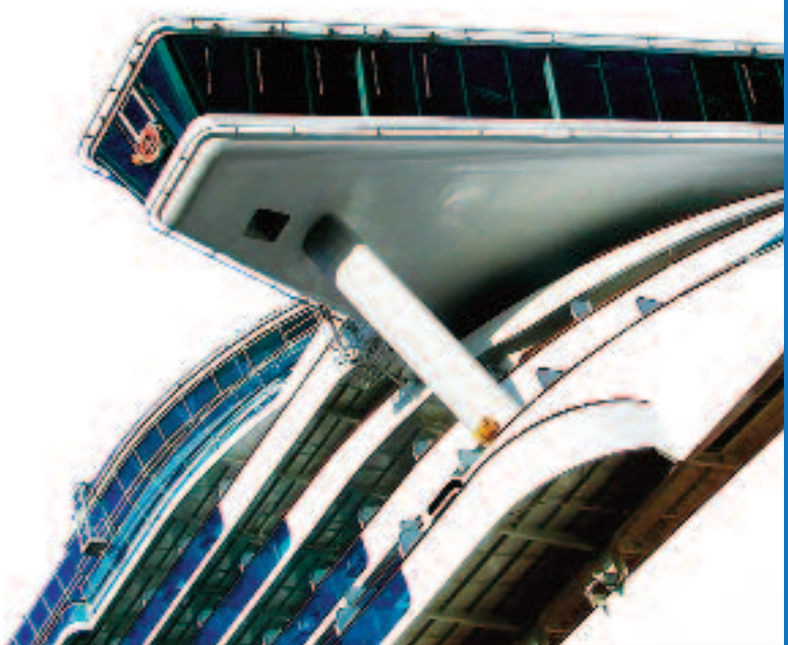
TECNIKABEL
is committed to constant product innovation to obtain a competitive advantage with ongoing dedication to research and development.



A TECHNICAL HEART BEATS WITHIN OUR COMPANY

PRODUCTION

Updated production systems, rigorous operational procedures and expert operators have made it possible for us to carry out our production both efficiently and flexibly. In 30 years of activity we have built more than 22,000 different types of cables.

LABORATORY TESTS

We subject our cables to the most rigorous tests, simulating critical utilisation conditions. In addition to the classic tests required by current regulations, we have also built special machinery for various types of mechanical and electrical tests.

FINAL INSPECTIONS

At the end of production processes each cable is examined to check its electrical specifications and complete compliance with customer specifications.

