CUSTOMER CASE

Alcadon



The customer

Leading wind energy company

The product

Wall cabinet and splice closures

Patch and splice management

THE CUSTOMER'S CHALLENGE

The customer – and sub-contractors – have been designing a new setup for every wind farm. They were looking for a pre-defined technical solution, which is applicable for all future wind farms with minimum adjustments.

Additionally, the requirements were following:

- A shorter cabling distance of the fibre from array cable to the fibre tray to minimize the risks of fibre damages.
- Better grounding/buried to protect against leakage current from array cables.
- A cable management solution with greater flexibility regarding fibre connections

SOLUTION



- Alcadon worked closely together with the customer to identify needs
- Testing and evaluation of possible solutions in cooperation with the manufacturer
- A prototype was designed, tested and approved in cooperation between the customer, manufacturer and Alcadon
- Alcadon helped preparing the documentation
- Alcadon in Denmark handled production, testing and global logistics

ADVANTAGES FOR THE CUSTOMER

- A flexible product design specially adapted to the market /customer requests and needs – regardless of wind farm and location.
- In close cooperation with the customer, Alcadon has delivered a complete solution and will assist with future adjustments and customised global logistics.

FURTHER INFORMATION ON THIS CASE AND THE PRODUCT

Read the article about the case

See next page

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SCAN OR CLICK

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Alcadon

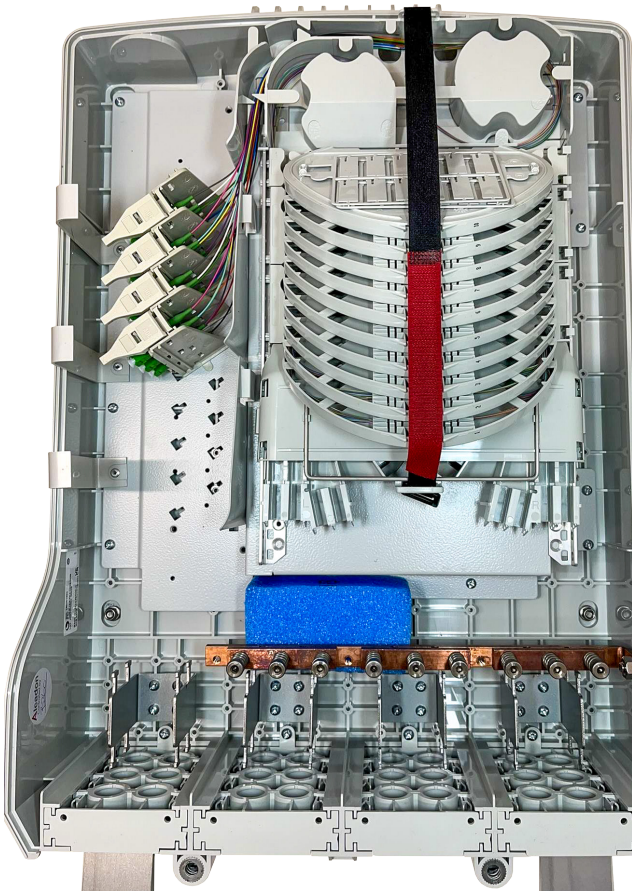
Customized fibre solutions ensure a high and consistent quality on-site

Alcadon is supplying ever increasing amounts of customer-specified fibre solutions from their production in Nivaa, Denmark. The globally applicable solutions are manufactured here with uniform instructions for installation and documentation, which are adapted to customers' needs for easy on-site installation in wind farms.

In contrast to the visual similarity between many wind farms, there may be significant technical differences in the global landscape dictated by technical, environmental or regional requirements. This results in installations with individual variations that are important for the practical work.

One common feature for special offshore wind turbines is that the installations in the field are often difficult to access, and the practical installation work dictates that you have all the goods available when the work begins. If the components are optimally suited to the technique and function, you save time during the installation and minimize risks of the installation work. If the components are prequalified by the wind turbine industry with support and documentation in place, life will be easier for all parties – especially for the contractors who have to carry out the installations on-site.

