine Filter Type HDU 3x27/-<br>Assembly Drawing + Parts List | SI     | 23 May 2025 |
| 1200110            | P    | Stagbolt for HDU 27/27 M85                                       | SI     | 23 May 2025 |
| 1200106            | A    | Stagbolt for HDU 27/54 27/81, 27/108 M82                         | SI     | 23 May 2025 |
| 4801120            | D    | Hætte for 27/0.7bar                                              | SI     | 23 May 2025 |
| 4401005            | D    | Topdaeksel for 27/ .7bar                                         | SI     | 23 May 2025 |
| 1802302            | B    | Hus f.forvarmer indstik 500mm                                    | SI     | 23 May 2025 |
| 4800803            | C    | Hus f.forvarmer indstik 1000mm                                   | SI     | 23 May 2025 |
| 2301323            | A    | Muffe RF for forvarmerør 2"                                      | SI     | 23 May 2025 |
| 2604849            | E    | Pakdåse 27                                                       | SI     | 23 May 2025 |
| 2900121            | B    | Svøb udfoldet for 27/27, 54, 81, 108 - hætte<br>og underpart     | SI     | 23 May 2025 |
| 1600133            | F    | Filterfod f. HDU 27/-M03                                         | SI     | 23 May 2025 |
| 1600143            | C    | Filterfod f. HDU 27/-M03                                         | SI     | 23 May 2025 |
| 1500613            | B    | Endebund f. HDU 27/- .7bar                                       | SI     | 23 May 2025 |
| 29 01226           | A    | Studs 1/4"RG L=25MM                                              | SI     | 23 May 2025 |
| 2300116            | A    | Topmøtrik HDU-PTU NV41                                           | SI     | 23 May 2025 |
| 5802684            | C    | Forvarmerarrangement 500mm Hus                                   | SI     | 23 May 2025 |
| 1500605            | A    | Endebrik RF for Forvarmerhus, til ¾" muffe                       | SI     | 23 May 2025 |
| 2301325            | A    | Muffe ¾" RG RF afdrejet                                          | SI     | 23 May 2025 |
| 2801702            | B    | RF rør for varmer L=986                                          | SI     | 23 May 2025 |
| 2300529            | C    | Mellemstykke for CJC<br>filter med forvarmer                     | SI     | 23 May 2025 |
| 2801604            | B    | Rør for forvarmer 500mm L=450 HDU                                | A      | 23 May 2025 |
| 26 026 13-4        | 5    | Pakring for HDU 27/-, øverst                                     | SI     | 23 May 2025 |
| 7000640            | F    | Piping Diagram HDU 27 H                                          | A      | 04 May 2026 |
| 7000638            | F    | Piping Diagram HDU 27                                            | A      | 04 May 2026 |
| 7000645            | -    | PI Legend                                                        | SI     | 23 May 2025 |
| 1602578            | B    | Filterfod f. HDU 27/-, for tryksætning                           | SI     | 04 May 2026 |

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## Appendix

2. The documents listed below have been considered together with the submitted documents in the appraisal

| Document No. | Rev.       | Title                                                         |
|--------------|------------|---------------------------------------------------------------|
| -            | -          | <b>HDU 27 Marine Diesel Purifier Product Sheet</b>            |
| -            | -          | <b>Design Specifications: E-mail 23/03/2015</b>               |
| -            | <b>1.1</b> | <b>CJC Filter Units – Piping Dimensions and Specification</b> |

### Appraisal Status Key

- A Approved - provided the arrangements are to the surveyor's satisfaction  
SI Retained as supporting documentation for information only

- 3.

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