Case Study

HFCL

Challenge

A leading telecom provider in the UK had an urgent need to future proof their fiber plant by improving the flame rating of their legacy cabling solution. They needed a new solution within an aggressive timeframe and with a minimal cost impact.

Solution

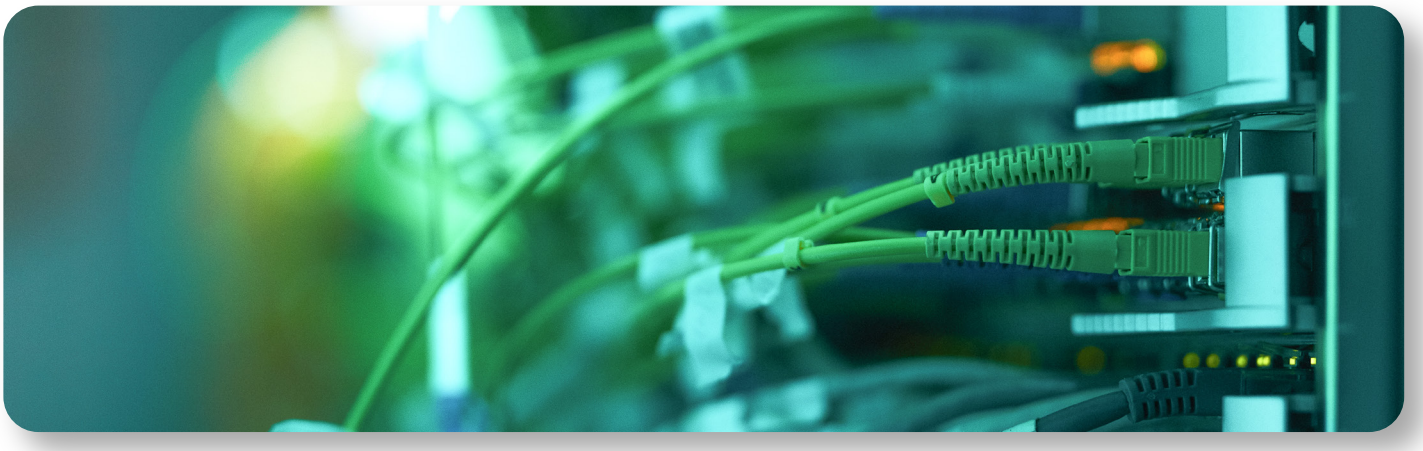
HFCL designed, tested, and certified a variety of unarmoured, multi loose tube cable configurations that exceeded the customer's flame rating requirement. Not only did the new solution meet a far more robust B2ca-s1a,d0,a1 rating, but it also yielded a smaller diameter and lower cost as compared to the legacy cable.

Results

HFCL successfully delivered a B2ca-compliant, cost-effective, and reduced-profile multi loose tube cable solution within the required timeline, helping the customer to future proof the flame rating of their network, maximize capacity, and minimize cost.

Challenge

One of the largest service providers in the UK was tasked with upgrading the CPR rating of their optical fiber cable plant within an aggressive timeframe while limiting costs. The goal was to improve the current cable infrastructure from a Dca class rating to a more stringent Cca class rating. This required a new cabling solution to be designed, prototyped, tested, and audited within a 6 month timeframe. Many of the steps involved in achieving this class rating rely on lab and audit third parties, meaning that the design, prototyping, and internal testing phases of the development process needed to be complete within roughly half of the allotted window. From a design standpoint, material selection is challenging because mechanical performance needs to be maintained while flame propagation and smoke release are limited. To further complicate matters, cost must be contained to ensure that the customer does not bear an added price burden to adopt the new solution.



Solution

HFCL designed and produced a full suite of unarmored multi loose tube cables, ranging between 16 and 288 fibers that (1) exceeded the customer's CPR fire rating requirement, (2) was delivered within the established timeframe, (3) supports a smaller cable outer diameter and (4) costs less than the legacy solution:

1. HFCL produced a solution with a B2ca-S1a,d0,a1 classification exceeding the customer's Cca-s1a,d0,a1 requirement and the legacy cable's Dca class rating.

