Airborne
Oil & Gas

TCP JUMPER SPOOL

Thermoplastic Composite Pipe

lightweight | flexible | corrosion resistant

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Airborne Oil & Gas is the world's first and leading manufacturer of Thermoplastic Composite Pipe (TCP)

Located in The Netherlands, Airborne Oil & Gas delivers a range of TCP products for the global subsea market, including flowlines, risers, and jumper spools. TCP is a flexible, lightweight, high strength and corrosion resistant alternative to conventional flexible pipe and steel tubulars.

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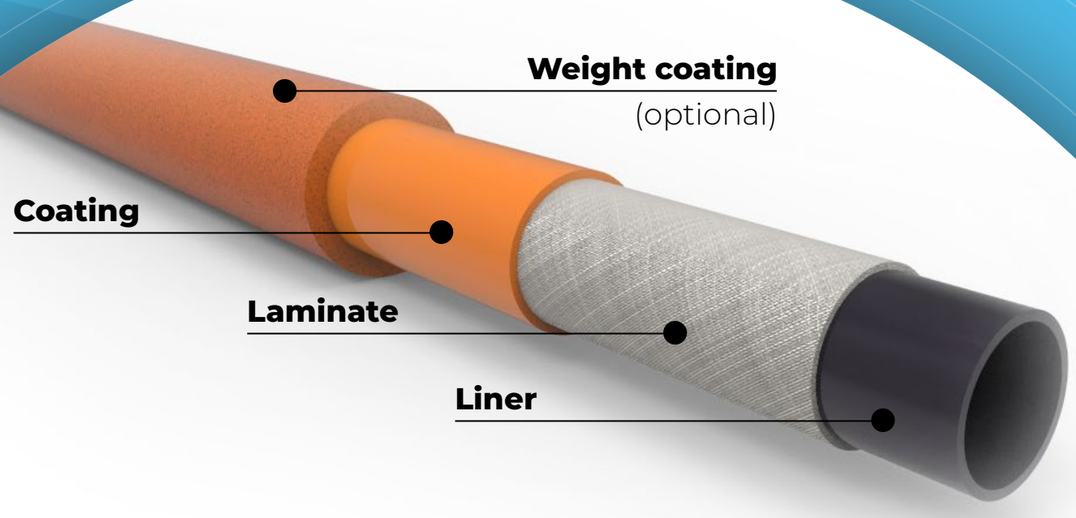
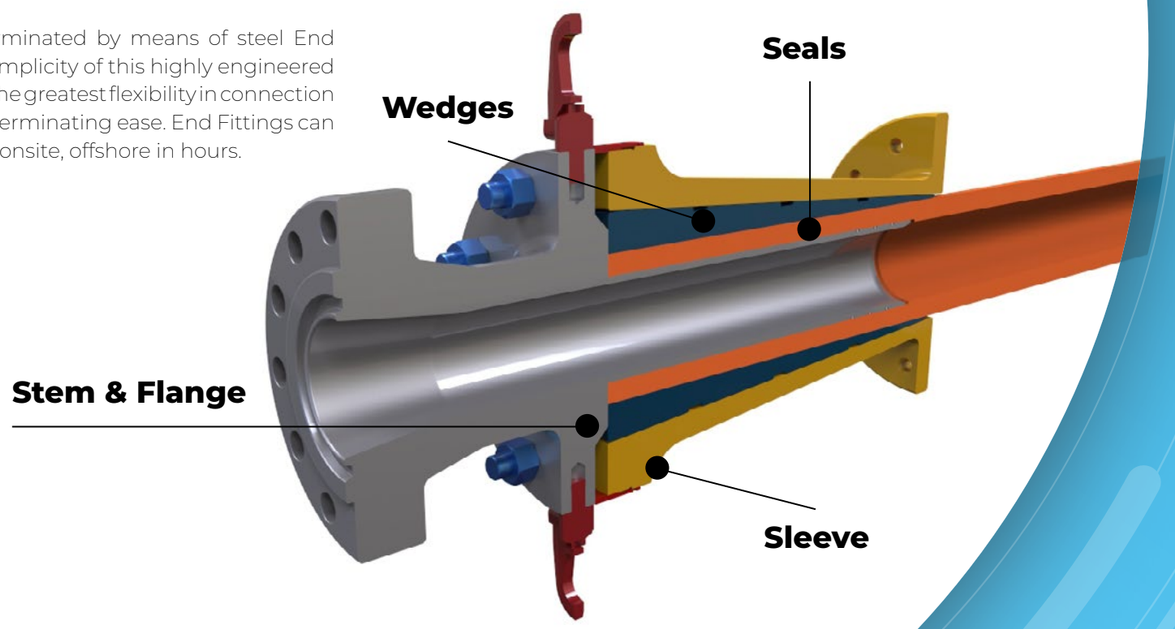
TCP DESIGN

lightweight | flexible | corrosion resistant



An extruded plastic liner is over-wound with polymer impregnated fibre tapes and melt fused using Airborne Oil & Gas' propriety production technology and know-how to form a single fully bonded pipe wall structure.

The TCP is terminated by means of steel End Fittings , the simplicity of this highly engineered design allows the greatest flexibility in connection selection and terminating ease. End Fittings can be completed onsite, offshore in hours.



TCP Material Selection

Material selection is a key element to the flexible and fit for purpose cost savings for TCP.

