

# Hydrographic Services and Standards Committee

## Report of the International Cable Protection Committee *Docs: HSSC15-07.10A*

### ICPC activities affecting HSSC

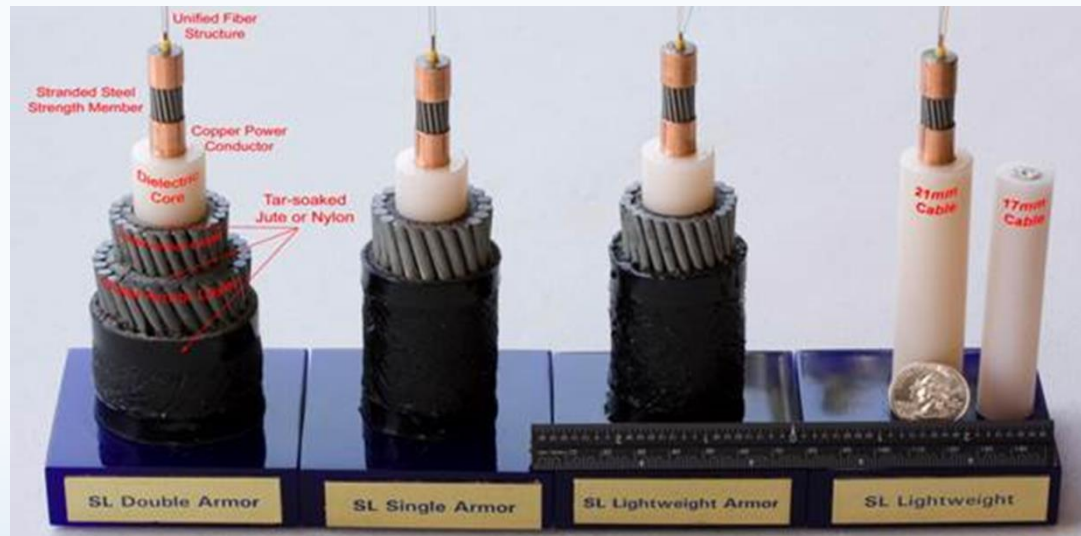
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# Submarine Telecommunications Cables



- Materials: glass, copper, polyethylene, fiberglass, steel wire
- Weight: from 0.7 kg/meter (unarmored deep-water) to 4.8 kg/m (double-armored)
- Diameter: 17mm to 50 mm (with armor)



# Principal activities and achievements

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## ***Pre Pandemic Update***

- ICPC Chair/Charting Working Group Chair attended IRCC-11 meeting in Genoa in June 2019 leading to invitation by Rear Admiral Tim Lowe to meet at UKHO HQ to discuss ICPC charting objectives.
- UKHO meeting held 30 August 2019; main discussion points:
  - Inconsistencies with some hydrographic offices to conform to IHO S4 Charting Specifications to chart submarine cables to 2,000m
  - Follow up on previous ICPC IHO meeting presentations/discussions regarding charting cables to full ocean depth particularly in deep seabed mining areas
  - Explore inclusion of published ISA Mining Licence Blocks on navigation charts
- Meeting indicated that the inclusion of submarine cables could be a secure layer as a product of the UKHO MSDI platform.



# Principal activities and achievements

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- Output from two rounds of calls to a cross section of ICPC members yielded an inconclusive demand for the proposed HKHO MSDI product, as a result:
- UKHO indicated their interest to participate in the 2020 Madrid Plenary to further evaluate the concept with ICPC members and deep seabed mining contractors
- UKHO indicated interest in participating in the ICPC Charting Working Group
- With the continued deferment of the Madrid Plenary until 2023 further discussions on the UKHO MSDI potential solution for charting cables lapsed
- ICPC was pleased to see the revision of IHO S4 Specifications Edition 4.9.0 – March 2021 Section B-443.8 related to buried cables which was previously misleading; however
- S4 Edition 4.9.0 – March 2021 B443 and C408.1 still retain submarine cable charting limits of 2,000m
- ICPC issues Government Best Practices for Protecting and Promoting Resilience of Submarine Telecommunications Cables – This document highlights the importance of cable awareness through the charting of submarine cables



# Principal activities and achievements

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## ***Post Pandemic***

- ICPC requested by Indonesia's Pushidrosal (Indonesian Navy Hydrography and Oceanography Centre), to support a submarine cable best practices workshop March 2022
- Pandemic driven recognition of the criticality of the submarine telecommunications infrastructure
- Criticality of submarine cable infrastructure has also become the focus of national security agencies given the prevailing geopolitical environment
- Given that +/- 80% of all cable faults occur in shallow water due to fishing and anchoring; cable awareness though the accurate portrayal of cables on charts is fundamental to cable protection
- The stated ICPC objective of charting submarine cables end to end and to full ocean depth was considered by the ICPC EC at the pre plenary meeting in Madrid in April; EC voted unanimously to continue pursuing this objective



