TSS 440 Dual Track

Subsea pipe & cable tracking system

There are thousands of miles of pipes and cables beneath our oceans. Commercial, legal, operational and environmental consideration demand that these remain in good order. This requirement creates a constant need to verify location, condition and burial status – operations that are complicated by the ever-changing seabed topography.

TSS is the world leader in developing and supplying technologies to meet these demands. Having developed the world's first commercial pulse induction pipe and cable survey system (TSS 340) in 1991, followed by the release of the TSS 350 AC tone cable survey system, TSS has gone from strength to strength and become the industry standard.

Specifications

Product	TSS 440 Dual Track
Country of origin	USA
Manufacturer	Teledyne Marine

TSS 440
Subsea pipe & cable tracking system

TSS technologies are proven in operation in some of the most exacting environments world-wide, and its equipment is established as the most accurate means of obtaining pipe and cable burial data. There is a need for a system that can detect the presence of both pipes and cables, and can provide accurate and reliable survey data, which describes the position of these cables on or beneath the seabed. The system needs to be flexible in its range of uses and in the variety of vehicles on which it can be installed to complete survey work.

TSS 350
Subsea pipe & cable tracking system

With modern subsea cable systems becoming increasingly sophisticated and their deployment, recovery and repair a more exacting science, there is a need for accurate subsea cable location. The TSS 350 cable survey system has been developed to meet this requirement in a compact modular system that provides enhanced features whilst remaining easy to use.

The TSS 350 system is designed specifically for the detection and survey of tone-carrying cables. Featuring a comprehensive software display and menu structure, vreal-time information is presented in a clear graphical format and provided as a digital output for storage and subsequent processing.The TSS 350 provides today's specialist operating companies with a system that will significantly improve their subsea operations allowing cable detection at greater burial depths for a variety of applications.

Product features and benefits TSS 440

- Windows™ based display and control software
- DSP techniques give quality control information
- Long range detection of buried subsea targets
- Pulse induction technology allows accurate survey information regardless of vehicle heading
- No time-consuming vehicle calibrations required
- Simple to install and service
- Easy to operate
- Fully integrated system with altimeter, spares and documentation

Product features and benefits TSS 350

- Cable location data and depth of burial data
- Cable fault location
- Vehicle skew angle data
- Tone discrimination
- Look-ahead information
- Accurate and reliable survey data with quality control envelope
- Tone frequency discrimination
- Combination of advanced DSP technology and proven tone-detection techniques

Specifications

	440	350	Dualtrack
Surface display console	•	•	•
440 Subsea electronics pod	•		•
350 Subsea electronics pod		•	•
Power supply pod	•		•
Deepview software	•	•	•
ALT250 Altimeter	•	•	•
3-Axis Coil Cable Ass		•	•
Pod to ROV Cable	•	•	•
350 Coil Assy x 2		•	•
Coil mounting frame	•	•	•
Spare 350 Coil		•	•
440 Coil Assy x 4	•		•
Transit Cases	•	•	•
System Manuals	•	•	•
Transit Cases	•	•	•

Product features

- Excellent detection and tracking performance
- High accuracy repeatable range data
- Pulse induction technology allows autonomous operation
- Suitable for pipe and cable tracking, burial and survey requirements
- System design facilitates quick and easy mobilisation
- Forward search mode for target location
- AC tone detection mode for measurement at increased burial depths

Technical Specifications

		440	350
System performance	Detection range	A C Tone Cable detected at vertical range up to 10m and within a total horizontal swath width of 20m centred on the coil array	Pulse induction3cm armoured cable depth and tracking at 1.2m; 1cm unarmoured cable depth and tracking at 0.6m
	Vertical measurement accuracy (in a low noise environment)	RMS 5cm or 5% of slant range – whichever is greater. Stated accuracy applies within the quality envelope of 4m. 3cm armoured cable depth and tracking at 1.2m; 1cm unarmoured cable depth and tracking at 0.6m	RMS 5cm or 5% of slant - range whichever is greater
Subsea Electronics Pod (SEP)	Dimensions Weight per pod SDC communication	140mm (dia) x 450mm (h) (440 – 2 pods, 350 – 1 pod) 10Kg in air; 2Kg in water 2-wire 20mA digital current loop or 4-wire 20mA digital current loop RS232 via a multiplexer	
	Voltage input	Standard 110V AC (input range 98-135V AC); Optional 240V AC (input range 198-270V AC)	
	ROV connection	Via 8-way waterproof connector	
	Voltage input	Standard 110V AC (input range 98-135V AV); Optional 240V AC (input range 198-270V AC)	
SDC	Hardware	19” military grade touch screen panel PC Rear mounted comms endorse for all external interfaces	
	Display resolution Dimensions Power consumption	1280 x 1080 599 x 480 x 345mm (including transit case) 250W max	
	Shock resistance	Operating: better than 5g for <10ms Non-operating: better than 40g for <10ms	
Altimeter	Dimensions Frequency Range	140mm (dia) x 290mm (h) 200kHz 30cm to 30m	
	Connection cable Connection to	4m length (7m length optional) Subsea electronics pod	
Depth Rating	All subsea components are depth rated to 3000m (optional 6000m)		
Field Support Kit	Supplied as part of the recommended system		
Warranty	12 months international warranty including parts and labour.		