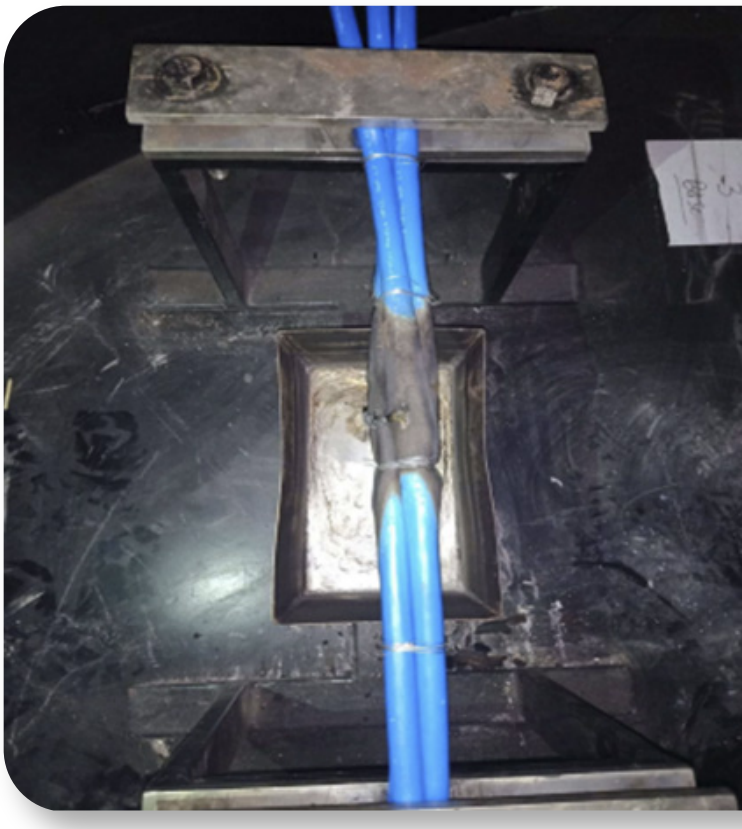
2. HFCL's library of available "fire test ready" materials and on-site evaluation facilities enabled concepts to be rapidly screened. The new HFCL solution was designed, internally tested, and prototyped within a 3-month window. Similarly, HFCL assigned a dedicated team to support third party testing and auditing. These resources enabled the team to adhere to a timeline of 6 months compared to an industry standard CPR design/certification timeline of > 1 year.

3. The HFCL design leveraged materials that produced a solution with a smaller outer diameter.

4. A reduction in jacket thickness coupled with vertically-integrated material sourcing, enabled HFCL to produce a lower cost solution as compared to the legacy cable offering.

Results

The new portfolio of HFCL cables was successfully delivered to the customer within the established 6-month timeframe, with a superior CPR flame rating of B2ca-S1a,d0,a1 (exceeding the requirements of Cca-s1a,d0,a1 and that of the Dca-compliant legacy cabling solution), at a smaller diameter as compared to the legacy solution, and at a lower price. HFCL's new solution enabled the customer to future proof the flame rating of their cable plant, increase fiber capacity, reduce cost and do it all within a timeframe that is unprecedented in the industry.



About HFCL

At HFCL, we are a trailblazing global technology company dedicated to connecting billions of people, devices, and systems. With a strong focus on innovation, we design, develop, and manufacture cutting-edge telecommunications equipment, fiber-optic cables, and other related electronics. Our commitment to technological advancement and quality has positioned us as a leading player in the industry. With a rich legacy and a global presence, we are driven by our passion to empower networks and revolutionize the way people communicate. By leveraging our expertise and innovative solutions, we enable seamless connectivity and enhanced reliability, shaping the future of digital and telecommunications.

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