Certificate No:
TACC0000011

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Commercial Craft

with type designation(s)
FIV143

Issued to
Chantiers Naval Couach CNC S.A.S.
Gujan Mestras, **France**

is found to comply with
DNV GL standard DNVGL-ST-0342 - Craft, 2016

Application :

See next page.

Issued at **Høvik** on **2021-04-06**
This Certificate is valid until **2026-04-05** .
DNV local unit: **France NB**

Approval Engineer: **Per Annar Sandaune**

for **DNV**

Thomas Revheim
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.

Conditions

Type certification means that the boat builder has engaged himself to build boats in series identical to the prototype which the Society has inspected and found to be in accordance with the abovementioned standard. The production of the type certified boat is subject to surveillance by the Society, by inspection. Boats of the certified type are to be equipped with an individual certificate to be issued upon product survey.
The certification is based on the assumption that the boats will be handled in a seamanlike manner as stipulated in the standard.

Boat type

Boat type identification number:	**657.01**
Application of standard:	**Requirements for decked craft** **Hull scantlings specially considered according to DNVGL-RU-HSLC (ref. ST-0342 15.2)**

Particulars

Length, Loa:	**14.15 m**
Beam incl. fenders, B max:	**3.80 m**
Draught incl. keel, max:	**0.709 m**
Height above waterline, incl. mast, max:	**Approx. 5.2 m**
Weight of boat, incl. engine, equipment, net:	**13 123 kg (±4% for subsequent builds)**
Hull material:	**E-glass and carbon fibre reinforced plastics**
Propulsion:	**2 x Caterpillar C18 ACERT** **2 x KaMeWa S32-3/CA Waterjets**

Restrictions

Engine power, max:	**2 x 651 kW**
Maximum load (fuel, persons, add. weight):	**1 346 kg**
Number of persons, max:	**4 persons**

Special restrictions and additional comments:

Design vertical acceleration

Design vertical acceleration at center of gravity a_{cg} = 4.0g.
The operation of the craft has to be carefully adjusted to the wave pattern in terms of heading and reduced speed, to prevent excessive loads on the hull. Acceleration meters installed onboard shall be used to ensure operation of the boats within the design limit.

Adhesive bonding

The use of adhesive bonding is covered by DNV GL ST-0342 Sec.11.2.11. The main intention / interpretation of the DNV GL ST-0342 is that adhesive bonding is considered for limited application. However, for the FIV143 boat series, this methodology is deployed for the purpose of connecting framing structure to hull shell. Chantiers Naval Couach CNC S.A.S. (herafter called the boat builder) has provided documentation of the bonding process referencing testing in order to document capacity and the service life of the bonds. The boat builder has reported identical bounding process qualified and accepted by Bureau Veritas IACS member on certified patrol boats under operation since 2016. That documentation has been used as basis for DNV evaluation of equivalence of the bonding process to DNV GL ST-0342. It is expected that planned maintenance programme is to have regular attention on bonding condition following appropriate recommendations by the boat builder. DNV can revise the above status provided additional input on bonding detailed design or formal long term “In service” feedback for DNV certified boats is received.

DNV has concluded that the boat builder’s solution can be considered by applying limitation on adequate capacity of the bonds throughout the service life of the vessel which has not been demonstrated by submitted documentation.

Intumescent paint

The same type of intumescent paint used in the engine room shall be used for maintenance throughout the service life of the boats.

Periodical assessment

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnvgl.com