MATERIALS RESEARCH AND DEVELOPMENT

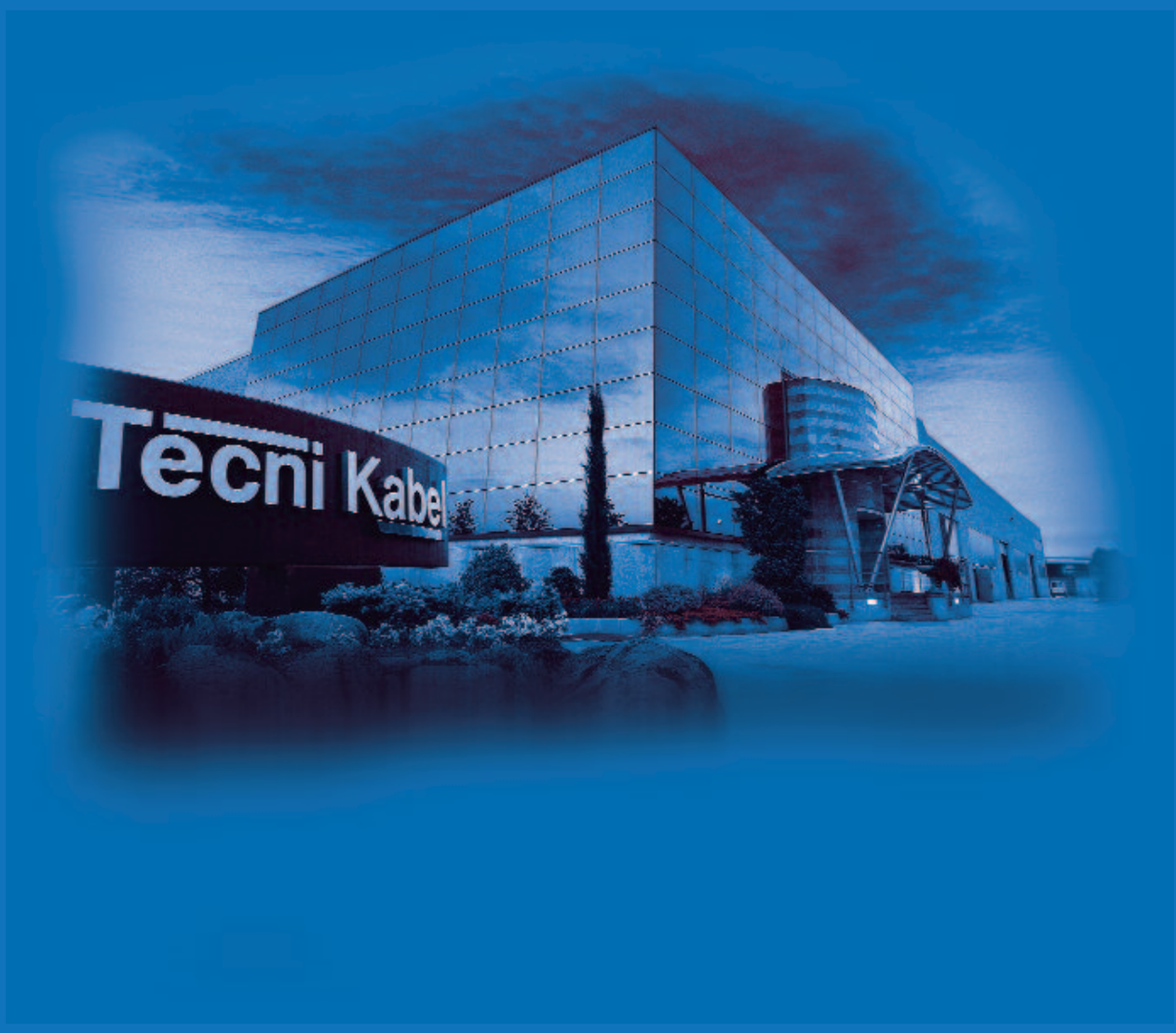
Our thirty year experience has committed us to continual research in new materials in order to optimise performances, costs and achieve the standards required by our customers.

TECNIKABEL has always devoted special attention to quality and customer service from the very first phases of any sale.

Leading certification organisations like **UL** and **CSA** have, over the years, recognised the high quality and performance of our cables, issuing us with **more than 600 homologations**.

In the marine sector too our cables have been awarded the most important homologations.

