EMTELLE

CON-DUCT™

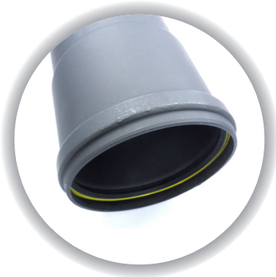
FAULT DETECTION MADE EASY

- Quicker detection and faster repair
- Considerably less digging
- Rapid fault detection

GLOBAL MANUFACTURER OF PRE-CONNECTORISED, BLOWN FIBRE CABLE & DUCTED NETWORK SOLUTIONS

Emtelle are the market leading supplier of duct systems for HV cables in the UK and Ireland. Close dialogue with clients, consultants, developers and engineers, has led to the development of con-duct, our latest product set for this market. As well as offering all the existing features and benefits associated with our powerprotect+ range, con-duct enables rapid traceability of cable sheath faults within the duct system.

Con-duct for placement of HV Cables and enabling rapid fault detection. Traditionally, if a fault was detected on a length of cable, engineers would typically have to dig down to the cable at the halfway mark and use a tester to determine which half was defective. The process was repeated until a short enough section of cable was reached to repair the fault.



Coated Interference Ring Seal Socket

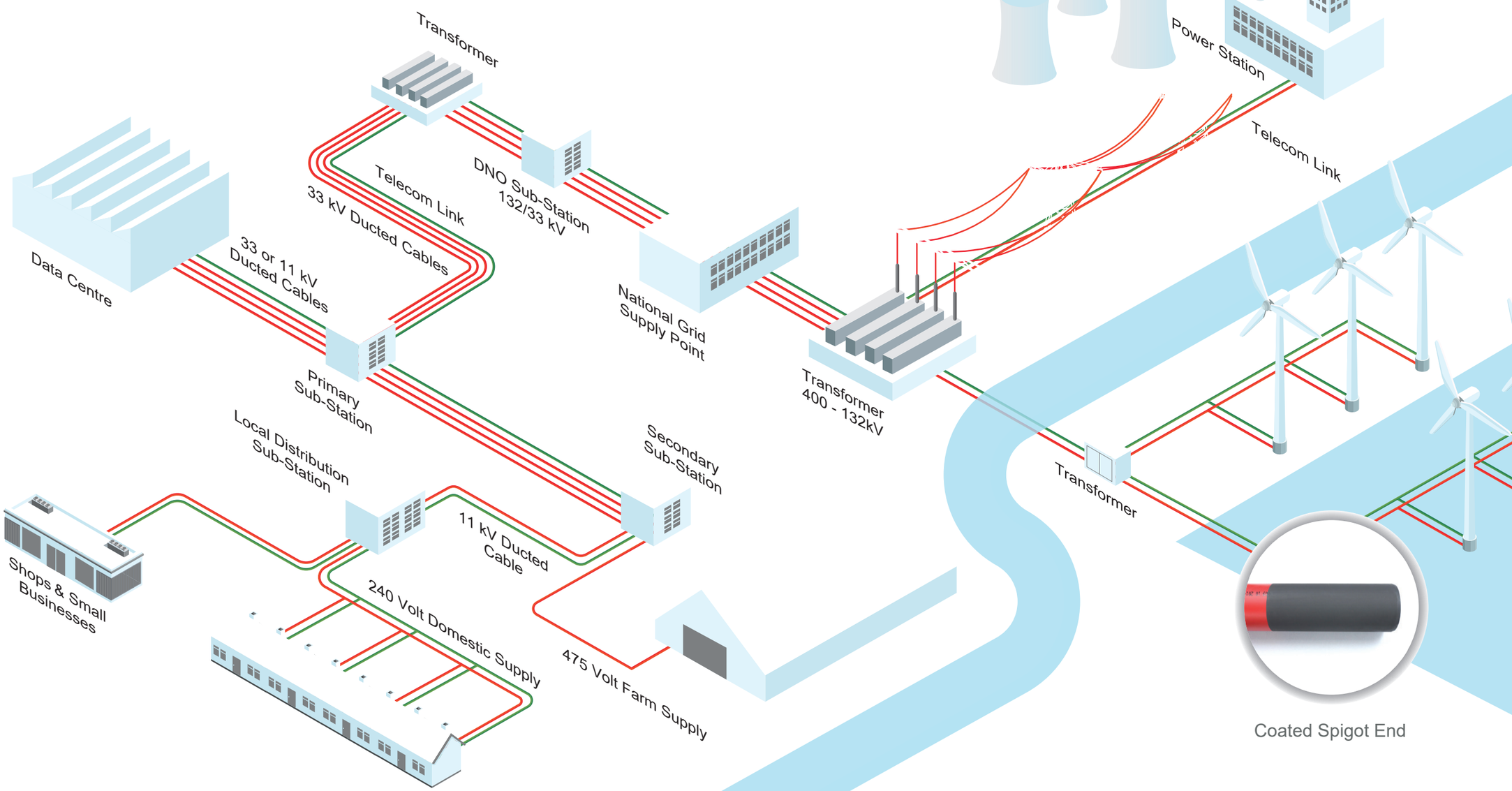
PVC Duct Bend

38mm Domestic Supply

160mm Powerprotect+ Bend 22½°

160mm Powerprotect+ Duct for 132kV Cable

110mm Powerprotect+ Trefoil



Coated Spigot End

Prysmian Cables & Systems, the UK market leading HV Cable manufacturer tested the system in March 2010. A short route length of Class 1 cable ducts were jointed together in trefoil formation with con-duct connectors between each 6 metre length and back-filled leaving each end open to allow cables to be placed.

CONNECTORS

connectors are short PVC Duct spigot and socket sections which are encapsulated with a specifically developed “electro conductive” coating. The system allows the connectors to act as an earthing point from the fault to ground, as the current is conducted from inside to outside of the duct via the Con-Duct connector.

In addition to individual connectors, the same fault-finding ability can be achieved by coating the spigot end of any PVC Duct with the same “electro conductive” coating. The coating enables the location of the cable sheath fault through use of industry standard cable tracing / fault detection equipment.

