

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Emergency Towing Arrangement

with type designation(s)

ETS1000 - AFT ETA, YT1000-F - FWD ETA, YT1000-A - AFT ETA, YT2000-F - FWD ETA & FWD SPM, YT2000-A - AFT ETA, YT3500-F-01-CHAIN STOPPER, YT3500-F-02-CHOCK, YT2000-A-BOLLARD - ESCORT and PULLBACK, YT2000-A-CHOCK - ESCORT & PULLBACK, OCIMF TYPE CHAIN STOPPER YT2000-F-001, OCIMF TYPE CHAIN STOPPER YT3500-F-001, YT2000 SMIT, OCIMF TYPE CHAIN STOPPER YT2500-F-001, OCIMF TYPE CHAIN STOPPER YT3500-F-010, YT2000-A-C.BOLLARD, YT2000-A-C.CHOCK, YT2000-A-006 STOPPER

Issued to

Jiangsu Xingyang Marine Equipment Making Co., Ltd.
Jiangyan, China

is found to comply with

DNV rules for classification – Ships

IMO/MSC Resolution 35 (63)

OCIMF Mooring Equipment Guidelines (MEG4), Fourth Edition 2018

OCIMF Guidelines for Offshore Tanker Operations, First Edition 2018

OCIMF's Recommendations for Equipment Employed in the Bow Mooring of Conventional Tankers at Single Point Moorings, Fourth Edition May 2007

Application :

Strongpoint, Chain Stopper, Fairlead and Bollard and Stopper for Emergency Towing Arrangement, Single Point Mooring, Escorting and Pullback as stated in page 2

Issued at **Høvik** on **2022-12-02**

This Certificate is valid until **2027-12-01**.

for **DNV**

DNV local unit: **Nantong**

Approval Engineer: **Lap Van Duong**

Per Esvall
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

EST1000: Aft Emergency Towing, ref. drawing EST1000 (1) & (2)

- SWL: 1000 kN (102 tonnes)

YT1000: Forward Emergency Towing, ref. drawing YT1000-F

- SWL: 1000 kN (102 tonnes)

YT1000: Aft Emergency Towing, ref drawing YT1000-A

- SWL: 1000 kN (102 tonnes)

YT2000: Forward Emergency Towing and Single Point Mooring, YT2000-F

- Emergency Towing, SWL: 2000 kN (204 tonnes)
- Single Point Mooring, SWL: 2000 kN (204 tonnes)

YT2000: Aft Emergency Towing, YT2000-A

- Emergency, SWL: 2000 kN (204 tonnes)

YT3500: Emergency Towing and Single Point Mooring:
Chain stopper (YT3500-F-01)

- Emergency Towing, SWL: 2000 kN (204 tonnes)
- Single Point Mooring, SWL: 350 tonnes

Chock (YT3500-F-02)

- Emergency Towing, SWL: 2000 kN (204 tonnes)
- Single Point Mooring, SWL: 350 tonnes

YT2000-A-Bollard and YT2000-A-Chock for Escorting & Pullback

- SWL: 200 tonnes

OCIMF Type Chain Stopper, YT2000-F-001

- Emergency Towing, SWL: 2000 kN (204 tonnes)
- Single Point Mooring, SWL: 200 tonnes

OCIMF Type Chain Stopper, YT3500-F-001

- Emergency Towing, SWL: 2000 kN (204 tonnes)
- Single Point Mooring, SWL: 350 tonnes

YT2000-smit

- Emergency, SWL: 204 tonnes
- Single Point Mooring: 200 tonnes

OCIMF Type Chain Stopper, YT2500-F-001

- Emergency Towing, SWL: 204 tonnes
- Single Point Mooring, SWL: 250 tonnes

OCIMF Type Chain Stopper, YT3500-F-010

- Emergency Towing, SWL: 204 tonnes
- Single Point Mooring, SWL: 350 tonnes

YT2000-A-C.Bollard

- Emergency Towing and Escorting & Pullback, SWL: 2000 kN (204 tonnes)

YT2000-A-C.Chock

- Emergency Towing and Escorting & Pullback, SWL: 2000 kN (204 tonnes)

YT2000-A-006

- Stopper, SWL: 2000 kN (204 tonnes)

(Note: SWL = Safe Working Load)

Application/Limitation

- The connection and support of the above components to the ship's structure are not included in this approval and to be covered by separate approvals.
- If installed on DNV vessels, a DNV product certificate is to be issued for each product and the following will apply:

- The manufacturer is required to have a DNV surveyor witness all important production and tests as required.
- Non-destructive testing is to be carried out to the attending surveyor's satisfaction.
- All welding is to be carried out by approved welders and according to approved welding
- The chock is approved for all relevant angles of the towline up to 90° from the ship's centreline to port and starboard and 30° above and below horizontal in the vertical plane.

