



TYPE APPROVAL CERTIFICATE
No. ELE069614CS/001

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	TK SEA05; 60 V- 250 V
<i>Applicant</i>	TECNIKABEL S.R.L. VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Manufacturer</i>	TECNIKABEL S.R.L.
<i>Place of manufacture</i>	VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Reference standards</i>	IEC 60092-350; IEC 60092-375.

Issued in **Genoa** on **March 5, 2015**. This Certificate is valid until **March 5, 2020**


RINA Services S.p.A.
Valerio Bonanni

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TYPE APPROVAL CERTIFICATE

No. **ELE069614CS/001**

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TK SEA05

60 V- 250 V

Materials/Components

Telecommunication, control and instrumentation cables, fire retardant, low smoke, halogen free. for ships and offshore units.

Rated voltage: 60/250 V

Type: TK SEA05

Maximum conductor temperature: 90°C

Marking: **TECNIKABEL (TO) - ITALY - (week/Year) - TKSA (Cable Type) - n° x section mm2 - 60/250 V - IEC 60332-3-22**

Construction:

conductor: bare copper (IEC 60228 class 2)

insulation : XLPE

Inner covering: halogen free compound (when requested by the relevant Standards)

shield: tinned or plain copper braid

outer sheath: SHF1

In accordance with IEC 60228; IEC 60092-350; IEC 60092-351; IEC 60092-359; IEC 60092-375; IEC 60332-1; IEC 60332-3-22 Cat.A; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; IEC 60092-360 as applicable.

Tecnical specification: **TECNIKABEL N. TK SEA05 Rev.1** dated 20/06/2014.

Genoa March 5, 2015

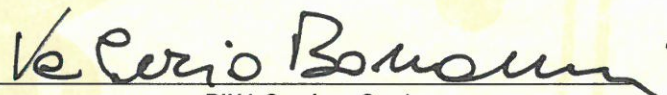


TYPE APPROVAL CERTIFICATE
No. ELE069614CS/002

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	TK SEA03; 150 V- 250 V
<i>Applicant</i>	TECNIKABEL S.R.L. VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Manufacturer</i>	TECNIKABEL S.R.L.
<i>Place of manufacture</i>	VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Reference standards</i>	IEC 60092-350; IEC 60092-376.

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No. **ELE069614CS/002**

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TK SEA03

150 V- 250 V

Materials/Components

Control and instrumentation cables, fire retardant, low smoke, halogen free. for ships and offshore units.

Rated voltage: 150/250 V

Type: TK SEA03

Maximum conductor temperature: 90°C

Marking: **TECNIKABEL (TO) - ITALY - (week/Year) - TKSEA (Cable Type) - n° x section mm2 - 150/250 V - IEC 60332-23-22**

Construction:

conductor: bare copper (IEC 60228 class 2 or class 5)

insulation : XLPE

Inner covering: halogen free compound (when requested by the relevant Standards)

Individual and/or collective shield (optional) : Al/Polyester tape and/or plain or tinned copper braid

armour (optional): galvanized steel or tinned or plain copper braid

outer sheath: SHF1

In accordance with IEC 60228; IEC 60092-350; IEC 60092-351; IEC 60092-359; IEC 60092-376; IEC 60332-1; IEC 60332-3-22 Cat.A; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; IEC 60092-360 as applicable.

Tecnichal specification: **TECNIKABEL N. TK SEA03 Rev.1 dated 20/06/2014.**

 **Genoa March 5, 2015**



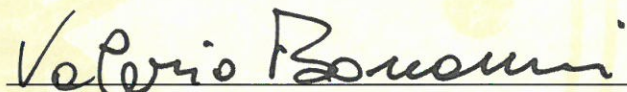
TYPE APPROVAL CERTIFICATE

No. ELE069614CS/003

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	TK SEA04; 150 V- 250 V
<i>Applicant</i>	TECNIKABEL S.R.L. VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Manufacturer</i>	TECNIKABEL S.R.L.
<i>Place of manufacture</i>	VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Reference standards</i>	IEC 60092-350; IEC 60092-376; IEC 60331-21.

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No. **ELE069614CS/003**

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TK SEA04

150 V- 250 V

Materials/Components

Control and instrumentation cables, fire retardant, fire resistant, low smoke, halogen free, for ships and offshore units.

