



Design Appraisal Document

Lloyd's Register EMEA
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Date
31 July 2020

Please quote this reference number on all future communications
HPC 2010222/41200-20/TS

**MACHINERY GENERAL DESIGN APPRAISAL
NON-SPARKING FANS FOR LNG GAS PLANT VENTILATION
MANUFACTURER: WITT & SOHN IGW VENTILATOREN**

VALID UNTIL 30 July 2025

1. The document(s) listed in paragraph 1 of the appendix has/have been examined for compliance with **Part A-1, Section 13 of the Rules and Regulations for the Classification of Ships using Gases or other Low-Flashpoint Fuels, July 2020** and is/are assigned an appraisal status as indicated, in accordance with the following conditions:-
 2. **Comments**
 - 2.1 Proposed materials for impellers and fan housings are aluminium alloy, ferrous or stainless steel. The required minimum tip clearance of 13 mm between any combination of ferrous (including austenitic stainless steel) impellers and housings in axial (f3) and radial direction has been recognised on plans "Theoretical assembly measurements at radial fans".
 - 2.2 The installations of non-sparking ventilation fans have to be carried out to the attending Surveyor's satisfaction.

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

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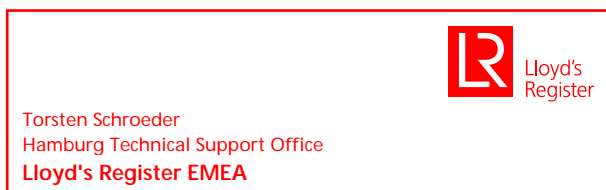
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Appendix

2. Comments, cont.

- 2.3 The validity of this Machinery General Design Appraisal expires as shown above respectively change of Rules requirements, whichever comes first.



LR031.1.2016.06

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1. The document(s) listed below has/have been examined

Document No.	Rev.	Title	Status	Date
A99-16-4	c	Theoretical assembly measurements at radial fans, single inlet Types: RNN, RSZ, RNZ, page 1/4	A	31.07.2020
A99-16-4	c	Theoretical assembly measurements at radial fans, single inlet Type: RNM, page 2/4	A	31.07.2020
A99-16-4	a	Theoretical assembly measurements at radial fans, single inlet Types: RNNS and RNSK, page 3/4	A	31.07.2020
A99-16-4	a	Theoretical assembly measurements at radial fans, single inlet Type: RNZ9, page 4/4	A	31.07.2020
A98-66-4	b	Theoretical assembly measurements at radial fans, single inlet Types: LRZ / LQZ	A	31.07.2020

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Appendix

Document No.	Rev.	Title	Status	Date
A98-67-4	a	Theoretical assembly measurements at radial fans, single inlet Types: PRZ / PQZ	A	31.07.2020
A98-68-4	b	Theoretical assembly measurements at radial fans, single inlet Types: MRZ / MQZ	A	31.07.2020
A98-69-4	b	Theoretical assembly measurements at radial fans, single inlet Types: HRZ / HQZ	A	31.07.2020
M97-05-4	e	Designs of centrifugal fans	SI	31.07.2020
TB20-03	-	Technical report 20 – 03 radial fans for LNG applications	SI	31.07.2020
V01-35-2	g	IGW Radial fan, Assembly drawing Types: RNN 6 (8, 10, 12), RNZ, RSZ, VPZ	SI	31.07.2020
V01-70-2	e	IGW Radial fan, Assembly drawing Types: HRZ / HQZ, size 63 - 630	SI	31.07.2020
V01-71-2	c	IGW Radial fan, Assembly drawing Types: MRZ / MQZ, size 90 - 710	SI	31.07.2020
V01-72-2	c	IGW Radial fan, Assembly drawing Types: PRZ / PQZ, size 125 - 1250	SI	31.07.2020
V01-73-2	f	IGW Radial fan, Assembly drawing Types: LRZ / LQZ,	SI	31.07.2020

2. Documents not mentioned above are not required for appraisal or as supporting documentation and have not been retained.

Appraisal Status Key

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

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

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