DNV·GL

Certificate No:
TAE000039X

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cable Ties

with type designation(s)
RSU, RSP, RSVP and RCU type, band & clip/saddle

Issued to
Raychem RPG (P) Limited
MUMBAI, MAHARASHTRA, India

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 **2018-11-27**
This Certificate is valid until **2023-12-31**.
DNV GL local station: **Mumbai FiS**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**

Arne Schaarmann
Head of Section

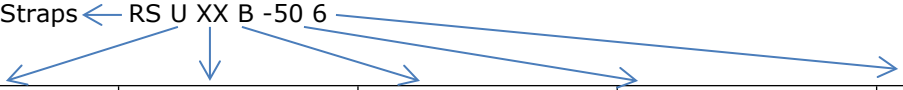
This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-012610-4**
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Product description

I Raychem Straps ← RS U XX B -50 6

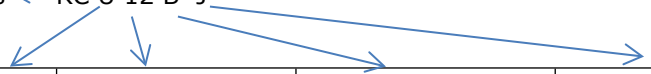


Surface Condition	With, mm	Raw Material	Roll Length , M	Thichness
U- Uncoated	0.6 – 6.5	B: SS201	20	4 – 0.4
P – PPA Coated	0.9 – 9.5	E: SS316	25	5 – 0.5
VP – PVC Coated	0.1 - 10		30	6 – 0.65
	0.12 – 12,7		50	6-5 – 0.65
	0.16 – 16		61	7-5 – 0.75
	0.19 – 19.0			

S. no.	Part numbers
1	RSU06E305
2	RSU06E615
3	RSU09E306-5
4	RSU09E616-5
5	RSU12E307-5
6	RSU12E617-5
7	RSU16E307-5
8	RSU16E617-5
9	RSU19E307-5
10	RSU19E617-5
11	RSU06B305
12	RSU06B615
13	RSU09B306-5

14	RSU09B616-5
15	RSU12B307-5
16	RSU12B617-5
17	RSU16B307-5
18	RSU16B617-5
19	RSU19B307-5
20	RSU19B617-5
21	RSP06E254
22	RSP09E254
23	RSP12E254
24	RSP16E254
25	RSP19E254
26	RSVP12E254
27	RSVP16E254

II Raychem Clips ← RC U 12 B J



Surface Condition	With, mm	Raw Material	Design Type
U- Uncoated	0.6 – 6.5	B: SS201	J – Jaw type
	0.9 – 9.5	E: SS316	W – Wing type
	0.1 - 10		
	0.12 – 12,7		
	0.16 – 16		
	0.19 – 19.0		

S. no.	Part numbers
1	RCU06BJ
2	RCU09BJ
3	RCU10BJ
4	RCU12BJ
5	RCU16BJ
6	RCU19BJ
7	RCU20BJ
8	RCU06EJ
9	RCU09EJ
10	RCU10EJ
11	RCU12EJ

S. no.	Part numbers
12	RCU16EJ
13	RCU19EJ
14	RCU20EJ
15	RCU09BW
16	RCU10BW
17	RCU12BW
18	RCU16BW
19	RCU19BW
20	RCU20BW
21	RCU06EW
22	RCU09EW

Classification according to IEC 62275:

6.1 Material:	Metallic, coated and uncoated
6.2 Loop tensile strength:	Type 2: Retains 100% strength after testing
6.3 Temperature:	Maximum operation temperature [°C]: 300 uncoated / 150 coated Minimum operation temperature [°C]: -60°C Minimum installation temperature [°C]: -60°C
6.4 Contribution to fire:	Non-flame propagating
6.5.1 Resistance to UV light:	resistant
6.5.2 Resistance to corrosion:	resistant

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

Mandatory tests for metallic types according to type approval programme DNVGL-CP-0407 and IEC 62275 2013-11

Loop tensile strength for ties retaining 100% strength after testing.

Marking of product

The smallest package is to be marked with the following:

- Manufacturer’s name / trade mark & catalog 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