

A 3D computer-generated rendering of a red subsea riser pipe. The pipe is shown at an angle, highlighting the 'Tri Strakes' (three-pronged strakes) attached to its exterior. The background is a blue, wavy surface representing water.

Highly resilient vortex induced vibration suppression

Tri Strakes® Stinger

In deepwater riser applications where the use of steel catenary risers (SCRs) is common, these risers can be introduced to the phenomenon of vortex induced vibration (VIV). This is caused by the regular shedding of vortices from the pipe when subjected to a steady current. The shedding of the vortices can “lock into” the resonant frequency of the pipe along a significant length and can cause the pipe to vibrate. VIV causes accelerated fatigue damage and can give rise to problems such as pipe girth weld failure or premature pipe failure. Other applications prone to VIV are rigid steel flowlines unsupported over free spans and major deepwater field developments requiring a large number of thermally insulated pipelines.

CRP Subsea recognises that this is an increasingly common problem and therefore, in order to suppress the damaging vibrations to an acceptable level, have put together a comprehensive design package which provides a successful VIV suppression system.

To perform at every level, CRP Subsea built up a wealth of in-house VIV knowledge through

consultation with industry renowned hydrodynamicists, alongside computational analysis. Physical hydrodynamic testing combined with in-house impact, axial slip and load bearing capacity testing has produced a hydrodynamically efficient and load bearing capable product. All materials and geometries used are fully qualified for long term subsea use.

CRP Subsea offers a range of VIV suppression strakes to meet your needs.



PU VIV SUPPRESSION STRAKES

PU VIV suppression strakes combine the benefits of traditional cable and flowline impact and abrasion protection with an effective VIV suppression profile. The product is manufactured in marine grade polyurethane (PU).

INTEGRAL STRAKES

CRP Subsea is able to mould strakes profiles into many of its products during manufacture. This is ideally suited for thermal insulation shells, where strakes can be moulded in, to provide effective VIV suppression.

For a stackable and lightweight vortex induced vibration suppression solution take a look at our Tri-Strakes® Lite product at:
www.crpsubsea.com/tri-strakes-lite

For a combination of the stackability of the Tri-Strakes® Lite with the load resilience of the Tri-Strakes® Stinger take a look at our Tri-Strakes® Combi product at:
www.crpsubsea.com/tri-strakes-combi

Benefits

- Eliminates periodic vortex shedding
- High load bearing capability
- Strake geometry
- Can be designed to meet individual project requirements
- High impact and abrasion resistant
- Suitable for S-lay and J-lay loads

Applications

- Risers
- Pipelines



CRP Subsea delivers innovative and reliable offshore solutions that maximise business performance to meet your needs. Our dedicated and highly skilled staff are always on hand to provide seamless process support from initial idea, through to delivery and beyond.