When utilised with every 6m length of duct, connectors will enable the location of the fault to within 3m - a substantial improvement over the traditional method. Con-duct connectors and ducts are installed using the same procedures to install powerprotect+ duct systems.

CON-DUCT BENEFITS

- Considerably less digging
- Safer procedures
- Fewer man-hours
- Quicker detection
- Faster repair
- Shorter downtimes

SYSTEM INSTALLED IN PRESTIGIOUS OFFSHORE WINDFARM PROJECT

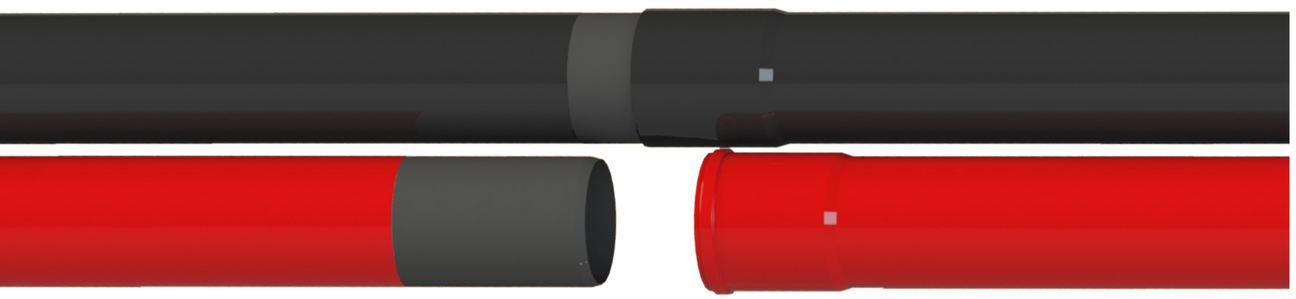
Prysmian have since installed 132km of Emtelle’s con-duct system on the Gwynt y Môr Offshore Wind farm project for RWE N Power, in March 2011. At 576MW, with 160 turbines and a site area of 79km2, Gwynt y Môr is one of the largest offshore wind farms in construction in the world.

Subsea power cables will be installed to take the electricity from the wind turbines to the two offshore electrical substations, and onwards to underground transition pits on the shore.

A 132/400kV electricity substation will be constructed at St Asaph Business Park, Denbighshire, North Wales. This will convert the electricity into the voltage required for the National Grid. For the project, Prysmian installed 132km of 160mm OD Class 1 powerprotect+ duct with conductive connectors to suit. The products were installed in a connection from the landing site for the Offshore windfarm to the St Asaph sub station.

Con-duct is also being used for sub-station works on National Grid connections.

Prior to installation, two deliberate cable faults were introduced to a 132kv cable at known increments to establish the accuracy of the tracing. The assembly was tested with a BICOTEST 12kV DC s271T MAGPIE trace set. The two separate faults were located to the nearest connector. This clearly indicated that the current “leakage” was allowed to flow to the con-duct connector where it could be detected to the nearest 6 metre joint by the POPIE method.



CON-DUCT™

EMTELLE
TOGETHER EVERYTHING CONNECTS

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