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ADVANCED COMPOSITE TECHNOLOGY

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VELLO[®] NORDIC

HIGH STRENGTH
FIBRE REINFORCED
COMPOSITE PRODUCTS
FOR THE OIL & GAS
INDUSTRY

COMPOSITE TECHNOLOGY

Composites are materials that are comprised of strong load-carrying fibre reinforcement embedded in a polymer, known as matrix. The reinforcement results in a very strong and rigid material at very low weight, and the matrix can be combined in many different ways in order to meet specific requirements.

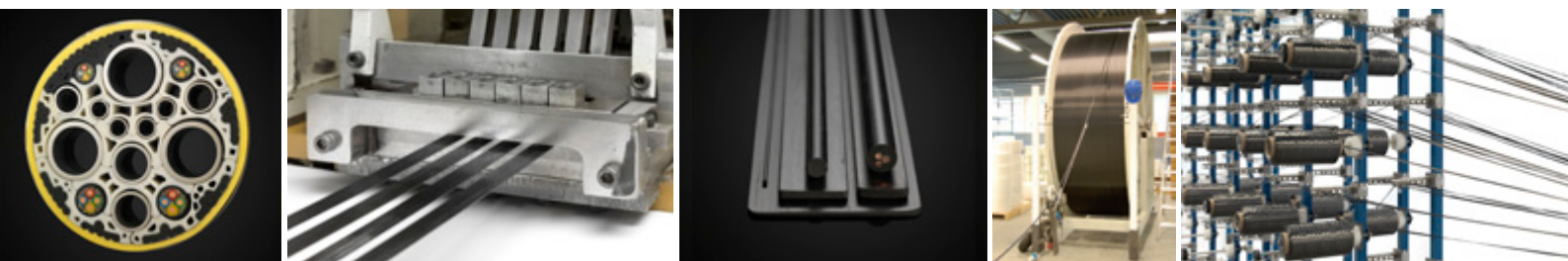
Pultrusion is a process that enables continuous production of composite profiles with constant cross sections and material properties tailored to specific purposes. The method enables very complex shapes to be produced, and ensures consistent quality that can be reproduced.

As the development of new offshore oil fields moves to deeper water, composite materials have tremendous advantages over traditional steel. Properties such as high stiffness, superior mechanical strength to weight ratio, and unsurpassed corrosion resistance are highly valued in development of new solutions.

COMPOSITE PRODUCT APPLICATIONS WITHIN THE OIL AND GAS INDUSTRY - SOME EXAMPLES:

- Carbon fibre cables with various contents as electrical conductors, fibre optics etc. for operations such as well intervention, monitoring and lifting
- Carbon fibre profiles as strengthening member in umbilicals and flexible pipes for deep water installations

	Carbon fibre composite (CFRP)	Glass fibre composite (GRP)	Aluminium	Mild steel
Tensile strength N/mm ²	1900	1200	300	400
E-Modulus (stiffness) N/mm ²	150.000	38.000	65.000	210.000
Specific weight Kg/dm ³	1,6	1,9	2,7	7,8



COMPANY

VELLO NORDIC AS is a leading Norwegian company developing and manufacturing pultruded composites since 1965. Our products are based on carbon fibre, basalt and glass fibre for use in advanced applications for the oil and gas industry where the use of light weight high strength composite materials is a driving force in new technology.

VELLO has an outstanding competence and knowledge within this field, where we combine specialists with PhD in polymer chemistry and years of experience in tailoring products to meet our customers' requirements.

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