

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Tray**

with type designation(s)

TA (Carbon steel), BTA (Stainless steel) & LTA (AL-Mg alloy) and accessories

Issued to

**Fushun Obali Co., Ltd.
Fushun, China**

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Material** **Metallic**
Suitable for open deck **Yes**Issued at **Hamburg** on **2018-03-26**This Certificate is valid until **2023-03-25**.for **DNV GL**DNV GL local station: **Dalian**Approval Engineer: **Carsten Hunsalz**

Arne Schaarmann
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.



Product description

Cable tray system OBALI consisting of strait ladders, Tee's, Crosses, Raisers etc. and support accessories.

Technical specifications:

Cable tray TA:

Standard surface:	Carbon Steel, single layer				
	Length (mm)	Width (mm)	Weight (kg)	Thickness (mm)	Longitudinal deflection no load (mm)
1TA20A - 1TA20J	50-3000	200	0.29 - 7.76	2.0	4,0
1TA30A - 1TA30J	50-3000	300	0.38 - 8.67	2.0	4,0
1TA40A - 1TA40J	50-3000	400	0.55 - 10.48	2.0	4,0
1TA50A - 1TA50J	50-3000	500	0.67 - 11.68	2.0	4,0
1TA60A - 1TA60J	50-3000	600	1.11 - 17.40	2.5	4,0
1TA70A - 1TA70J	50-3000	700	1.26 - 19.12	2.5	5,0
1TA80A - 1TA80J	50-3000	800	1.70 - 25.02	3.0	5,0
1TA90A - 1TA90J	50-3000	900	1.92 - 27.08	3.0	6,0
1TA100A - 1TA100J	50-3000	1000	2.08 - 29.16	3.0	6,0

Cable tray BTA:

Standard surface:	Stainless steel, single layer				
	Length (mm)	Width (mm)	Weight (kg)	Thickness (mm)	Longitudinal deflection no load (mm)
1BTA20A - 1BTA20J	50-3000	200	0.23 - 5.93	2.0	4,0
1BTA30A - 1BTA30J	50-3000	300	0.29 - 6.63	2.0	4,0
1BTA40A - 1BTA40J	50-3000	400	0.56 - 10.68	2.0	4,0
1BTA50A - 1BTA50J	50-3000	500	0.69 - 11.91	2.0	4,0
1BTA60A - 1BTA60J	50-3000	600	1.13 - 17.74	2.5	4,0
1BTA70A - 1BTA70J	50-3000	700	1.29 - 19.49	2.5	5,0
1BTA80A - 1BTA80J	50-3000	800	1.45 - 21.25	2.5	5,0
1BTA90A - 1BTA90J	50-3000	900	1.96 - 27.60	3.0	6,0
1BTA100A - 1BTA100J	50-3000	1000	2.12 - 29.72	3.0	6,0

Cable tray LTA:

Standard surface:	Al-Mg alloy single-layer				
	Length (mm)	Width (mm)	Weight (kg)	Thickness (mm)	Longitudinal deflection no load (mm)
1LTA20A - 1LTA20J	50-3000	200	0.13 - 3.46	2.5	4,0
1LTA30A - 1LTA30J	50-3000	300	0.17 - 3.87	2.5	4,0
1LTA40A - 1LTA40J	50-3000	400	0.25 - 4.68	2.5	4,0
1LTA50A - 1LTA50J	50-3000	500	0.30 - 5.21	2.5	4,0
1LTA60A - 1LTA60J	50-3000	600	0.48 - 7.45	3.0	4,0
1LTA70A - 1LTA70J	50-3000	700	0.54 - 8.19	3.0	5,0
1LTA80A - 1LTA80J	50-3000	800	0.61 - 8.93	3.0	5,0
1LTA90A - 1LTA90J	50-3000	900	0.92 - 12.88	3.0	6,0
1LTA100A - 1LTA100J	50-3000	1000	0.99 - 13.87	3.0	6,0

Application/Limitation

The cable tray system type Obali has to be installed in accordance with the producer's loading table for the mentioned type.

The installation is to be mechanically protected in accordance with our Rules and especially on weather decks in cargo hold areas and through cargo holds.

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 61537:2006 Load bending test, electric continuity, resistance against corrosion (salt mist) & impact resistance

Marking of product

OBALI Systems – Type designation – Width – Material (cover marking).

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE