



# Design Appraisal Document

1Lloyd's Register EMEA  
Copenhagen Technical Support Office  
Strandvejen 104A  
DK-2900 Hellerup  
Denmark  
copenhagen-technical-support@lr.org

Date  
**14 May 2020**

Please quote this reference number on all future communications  
**M/I122189/2000261/JLJ**

## Machinery General Design Appraisal

Client : CC Jensen A/S, Svendborg, Denmark  
Manufacturer : CC Jensen A/S, Svendborg, Denmark  
Subject : Type HDU 427 – 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.

- 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 2019 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:
- Product Description**

Makers Designation	:	CJC HDU 427
Class	:	II (piping)
Design Pressure	:	≤ 0.7 MPa
Design Temperature	:	≤ 120 °C
Function	:	Lube and Hydraulic Oil Purification
- Comments**
  - Lloyd's Register must be advised of any design or material modifications. Failure to do so will render this general approval invalid.
  - Please observe that the requirements of the European Directive "The Marine Equipment Directive" will be applicable for installations on board all EU Flag vessels.

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

1Lloyd's Register EMEA  
Is a member of Lloyd's Register group

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

**1Lloyd's Register EMEA**  
**Copenhagen Technical Support Office**  
**Strandvejen 104A**  
**DK-2900 Hellerup**  
**Denmark**  
**copenhagen-technical-support@lr.org**

Date  
**14 May 2020**

Please quote this reference number on all future communications  
**M/1122189/2000261/JLJ**

- 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,



Jens Lyk-Jensen  
Senior Specialist  
Engineering Department  
Copenhagen Technical Support Office  
Lloyd's Register EMEA  
☎ Direct (+45) 3948 4239  
✉ [jens.lyk-jensen@lr.org](mailto:jens.lyk-jensen@lr.org)

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

1Lloyd's Register EMEA  
Is a member of Lloyd's Register group

1Lloyd's Register EMEA  
Copenhagen Technical Support Office  
Strandvejen 104A  
DK-2900 Hellerup  
Denmark  
copenhagen-technical-support@lr.org

Date  
14 May 2020

Please quote this reference number on all future communications  
M/I122189/2000261/JLJ

## Appendix

1. The documents listed below have been examined

Document No.	Rev.	Title	Status	Date
46 040 04-3 (2 sheets)	1	CJC Fine Filter Type HDU 427/- Assembly Drawing + Parts List	SI	23 Mar 2015
48 001 41-4	2	Haette for HDU 427	SI	23 Mar 2015
12 001 11-4	4	Stagbolt for HDU 427/54	SI	23 Mar 2015
12 001 22-4	5	Stagbolt for HDU 427/81	SI	23 Mar 2015
1200121 (2 sheets)	A	Stagbolt for HDU 427/108 og HDU 727/108	SI	23 Mar 2015
1600139	B	Filterfod f. HDU 427 M03	SI	23 Mar 2015
7000644	-	Piping Diagram HDU 427	AQ	23 Mar 2015
7000645	-	PI Legend	SI	23 Mar 2015

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

Document No.	Rev.	Title
-	-	HDU 427/54-108 Offline Fine Filter Product Sheet
-	-	Design Specifications: E-mail 23/03/2015
-	1.1	CJC Filter Units – Piping Dimensions and Specification

### Appraisal Status Key

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

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

1Lloyd's Register EMEA  
Is a member of Lloyd's Register group