



FLUOROCARBON

CASE STUDY

FL491 - SUPPORT CLAMP BEARING PADS



THE CHALLENGE

The client requested an Elastomeric material with high friction and high load bearing capacity for use in the transportation of large diameter monopoles for offshore wind turbines.

Physical properties required for the clamp support pad:

1. The support clamp bearing surface has to be very tough with a high tear strength to resist damage as the monopile is dragged across the surface during the offloading/installation process;
2. A static friction value in excess of 0.45 to hold the monopile in place during transportation;
3. A Compressive Modulus of 16-19 Mpa;



Physical properties of FL491:

Shore Hardness	Shore A	75±5
Tensile strength	Mpa	40 Mpa
Compressive Modulus	Mpa	12±2
Coefficient of friction		0.7
Temperature Range		Up to 70°C
Marine Corrosion		Good

THE SOLUTION

Fluorocarbon manufactured a range of Support Clamp Bearing Pads utilising our FL491 material to be used in the pipe support cradles; typical monopiles have a diameter of 6.5 meters and a weight of 1000 tonnes.

Measurement of coefficient of friction

Fluorocarbon designed and built special testing rigs for measuring friction values between Fluorinoid® FL491 and coated or untreated steel plate over a wide range of loads, for measuring coefficient of friction to achieve results which could be presented to a qualifying authority.

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THE OUTCOME

Fluorocarbon are able to supply FL491 JT Support Clamp Bearing Pads of varying dimensions to suit the clamp loadings and monopile diameter.

All pads are supplied with recessed fixing holes and sealing bungs.

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