> „In itself, the fibre optics for communication in wind farms with associated cabinets and splice closures do not make up a large part of the total budget. But if we take into account reliability as well as installation and service friendliness, the fibre infrastructure is an area where it's very beneficial to invest", says Mette Jessen Jensen, Sales Manager for the Industrial Division at Alcadon.



An energy company that owns wind farms across the globe needs to ground leak-currents in the array cables that carry both energy and communication - as a result of induction from the high phase-currents. Alcadon has adapted and configured wall boxes to the specific needs of the energy company, so that grounding when assembling the individual cables can be performed easily on-site with a „platform of solutions", which requires only minimal local adaptation.

Benefits of in-house development, manufacturing and logistics

Offshore wind farms usually follow a star-shaped topology with distribution of energy via central transformer platforms to the land-based electricity grid. Although there are many similarities between offshore wind farms around the world, there will be technical parameters that differ from region to region.

„To meet one of the technical challenges you experience offshore, we at Alcadon, in consultation with one of our customers, have developed and adapted a solution that offers grounding of the leak-currents that occur in the wind farms' array cables. The array cable consists of the conductors for the three phases that supply the electricity grid with energy, and in the middle there is a steel-shielded fibre cable that can carry, say, 72 fibres. When the steel housing protecting the fibres runs close and parallel to conductors which transmit larger currents in the three phases, a significant leak-current can be induced in the shielding of the array cables connected to the offshore wind farms. In the present case, the power company that owns the wind farm has - in cooperation with Alcadon - chosen a solution where the steel housings are grounded in CommScope's wall-mounted boxes and splice closures that distribute the fibre-optic communication to the turbines and intermediate stations, respectively", explains Mette Jessen Jensen.

Hence, it is a great advantage that Alcadon has its own production facilities in Nivaa, where the wall boxes and splice closures - that the power company in question needs - can be configured to the individual wind turbines and transformer stations.

Platform design-philosophy gives added value

„It's all about creating added value through a platform designed with standard products from our manufacturers, and which an energy company or a wind turbine manufacturer can use in installations or products worldwide. As a starting point, we at Alcadon can supply products that meet the basic requirements for various IP-classes, challenging environments, robustness and general design. We adapt these products so that they meet the more specific requirements that the customer may have. This provides products that are very easily adapted to regional conditions, no matter where in the world a wind farm or energy supply is to be implemented", says Mette Jessen Jensen.

Due to regional contractual clauses, a wind turbine manufacturer or energy supplier may not be allowed to use specific named brands, but for the companies that install the components described in the contracts, there is a clear advantage in using wall boxes and splice closures that are pre-qualified by the end-customers. This guarantees a consistent quality. As Alcadon can also provide support and guidance on how to use the products, both installation and implementation are made easier for wind turbine manufacturers/energy companies and contractors alike.

Bespoke global logistics

There are some significant potential advantages in being able to evaluate the possibilities of configuring the products that Alcadon distributes in a practical cooperation with customers in the energy and wind turbine sector. Individual workshops often lead to opportunities that are not directly obvious from the products' data sheets.
Through the hands-on experiences in the production facilities in Nivaa and the vast experience that Alcadon has achieved from their customers who does the work of the practical installation, Alcadon is able to effectively meet the needs of the wind turbine manufacturer and the power suppliers – particularly in the present case with the CommScope products. This has also lead to the manufacturing and testing of wall boxes and splice closures has been efficiently able to match the customer's specifications.

> „We are now shipping significant numbers, and we can always offer individually tailored solutions. This also applies to the regional conditions, which dictate the use of special components. We can pack this as bulk solutions, so that a contractor knows that it is a complete kit, which is delivered everywhere in the world", concludes Mette Jessen Jensen.

There are also a number of requirements for transport and storage of the fibre-optic solutions that Alcadon sends out to all corners of the world. In close cooperation with our customers, Alcadon always find the right solution for packaging and shipping. The products must arrive just-in-time no matter where in the world a wind turbine may be and at the same time endure storage until the components are to be installed.

About Alcadon
With almost 100 employees in Norway, Sweden, Denmark, Belgium, Holland and Germany, the Alcadon Group is a significant player in the communications and supply market for the supply of fibre, copper, added-value components, as well as test and measurement equipment for the installation industry, FTTH, FTTA and data centre markets.

For more information, please visit: www.alcadon.dk

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