For Emergency Towing:

- Materials are to be delivered with required material certificates in accordance with DNV rules Pt.5 Ch.5 Sec.1 [4.2]
- Materials of welded parts used in the strong point shall be Charpy V-notch tested with minimum 27J at 0 deg C according to DNV rules Pt.5 Ch.5 Sec.2 [2.2.5].
- The arrangements and positioning of the above components shall comply with the requirements in IMO resolution MSC.35(63), DNV rules Pt.5 Ch.5 Sec.2 [2.2] and OCIMF's Guidelines.
- Towing pennant and pick-up gear may be delivered with maker's certificate.

For Single Point Mooring:

- Materials are to be delivered with required material certificates in accordance with Pt.6 Ch.5 Sec.12 [2.1]
- The materials used for bow chain stopper shall comply with the requirements specified in DNV rules Pt.3 Ch.11 Sec.1 [6.2] according to DNV rules Pt.6 Ch.5 Sec.12 [3.1.2].
- The arrangement and positioning of the above components shall comply with the requirements in DNV rules Pt.6 Ch.5 Sec.12 [4] and OCIMF's Guidelines.

Type Approval documentation

	2001-05-11		
	2001-05-11		
	2001-05-11	Small Ear Plate	
	2001-05-11	Big Shaft	
	2001-05-11	Small Shaft	
	2001-05-11	Big Shaft Socket	
	2001-05-11	Towing Pennant	For Information
	2001-05-11		For Information
	2001-05-11	Lean Type Storage Box	For Information
ETS1000-005	2001-05-11		For Information
A 055	2003-05-19		
YT1000-F-01	2002-08-05	Chain Stopper	
YT1000-F-02	2002-08-05	Fairlead B600	
YT1000-F-03	2002-08-05	Chafing Chain	
YT1000-F-04	2002-08-05	Pedestal Roller	
C03-113	2003-06-10		
	2002-08-05		
YT1000-A-01	2002-08-05	Pick Up Gear	
	2002-08-05	Towing Pennant	
YT1000-A-03	2002-08-05		
YT1000-A-04	2002-08-05	Storage Drum	
YT1000-A-05	2002-08-05	Storage Box	
YT1000-A-06	2002-08-05	Stopper	
YT1000-A-07	2002-08-05	Pedestal Roller	
	2003-06-10	Report: Prototype Test of ETA for YT1000-A (Serial No.:03-6-2)	
	2002-08-05		
YT2000-F-01	2002-08-05	Chain Stopper	
YT2000-F-02	2002-08-05	Fairlead B600	

YT2000-F-03	2002-08-05	Chafing Chain
YT2000-F-04	2002-08-05	Pedestal Roller
C03-113	2003-06-10	
	2002-08-05	
YT2000-A-01	2002-08-05	
YT2000-A-02	2002-08-05	Towing Pennant
YT2000-A-03	2002-08-05	
YT2000-A-04	2002-08-05	Storage Drum
YT2000-A-05	2002-08-05	Storage Box
YT2000-A-06	2002-08-05	Stopper
YT2000-A-07	2002-08-05	Pedestal Roller
	2003-06-10	Report: Prototype Test of ETA for YT2000-A (Serial No.:03-6-3)
	2009-06-09	Emergency towing arrangement (ETA) deployment test report

Tests carried out

Report No.	Date	Description
A055	19-05-2003	Prototype test of EST1000 aft for ETA
C03-113	10-06-2003	Prototype test of YT1000-F & YT2000-F forward for ETA
C03-114	10-06-2003	Prototype test of YT1000-A aft for ETA
C03-115	10-06-2003	Prototype test of YT2000-A aft for ETA
-	09-06-2009	Deployment test of YT2000-A for ETA
09-06013	24-06-2009	Prototype test of YT3500-F-01 chain stopper and YT3500-F-02 chock for ETA
09-09011	25-05-2009	Prototype test of YT2000-A chock for Escorting & Pullback
-	22-04-2005	Prototype test of YT2000-A bollard for Escorting & Pullback
15-00018	17-07-2015	Prototype test of YT2000-F-001 chain stopper for ETA
09-06011	25-05-2009	Prototype test of YT3500-F-001 chain stopper for ETA
JSXY20220928.01	28-09-2022	Prototype test of YT2500-F-001 chain stopper
JSXY20220928.02	28-09-2022	Prototype test of YT3500-F-010 chain stopper
JSXY20220928.03	28-09-2022	Prototype test of YT2000-A-C bollard
JSXY20220928.04	28-09-2022	Prototype test of YT2000-A-C chock
JSXY20220928.05	28-09-2022	Prototype test of YT2000-smit

Marking of product

The equipment is to be marked with the SWL, manufacturers name or trademark and type number identification.

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.