

Pipeline Buckle Mitigation Buoyancy

Under certain conditions, subsea pipelines can experience lateral movement known as “buckling”. Lateral buckling causes the pipeline to be dragged across the seafloor, which can jeopardize the pipeline’s integrity. In response to this, Pipeline Buckle Mitigation Buoyancy modules are clamped onto the pipeline to control the formation of the lateral buckles and to alleviate stress. These modules decrease the lateral friction from the buckle by both reducing weight of the buckling sections and by providing a protective shell.

All modules are custom-designed to fit each application taking into consideration the designed uplift, pipeline specifications, and deployment strategy. The standard design has an integral elastomeric clamp designed to secure the modules against axial and torsional loads. All units are made using high-performance DeepTec® syntactic foam inside a thick-walled polyethylene exterior shell that provides superior resistance to impact, wear and biofouling.

Compression of the clamp is maintained by either standard hardware or by strapping systems. In either case, installation tools are provided to create the required compression for the elastomeric component.