# Principal activities and achievements

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- Attended HSSC-14 in Bali, no report but invited to present ICPC statement to close meeting
- The ICPC was reminded that it was incumbent of cable system owners/installers to provide cable positional data as soon as possible after installation
- The concept to develop a directory of principle and regional hydrographic offices and charting authorities has been considered for inclusion in either a new ICPC Cable Charting Recommendation, or as a standalone tool as an aid for the timely submission as-laid cable positional data
- The ICPC Chair reached out to the IHO Directorate seeking advice on the creation of a directory of regional Hydrographic Offices and authorities and was advised that an existing tool was available on the IHO website; Publication S-11 Part B); albeit this was not seen by the IHO as ideal for creating an ICPC charting authority directory
- The IHO stated preferred position on charting submarine cables was for the ICPC to be a conduit using a cable database from which a Hydrographic Office can pull, download the data (as part of their procedure to make a chart)



# Principal activities and achievements

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- A sub group from the Charting Working Group met in January to consider the IHO suggestion that the ICPC act as a conduit for submarine cable positional data resulting in the following actions:
  - Chair to continue to collate Hydrographic Office contacts regionally
  - Remind members of their responsibility to provide cable data in a timely manner to Hydrographic Offices
  - Review ICPC Recommendations and see where they could be enhanced or consider a standalone Recommendation
  - Secretariat and ICLA to look into associated liabilities for the ICPC and ICPC General Liability insurance
  - Address the outstanding development of an S100 registry Submarine Cable Product Specification (S4XX)
  - Consider links with providers of digital chart products to bridge the gap in charting
  - Chair to follow up at HSSC-15 in Helsinki and IHO Assembly
- ICPC Chair currently in discussions regarding outsourcing the development of an S100 product specification for submarine cable





# Principal activities and achievements

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## ***Engagement with the International Seabed Authority***

- Deep seabed mining is a priority issue for the ICPC as uncoordinated mining on the seabed in the high seas poses a risk of damage to existing submarine cables and a risk of route foreclosure for future cables
- The ICPC Chair and ICLA participated in the three ISA 27<sup>th</sup> Session Council meetings and first of the 28<sup>th</sup> Session and will be participating in the remaining 28<sup>th</sup> Council Sessions during 2023.
- With the support from Member States notably, France, Belgium, Germany, Australia, New Zealand and Japan; together with ICPC interventions; the current draft of the Exploitation Regulations include the substance of ICPC led proposals on submarine cable protection including:
  - Requirement for contractors to have identified in-service submarine cables from published charts
  - Requirement for contractors to provide documentary evidence of coordination and mitigation with cable owners





# Problems or outstanding issues

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- Cables missing from charts or inaccurate charted position; *possible reasons:*
  - Slow implementation of chart updates
  - Visibility of some cables dependent on where the vessel sources its on-board information
  - Too much 'purple' on the navigational chart to include a new purple cable
  - Charting authorities making cartographic decisions in order to maintain map clarity resulting in omission submarine cables
  - No record of the cable route notification being sent by cable owner or installation contractor
- ICPC recognizes addressing all but timely notification of cable positional data challenging



# Problems or outstanding issues

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- ICPC as conduit for submarine cable positional data
  - Having the ICPC serve as a conduit or repository of cable data poses material legal risks – risks that would require continuing resources to attempt to mitigate
  - To allow ICPC to play the role of conduit; system suppliers and operators would insist on requiring ICPC to assume certain liabilities that are currently allocated in supply contracts between suppliers and their customers
  - ICPC would need to seek limitations on liability and indemnification from suppliers and owners for the role as conduit – all of which would need to be addressed in legal agreements
  - ICPC is not insured to take on such risks, even if insured, still possibility for the ICPC being drawn into litigation over cable damage, where it would assert limitations on liability and indemnifications to defend itself
- ICPC to continue monitoring their cable charting policy driven by concerns over security and malicious acts by state and non state actors



# Problems or outstanding issues

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- S4 B443 and C408.1 still retain submarine cable charting limits of 2,000m and ICPC requests this to be revised with no depth limit
- ICPC to finalize outsourcing arrangements for development of S100 submarine cable product specification
- ICPC to continue development of hydrographic office/charting authority directory for its members
- ICPC to develop a cable charting recommendation or update existing recommendations



# Action requested of HSSC

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- ICPC invites the HSSC to note this report
- ICPC invites the HSSC note ICPC request to revise S4 B443 and C408.1 to reflect charting of cables to full ocean depth
- ICPC invites HSSC to investigate the inclusion of ISA designated mining boundaries on charts
- ICPC invites the HSSC to note ICPC intention to outsource the development of a submarine cable S100 Product Specification
- ICPC invite HSSC to note ICPC commitment for submarine cables to be charted end to end
- ICPC invites HSSC to note that ICPC will continue to develop a directory of Hydrographic Offices/Charting Authorities to aid its members to direct as laid cable positional data