Rated voltage: 150/250 V

Type: TK SEA04

Maximum conductor temperature: 90°C

Marking: **TECNIKABEL (TO) - ITALY - (week/Year) - TKSEA (Cable Type) - n° x section mm2 - 150/250 V - IEC 60332-3-22 - IEC 60331-21.**

Construction:

conductor: bare copper (IEC 60228 class 2 or class 5)

mica tape on the conductor

insulation : XLPE

Inner covering: halogen free compound (when requested by the relevant Standards)

Individual and/or collective shield (optional) : Al/polyester tape and/or tinned or plain copper braid

armour (optional): galvanized steel or tinned or plain copper braid

outer sheath: SHF1

In accordance with IEC 60228; IEC 60092-350; IEC 60092-351; IEC 60092-359; IEC 60092-376; IEC 60331-21; IEC 60332-1; IEC 60332-3-22 Cat.A; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; IEC 60092-360 as applicable.

Tecnichal specification: **TECNIKABEL N. TK SEA04 Rev.1 dated 20/06/2014.**

 **Genoa March 5, 2015**



TYPE APPROVAL CERTIFICATE

No. ELE069614CS/004

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	TK SEA02; 0.6/1 kV
<i>Applicant</i>	TECNIKABEL S.R.L. VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Manufacturer</i>	TECNIKABEL S.R.L.
<i>Place of manufacture</i>	VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Reference standards</i>	IEC 60092-350; IEC 60092-353; IEC 60331-21.

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TYPE APPROVAL CERTIFICATE

No. **ELE069614CS/004**

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TK SEA02

0.6/1 kV

Materials/Components

Power and control cables, armoured or unarmoured, fire retardant, fire resistant, low smoke, halogen free, for ships and offshore units.

Rated voltage: 0.6/1 kV

Type: TK SEA02

Maximum conductor temperature: 90°C

Marking: **TECNIKABEL (TO) - ITALY - (week/Year) - TKSEA (Cable Type) - n° x section mm2 - 0.6/1 kV - IEC 60332-3-22 - IEC 60331-21.**

Construction:

conductor: bare copper (IEC 60228 class 2)

mica tape on the conductor

insulation : XLPE

Inner covering: halogen free compound (when requested by the relevant Standards)

armour (optional): galvanized steel or tinned or plain copper braid

outer sheath: SHF1

In accordance with IEC 60228; IEC 60092-350; IEC 60092-351; IEC 60092-359; IEC 60092-353; IEC 60331-21; IEC 60332-1; IEC 60332-3-22 Cat.A; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; IEC 60092-360 as applicable.

Technical specification: **TECNIKABEL N. TK SEA02 Rev.1 dated 20/06/2014.**

 **Genoa March 5, 2015**



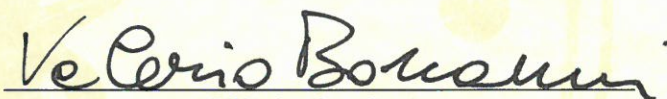
TYPE APPROVAL CERTIFICATE

No. ELE069614CS/005

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	ELECTRIC CABLES
<i>Type</i>	TK SEA01; 0.6/1 kV
<i>Applicant</i>	TECNIKABEL S.R.L. VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Manufacturer</i>	TECNIKABEL S.R.L.
<i>Place of manufacture</i>	VIA BRANDIZZO, 243 10088 VOLPIANO (TO) ITALY
<i>Reference standards</i>	IEC 60092-350; IEC 60092-353

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No. **ELE069614CS/005**

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TK SEA01

0.6/1 kV

Materials/Components

Power and control cables, armoured or unarmoured, fire retardant, low smoke, halogen free, for ships and offshore units.

Rated voltage: 0.6/1 kV

Type: TK SEA01

Maximum conductor temperature: 90°C

Marking: **TECNIKABEL (TO) - ITALY - (week/Year) - TKSEA (Cable Type) - n° x section mm2 - 0.6/1 kV - IEC 60332-3-22.**

Construction:

conductor: bare copper (IEC 60228 class 2)

insulation : XLPE

Inner covering: halogen free compound (when requested by the relevant Standards)

armour (optional): galvanized steel or tinned or plain copper braid

outer sheath: SHF1

In accordance with IEC 60228; IEC 60092-350; IEC 60092-351; IEC 60092-359; IEC 60092-353; IEC 60332-1; IEC 60332-3-22 Cat.A; IEC 60754-1; IEC 60754-2; IEC 61034-1; IEC 61034-2; IEC 60092-360 as applicable.

Technical specification: **TECNIKABEL N. TK SEA01 Rev.1** dated 20/06/2014.

Genoa March 5, 2015