The optimal material, design and fibre lay-up is used to yield the best pipe solution for each project and each application. TCP is developed for, and has track record on full wellstream hydrocarbon service, gas lift, water injection, methanol injection and chemical injection.

Glass – HDPE
65 °C / 150 °F

Carbon – PA12
80 °C / 176 °F

Carbon – PVDF
121 °C / 250 °F

TCP Jumper Spools

The TCP Jumper Spool range of products are designed to connect manifolds, wells and pipeline terminations together. The lightweight, flexible design provides a robust cost-efficient long-life solution for this application.

The lightweight design reduces the transferred loads to subsea equipment allowing for reduced sizing of subsea structures.

TCP Jumper Spools can be used for hydrocarbon service as well as gas lift and water or methanol injection, and can be fitted with appropriate insulation.

Design range of TCP Jumper Spools

- Up to 7.5” ID
- Up to 1034 bar / 15 ksi
- Up to 121 °C / 250 °F
- 3,000 m+ Water Depth
- Collapse Resistant
- All common flange types

TCP Jumper Spools Improve

- Cost reduction
- Schedule risk mitigation
- Award to deployment times
- Emergency response rates
- Design life
- Installation vessel choice
- Installation methodology options

TCP Jumper Spools Eliminate

- Complex geometries
- Complex spreader bars
- Metrology
- Buoyancy / VIV strakes
- Excessive transport requirements
- Large vessel foot-prints
- Large loads on subsea structures

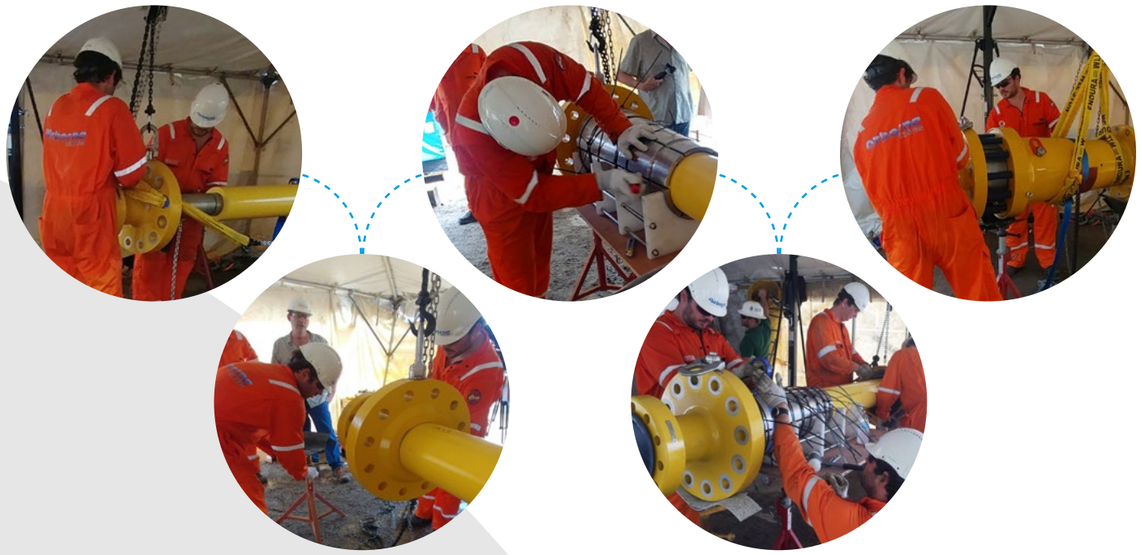
TERMINATION OF TCP

– a true strength of TCP

TCP gives the user the option to terminate the TCP Jumper outside the point of manufacturing if required. This gives much more flexibility for projects and avoids long waiting times for fabrication, metrology and welding of conventional technologies.
All pipes are shipped from the point of origin, fully Factory Acceptance Tested and ready to terminate with the equipment to perform the termination onsite.

The simplicity of the highly engineered End Fittings for TCP allows termination onsite or offshore when required. Timing to terminate can range from 4 to 12 hours, depending on the size of the End Fitting. Airborne Oil & Gas is the only manufacturer with this option and proven track record of terminating onsite in remote locations.
The termination procedure can be completed in the horizontal or if required in the vertical position.

▼ Installation of a TCP End Fitting



Jumpers On Demand

The TCP Jumper Spool offers the option of having a length of TCP readily available near site, reducing schedule risk and cost.

Clients can take advantage of a single pre-agreed continuous design shipped on a reel that can be spooled off to the required length, when and as required. Our simple and quick to terminate End Fittings are shipped separately, ready to be terminated onsite at short notice by Airborne Oil & Gas technicians or by our clients’ own trained and qualified personnel.

The Value Proposition of Jumpers On Demand

- De-risk and fully own the schedule
- Take advantage of volume cost optimizations
- Logistics costs reduced, simplified and known
- Ready to deploy in days not months
- Rapid response or emergency replacement

Qualification

Airborne Oil & Gas is the first company to have certified and qualified the design methods and production process in accordance with the new DNV standard for TCP, DNVGL-ST-F119.

Manufacturing

Airborne Oil & Gas' manufacturing facility is based in IJmuiden (Port of Amsterdam), The Netherlands.
The manufacturing facility has direct sea access and our spoolable TCP conduits can be loaded directly on our client's vessels. The quay has a length of 330 m with a water depth of 9.5 m.

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