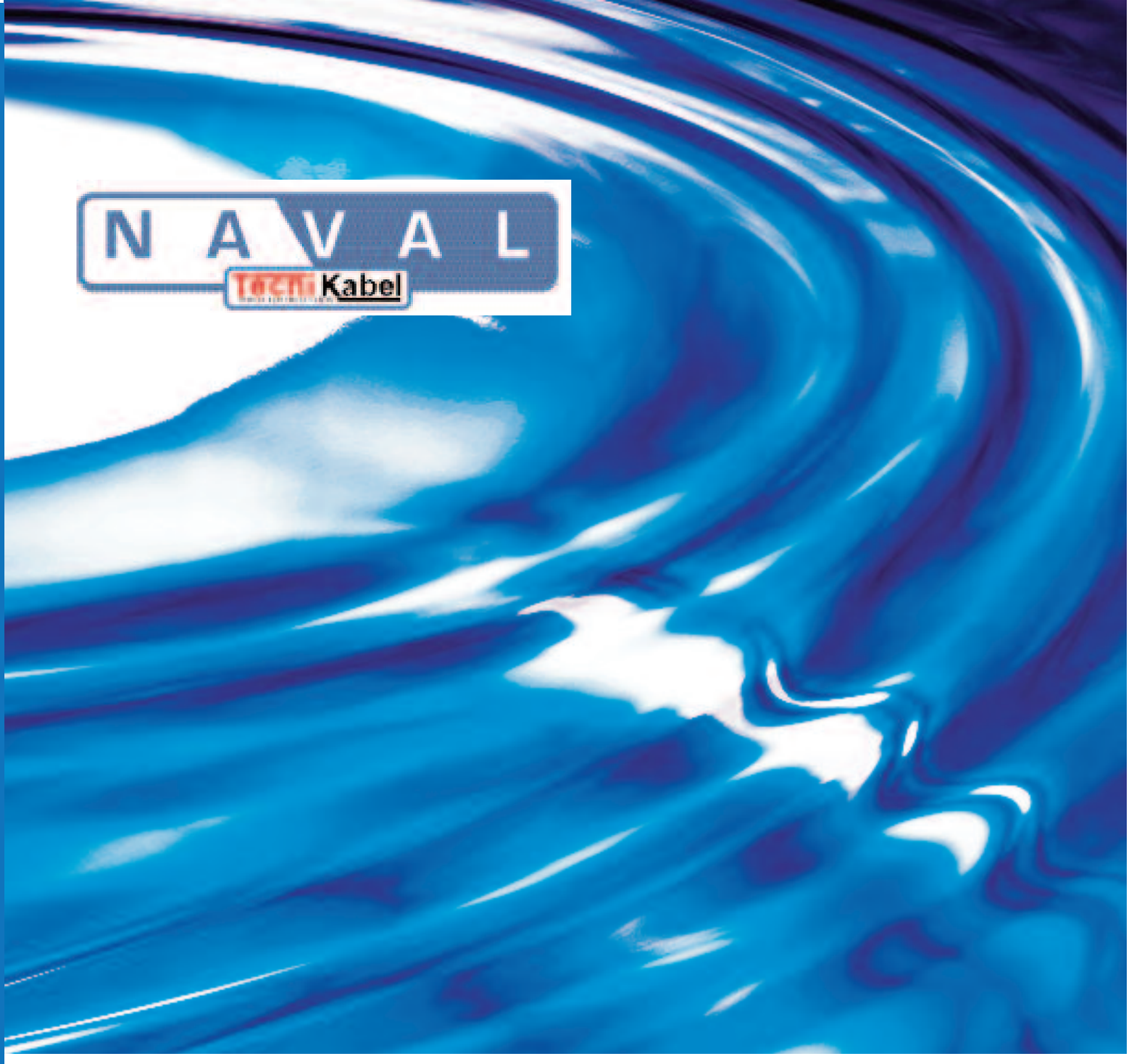
STAMPATO SU CARTA ECOLOGICA - LaPresse SPA



TecniKabel
SPECIAL ELECTRICAL CABLES

AGENT/DEALER:

TECNIKABEL srl
TURIN: Via Brandizzo, 243 - 10088 Volpiano (TO) Italy - Tel. +39 011 9951997 - Fax +39 011 9953062
ROME: Via Casali delle Cornacchiole, 154 - 00178 Rome - Italy - Tel. +39 06 50992552 - Fax +39 06 50514022
email: webstaff@tecnikabel.it - www.tecnikabel.it



NAVAL

Kabel

SPECIAL CABLES FOR

MARINE SHIP BOARD

TecniKabel

SPECIAL ELECTRICAL CABLES

TECNIKABEL is a leading company in Europe in the special electrical cables sector. Established in 1978, it immediately focused its business activity on research and innovation.
Wherever the future is designed **TECNIKABEL** is in the front line:

- Collaborating with leading companies in various sectors
- Fully satisfying the needs of its customers
- Focusing on continual improvement in its quality and reliability targets.

