

Offshore inspection equipment from Scotland wins manus award 2019

Judges award the application of high-performance plastics for cleaning and inspection of underwater pipelines

Remote intervention tooling and subsea engineering specialist, ToolTec has reason to celebrate: Its offshore inspection unit has won the manus award 2019 - a prize awarded by igus for the creative use of high-performance plastic bearings. Second place went to a floating catamaran, and third place to a driver assistance system for people with limited physical mobility.

More and more bearings made of high-performance plastic are being used worldwide, in industrial environments and far beyond - from asparagus harvesting machines to whirlpool covers to gears for church clocks. There are many reasons for this: tribopolymer bearings are lubricant- and maintenance-free, lightweight, corrosion-free and cost-efficient. It is therefore hardly surprising that 445 inventors from 32 countries applied for this year's manus award. The judging panel, made up of representatives from the trade media, industry and research, selected three winners that stand out for their technical and economic efficiency and creativity.

1st place: 5,000 euros awarded to a Scottish offshore engineering company

The winner of the 5,000 euros manus award is ToolTec. The Scottish mechanical engineering company has developed a device that allows operators of underwater oil and gas platforms to clean and inspect pipelines remotely. Until now, divers had to do this difficult job. The offshore inspection device wraps itself around the pipe like a sleeve and moves forward on rollers. While moving, the machine cleans the pipeline and inspects it for weak points. Only polymer bearings were considered by the engineers during the design phase. Metallic bearings would have been susceptible to corrosion and require regular maintenance. The engineering team specified iglidur plain bearings, drylin linear guides and an e-chain for safe cable guidance, which makes a 360-degree rotary movement. As with all igus motion plastics, these components are lubrication-free providing maintenance-free dry running, as well as corrosion resistance to salty seawater.

2nd place: iFLY 15 - the floating catamaran from Munich

Second place went to iFLY 15. The sports catamaran, made by Munich-based manufacturer CEC Catamarans, looks like an ordinary catamaran at first sight. However, this changes when the vessel picks up speed. Then, due to a mechanical flight control system, it rises about half a metre out of the water and travels on four small fold-out wings at speeds of up to 30 knots (55 km/h). But before the catamaran learned how to fly, the engineers had to master challenges with the control system, such as reducing weight. The developers therefore rely on light igus plain bearings made of high-performance plastics for the wings. The plastic bearings also score points in this environment due to their lubrication-free dry running and their resistance to salt water.

3rd place: A driver assistance system from France

The bronze medal of the manus award 2019 went to the French company Kempf, for its digital accelerator ring called 'DARIOS'. The ring, which is mounted on the steering wheel, provides hand controls for drivers with a physical disability. By pressing on the ring, the driver can accelerate the vehicle to the desired speed. Braking is achieved via a lever located next to the steering wheel. In the latest version, the control ring is no longer simply round, but, like many modern steering wheels, has a flat bottom. The engineers mastered this design challenge together with igus' 3D printing service. At igus, 200 high-performance plastics parts were produced on the 3D printer, which are connected to each other and slide on the metal core of the world's first flat bottomed control ring.

For more information about the winners and to review all applications from the past years, please visit: www.igus.co.uk/manus or call igus directly on: 01604 677240

Images with suggested captions:



IG003.1

The winners of the manus award 2019 were honoured at the Hannover Show and received the prizes from igus CEO Frank Blase (far right), Tobias Vogel (3rd from left), VP and head of the business unit for

iglidur plain bearings and drylin linear and drive technology and Thorsten Beitzel (far left) , CEO igus France.



IG003.2

iglidur plain bearings, drylin linear guides and an e-chain from igus score in the offshore inspection unit from ToolTec with their freedom from lubrication and maintenance as well as their resistance to salt water.

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About igus:

Based in Northampton in the UK and with global headquarters in Cologne, Germany, igus is a leading international manufacturer of energy chain systems and polymer plain bearings. The family-run company is represented in 35 countries and employs 4,150 people around the world. In 2018, igus generated a turnover of 748 million euros with motion plastics, plastic components for moving applications.

With plastic bearing experience since 1964, cable carrier experience since 1971 and continuous-flex cable since 1989, igus provides the right solution based on 100,000 products available from stock with between 1,500 and 2,500 new product introductions each year. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

The terms igus, chainflex, CFRIP, conprotect, CTD, drylin, dry-tech, dryspin, easy chain, e-chain, e-chain systems, e-ketten, e-kettensysteme, e-skin, flizz, ibow, iglide, iglidur, igubal, manus, motion plastics, pikchain, readychain, readycable, speedigus, triflex, plastics for longer life, robotlink and xiros

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