

TYPE APPROVAL CERTIFICATE

This is to certify:

That the personnel lift unit

with type designation(s)
1145-4-N

Issued to

Safe Transfer A/S
Fiskerihavngade 30, Esbjerg, Denmark

is found to comply with

Application :

NORSOK R:002-2017+AC2019 "Lifting equipment" as per Annex A, group A.7 "Personnel transfer carriers"

Issued at **Bergen** on **2023-08-25**

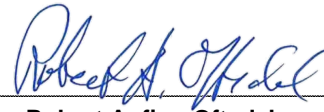
This Certificate is valid until **2028-08-25** .

DNV local unit: **Esbjerg Verification**

Approval Engineer: **Jens Petter Lande**



for **DNV**



Robert Anfinn Oftedal
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

- WLL: 1230 kg
 - o Includes 4 passengers, each of weight 100 kg and baggage 40 kg
 - o Includes tare weight of 670 kg
- Dynamic factor: 3,14 (ref NORSOK R-002:2017+AC:2019, annex F)
- Partial safety factor: 1,34
- Risk coefficient: 1,5
- Material factor: 1,25
- Horizontal impact at: 2 m/s
- Vertical impact at: 4 m/s
- Significant wave height: 3 m (NLS: Non Life Saving condition)
6 m (LS: Life Saving condition)
- Operating temperatures: -50°C to +70°C
- Maximum mean wind velocity: 10 m/s (NLS)
17 m/s (LS)

Application/Limitation

This Type Approval certificate is not valid for designs, components, equipment, systems or products which are subject to classification by DNV. The use of the term type examination is discontinued and replaced by the term type approval.

Following important aspects are underlined within the certificate:

- The equipment is intended for off-board and on-board lifting with persons
- This certificate covers design of equipment according to NORSOK R-002:2017+AC:2019. Manufacturing survey, overload test (3 x WLL), functional tests are to be performed by manufacturer and witnessed by DNV for each piece produced if a product certificate is needed.
- Influence of the vertical impact (ref NOROSK R-002:2017+AC:2019 "lifting equipment", annex A, p. A.8) on the basket's structure was not documented by design calculations. Real drop test was performed and witnessed by DNV as a compensative measure. Ref. Verification statement N141JSJX Rev. 01 from 01.05.2018.

Type Approval documentation

Ref. is made to DNV GL Design verification report no. 2017-5513, rev. 0 for information regarding the verification carried out. Following documents were reviewed:

Document number	Revision	Document title
11031.03.3390.02	Rev. 7	Workshop drawing
11031.03.3390.01	Rev. 3	General arrangement drawing
49038	A	Basket data plate
	V01	SE1035 – Basket – Calculation report acc. Norsok R-002-201
	26.07.2018	SE1035 – Basket – Norsok R002-2017 rule calcs
	N/A	JEGS Performance Products Pro High Back II Race Seat (datasheet)
13-6148 (PCG3547)	N/A	Vetus Pedestal (datasheet)
49031	4	Bumper ring, quarter
09-0128	3	Compensator for Norsok basket, Certex
H71682	N/A	Compensator, certificate
S35 188 85	C	Ringkette
H68984	N/A	Ringkette
49030	N/A	Boyancy tank
49030 udv. flyder" (Danhill)		Floater, stability
	From 27.06.2018 (in PDF)	Guidelines 1145-4-N
N/A	From 70.06.2017 (in PDF)	NORSOK Basket Risk Assessment
49-001		Testprocedure
49-002		Design details

Tests carried out

Type testing:

- Report for incomplete certification ref. no. A0379970, from 10.04.2017 by Lukasz Blawat

Overload test:

- DNV GL visit report no. 201802069, from 01.06.2018 by Anders Aalund

Manufacturing survey:

- Report for incomplete certification ref. no. A0379970, from 10.04.2017 by Lukasz Blawat

Drop test and floating test:

- Verification statement N141JSJX, rev. 01, from 01.05.2018 by Oddur Brjønsson

Marking of product

Marking shall be implemented in accordance with NORSOK R-002:

- the business name and full address of the manufacturer;
- designation of the lifting equipment;
- designation of series or type;
- serial number;
- the year of construction, that is the year in which the manufacturing process is completed;
- any legal marking (e.g. CE-marking) if applicable

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.