In its production plants **TECNIKABEL** realises cables intended for the widest variety of applications, from automation to railways, from telecommunications to industrial electronics, from audio video to defence, from off-shore to solar energy, from shipping to the electro-medical sector, with maximum priority given to technical support from the very start of the cable design phases.

- A rigorous analysis of applications
- Evaluation of the most suitable materials for any environment
- Optimisation of product costs

make it possible to suggest and realise original solutions that fully satisfy the specific requests of our customers.

Each **TECNIKABEL** cable contains everything needed to ensure our products are reliable with every type of voltage.

Our high quality levels are guaranteed by a modern production process controlled at every stage. Our staff's high degree of know-how and our company quality system have been recognised and certified in compliance with **UNI EN ISO 9001:2000** standards since 1994, under the control of national **(CISQ and IMQ)** and international **(IQNET)** certification bodies.

RINA
n. ELE50607CS

PRODUCT LINES

AUTOMATION
HEALTHCARE
OFFSHORE
TELECOMMUNICATION
AUDIO-VIDEO
SUN
DEFENSE
RAILWAYS
OPTICAL
NAVAL

POWER
CONTROL
SIGNAL
TELECOMMUNICATIONS

SPECIAL CABLES FOR
MARINE SHIP BOARD

TKSEA

TECNIKABEL is currently the only European company with such an enormous range of special cables for various applications.

The increasingly competitive globalisation of the world economy has given a new impulse to the maritime transport sector, including towards new emerging non-European countries.
In recent times we are witnessing an increasing electrical penetration in the marine field, resulting in an increase in the electrical power involved.

The electrical marine system is autonomous and independent of the external world. Everything that is required for the functioning of the said system e.g. generation, transmission, distribution and utilisation organs can therefore be found aboard.

The **TKSEA** cables project, in addition to the search for materials that are self-extinguishing, focuses on research into specific atoxic mixtures.

Should a fire break out aboard ship it is vital to have cables that have been constructed with self-extinguishing and atoxic materials. In the development of such cables, particular attention has been devoted to fire response features with reference to toxicity and corrosive properties of any resultant smoke due to fire.

For example, atoxic cables play an essential role since a ship remains an environment that is absolutely isolated from the rest of the world. Escape and evacuation possibilities are therefore much more limited and hence it is necessary to have, should any fires break out due to, for example, short circuits, cables whose insulation and protective sheath materials do not generate toxic fumes.

SPECIAL CABLES FOR

MARINE SHIP BOARD

LSOH

Features common to all families:

Economy of space and weight are vital for ship builders.
To satisfy these requirements, **TECNIKABEL** has developed cables that are easy to strip, work with and install.
All TKSEA cables are LSOH (Low smoke halogen free) in order to:

- guarantee good visibility should any fumes be generated
- avoid any generation of toxic gases should a fire break out
- not damage sophisticated equipment and instrumentation on board with corrosive acids
- avoid propagation of fire.

They are designed and built in compliance with IEC standards 60092-350, IEC 60092-351, IEC 60092-353, IEC 60092-359, IEC 60092-375, IEC 60092-376.

They fully comply with safety prescriptions regarding fire and fumes as set out in standards

IEC 60332-1,

IEC 60331-21,

IEC 60332-3-22,

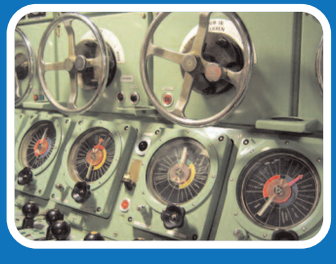
IEC 60754-1,

IEC 60754-2,

IEC 61034-1,

IEC 61034-2.

