Certificate No:
TAE00004C4

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Ties

with type designation(s)
Cable Ties FZGSJ, FZGSP, FZLDSP, FZLSJ, FZLSP, FZLSPAP, FZMSP, JZGS, JZLDS, JZLS, JZMS, RBS, RUS, Cable Bands MPS, MPSJ, MPSP, MPSPAP

Issued to
CCG Cable Terminations (Pty) Ltd.
KEMPTON PARK, **South Africa**

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Type	Material	Suitable for open deck
Cable Ties FZGSJ, FZGSP, FZLDSP, FZLSJ, FZLSP, FZLSPAP, FZMSP, JZGS, JZLDS, JZLS, JZMS, RBS, RUS Cable Bands MPS, MPSJ, MPSP, MPSPAP	**Metallic or Composite**	**yes**

Issued at **Høvik** on **2021-08-27**
This Certificate is valid until **2026-08-26**.
DNV local station: **Newcastle-upon-Tyne**

Approval Engineer: **Ivar Bull**

for **DNV**

Marta Alonso Pontes
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

Cable Ties of stainless steel 304 / 316 with or without Epoxy or PVC coating.

Type	Coating	Dimension(mm)			Declared Tensile(N)	Min & Max Operating Temperature
		T	W	L		
FZGSJ	PVC	1.0 - 1.2	5.6 - 16	100 - 800	350 - 890	-40 to 85 ºC
FZGSP	Epoxy	0.35 - 0.45	4.6 - 15.9	100 - 800	710 - 3000	-40 to 85 ºC
FZLDSP	Epoxy	0.45 - 0.47	4.6 - 12	100 - 800	488 - 1000	-40 to 85 ºC
FZLSJ	PVC	1.0 - 1.2	9 - 16	100 - 800	2000 - 3500	-40 to 85 ºC
FZLSPAP	PPA	1.0 - 1.2	6.4 - 19.05	100 - 800	1500 - 5000	-60 to 150 ºC
FZLSP	Epoxy	0.35 - 0.5	7.9 - 19	100 - 800	2220 - 5000	-40 to 85 ºC
FZMSP	Epoxy	0.45 - 0.47	7 – 12	100 - 800	1120 - 2000	-40 to 85 ºC
JZGS	None	0.26 - 0.35	3.8 - 15.9	100 - 800	600 - 4100	-60 to150 ºC
JZLDS	None	0.3 - 0.35	4.6 - 12	100 -800	488- 1000	-60 to150 ºC
JZLS	None	0.26 - 0.4	7.9 - 19	100 - 800	2220 - 5000	-60 to150 ºC
JZMS	None	0.28 - 0.35	7 - 12	100 - 800	1120 - 2000	-60 to150 ºC
RBS	Epoxy	0.5	6.3 - 9.6	100 - 800	340 - 1200	-40 to 85 ºC
RUS	None	0.38	6.3 - 9.6	100 - 800	340 - 1200	-60 to150 ºC

Cable Bands of stainless steel 304 / 316 with or without Epoxy or PVC coating.

Type	Coating	Dimension(mm)			Declared Tensile(N)	Min & Max Operating Temperature
		T	W	L		
MPS	None	0.26 - 0.4	7.9 - 19	25000	2200 - 5000	-60 to150 ºC
MPSJ	PVC	1.0 - 1.2	9 - 16	25000	2000 - 3500	-40 to 85 ºC
MPSP	Epoxy	0.35 - 0.5	7.9 - 19	25000	2200 - 5000	-40 to 85 ºC
MPSPAP	PPA	1.0 - 1.2	6.4 - 19.05	25000	1500 - 5000	-60 to 150 ºC

Stainless Steel Buckle type: BKL-8, BKL-9,BKL-10, BKL-12, BKL-13,BKL-15 and BKL-16,BKL-19 is fit for MPS, MPSP and MPSJ. BKLT-6.4,BKLT-9.6,BKLT-12.7,BKLT-15.9,BKLT-19.05 is fit for MPSPAP.

Application/Limitation

For fixing of cables, outdoor and indoor, onboard ships and mobile offshore units.

To be installed according with the manufacturer`s instructions and DNV GL rules.

Type Approval documentation

Tests carried out

Loop Tensile Strength, UV resistance and corrosion tests in accordance with IEC 62275.

Marking of product

The smallest package is to be marked with the following:

- Manufacturer’s name / trade mark & catalogue type designation
- Manufacturer’s rated load (tensile strength) as per catalogue
- Dimensions
- Type of product
- Maximum bundle diameter
- Temperature conditions

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