Cables	Description	Application
TKSEA01	Power and control cables 0.6/1 kV	Recommended for supply of equipment in fixed laying on ship bridges and all interior areas.
TKSEA02	Power and control cables 0.6/1 kV resistant to fire	Recommended for supply of fixed laying equipment in internal and external safety areas where the cable has to continue to function, including during a fire.
TKSEA03	Control and signal cables 150 – 250 V	Recommended for instrumentation and control with protection against external disturbances on ship bridges and in all interior areas.
TKSEA04	Control and signal cables 150 – 250 V resistant to fire	Recommended for instrumentation and control with protection against external disturbances where the cable must continue to function, including during a fire.
TKSEA05	Telecommunication, control and signal cables 60-250 V	Recommended for telecommunications, instrumentation and control.



TKSEA01

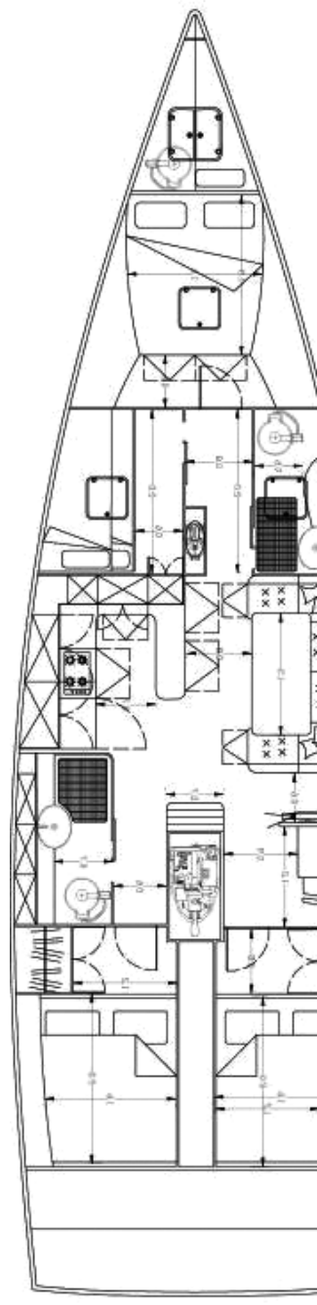
TKSEA01 PC	**P**ower and **c**ontrol cables 0.6/1 kV
TKSEA01 PCA	**P**ower and **c**ontrol cables 0.6/1 kV **A**rmoured

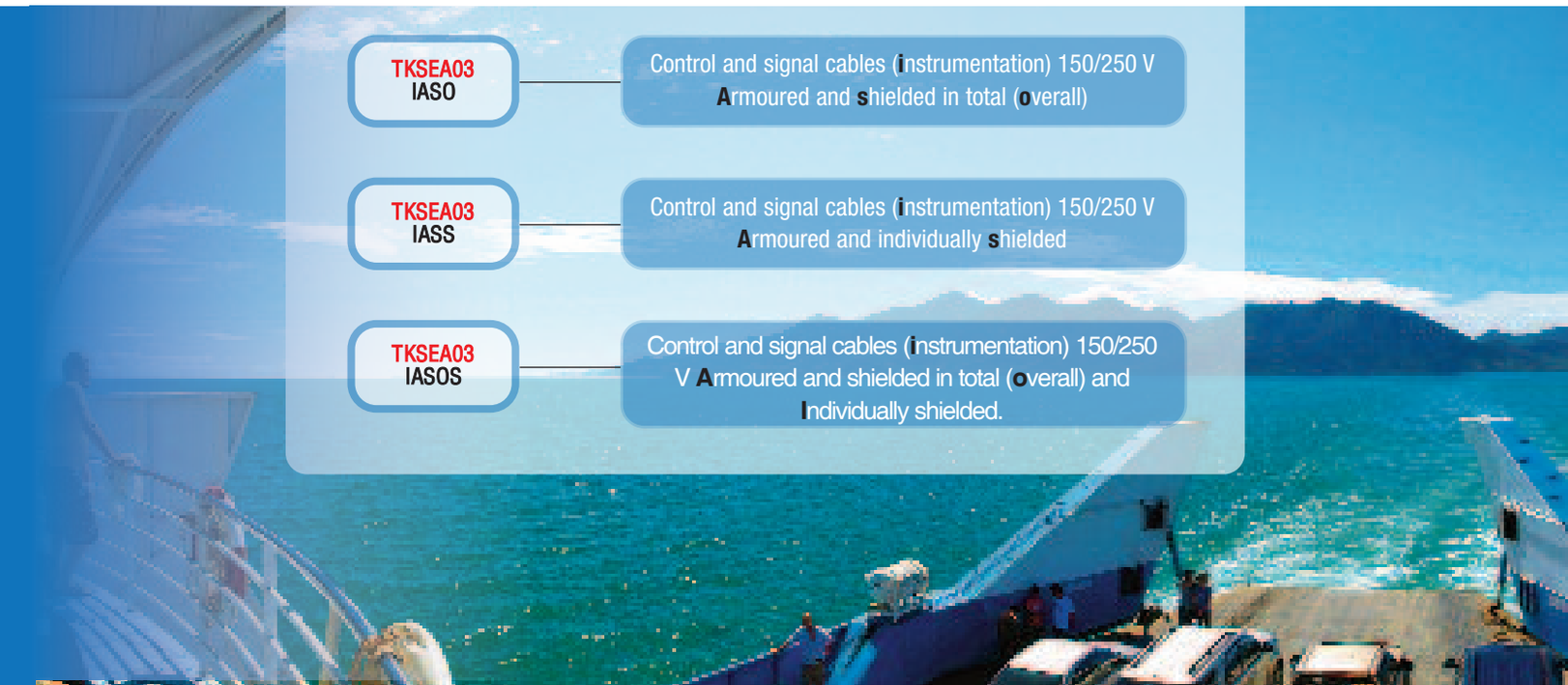
TKSEA02

TKSEA02 PCFR	**P**ower and control **c**ables 0.6/1 kV **F**ire **r**esistant
TKSEA02 PCFRA	**P**ower and control **c**ables 0.6/1 kV **F**ire resistant **A**rmoured

TKSEA03

TKSEA03 I	Control and signal cables (**i**nstrumentation) 150/250 V
TKSEA03 ISO	Control and signal cables (**i**nstrumentation) 150/250 V **S**hielded in total (**o**verall)
TKSEA03 ISS	Control and signal cables (instrumentation) 150/250 V **I**ndividually **s**hielded
TKSEA03 ISOS	Control and signal cables (**i**nstrumentation) 150/250 V **S**hielded in total (**o**verall) and **i**ndividually shielded
TKSEA03 IA	Control and signal cables (**i**nstrumentation) 150/250 V **A**rmoured
TKSEA03 IASO	Control and signal cables (**i**nstrumentation) 150/250 V **A**rmoured and **s**hielded in total (**o**verall)
TKSEA03 IASS	Control and signal cables (**i**nstrumentation) 150/250 V **A**rmoured and individually **s**hielded
TKSEA03 IASOS	Control and signal cables (**i**nstrumentation) 150/250 V **A**rmoured and shielded in total (**o**verall) and **I**ndividually shielded.





TKSEA04

TKSEA04 IFR	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant
TKSEA04 IFRSO	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant **s**hielded out of total (**o**verall)
TKSEA04 IFRSS	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant individually **s**hielded
TKSEA04 IFRSOS	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant shielded out of total (**o**verall) and **i**ndividually shielded
TKSEA04 IFRA	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant **a**rmoured
TKSEA04 IFRASO	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant **a**rmoured and **s**hielded out of total (**o**verall)
TKSEA04 IFRASS	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant **a**rmoured and **i**ndividually **s**hielded
TKSEA04 IFRASOS	Control and signal cables (**I**nstrumentation) 150/250 V **F**ire **r**esistant armoured **s**hielded out of total (**o**verall) and **i**ndividually **s**hielded

TKSEA05

TKSEA05 TI	Telecommunication, control and signal cables (**T**elecommunication, **I**nstrumentation) 60/250 V