The ACP2 is the first plough in the offshore industry fully designed for optimum performance in all areas, but specifically for the safe handling of large diameter power cables.

Incorporating an aggressive share design with multiple forecutters, the ACP2 is unique in its ability to accommodate up to 300mm diameter product with a 5m minimum bend radius and offer both on deck and seabed cable loading / unloading capability. The plough offers variable depth control via hydraulically actuated skids to enable safe burial from 0m to 3.3m. The plough has a powerful 325kW anti-cavitation jetting system capable of operating in water depth starting as little as 0.5m to reduce seabed resistance and tow loads.

Comprehensive instrumentation and surveillance for control and monitoring during ploughing is enhanced by a pivoting bellmouth that allows superior handling of the cable and a reduced cable wrap angle for product safety during launch and recovery. An industry proven mechanical link bridle system is utilised for efficient steering, whilst minimizing plough complexity.

The ACP2 utilises a sophisticated Launch and Recovery system, using a hydraulically dampened, wide angle A-Frame and traversing carriage for superior control during launch and recovery. The tow winch provides hydraulic render up to 150 tonnes, fixed lift tower at 60 tonne safe working load and 50 tonne low force constant tension for fast and reliable tow rope handling during ploughing and launch and recovery operations.
SPECIFICATION SHEET

PARTICULARS

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>Spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX. OPERATING DEPTH</td>
<td>0 to 1000m</td>
</tr>
<tr>
<td>MAX. CABLE DIAMETER</td>
<td>300mm</td>
</tr>
<tr>
<td>PRODUCT MBR</td>
<td>5.0m</td>
</tr>
<tr>
<td>MAX. TRENCH DEPTH</td>
<td>3.3m</td>
</tr>
<tr>
<td>TOW FORCE</td>
<td>150Te</td>
</tr>
<tr>
<td>LENGTH</td>
<td>15.2m</td>
</tr>
<tr>
<td>WIDTH</td>
<td>5.4m</td>
</tr>
<tr>
<td>HEIGHT</td>
<td>6.0m</td>
</tr>
<tr>
<td>WEIGHT IN AIR</td>
<td>44Te</td>
</tr>
</tbody>
</table>

BURIAL TOOL

<table>
<thead>
<tr>
<th>SHARE DESIGN</th>
<th>Aggressive multi-tip share design</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPTH CONTROL</td>
<td>Continuously variable between 0m and 3.3m using actuated front skids and stabilisers</td>
</tr>
<tr>
<td>SUBSEA JETTING</td>
<td>325kW patented anti-cavitation water pump delivering high flow, low pressure share tip jetting to reduce seabed resistance starting in water depths little as 0.5m</td>
</tr>
</tbody>
</table>

SOIL TYPE

Suitable for a range of soil types, including sand, soft to hard clay and weathered weak rock

CONTROL & CABLE HANDLING

<table>
<thead>
<tr>
<th>STEERING</th>
<th>Mechanical link bridled steering system combining efficient tow rope plough steering at +10º whilst minimizing plough complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOADING / UNLOADING</td>
<td>Accommodates subsea crane for subsea loading / unloading</td>
</tr>
<tr>
<td>HANDLING</td>
<td>Cylinder actuated pivoting bellmouth and cable trough</td>
</tr>
<tr>
<td>DEPRESSOR</td>
<td>Slew functionality for cable loading</td>
</tr>
<tr>
<td>INTRUMENTATION</td>
<td>Cable tension - depressor Port &amp; Starboard tow force Lay cabin tension (in chassis over bend plate)</td>
</tr>
</tbody>
</table>

PLough SURVEILLANCE & POSITIONING

<table>
<thead>
<tr>
<th>CAMERAS</th>
<th>2 x Kongsberg OE15-100 enhanced Low Light CCD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 x Kongsberg OE14-366 Colour with manual zoom</td>
</tr>
<tr>
<td></td>
<td>1 x Kongsberg OE15-108 Mini Observation manual zoom</td>
</tr>
<tr>
<td></td>
<td>1 x Sub-Atlantic rotator unit</td>
</tr>
<tr>
<td></td>
<td>2 x Sub Atlantic - 1128-MAS - 24V</td>
</tr>
<tr>
<td>LAMPS</td>
<td>6 x Bowtech 3200 LED lamps with dimming</td>
</tr>
<tr>
<td>OBSTACLE AVOIDANCE</td>
<td>Hi-resolution 2D imaging sonar Tritech Gemini / Kongsberg MS1000</td>
</tr>
<tr>
<td>PROFILING SONAR</td>
<td>Tritech Super Seaking dual frequency profiler for mean seabed level measurement</td>
</tr>
<tr>
<td>HYDROPHONE</td>
<td>A hydrophone is provided with an integral pre-amplifier</td>
</tr>
<tr>
<td>ACOUSTIC POSITIONING</td>
<td>Interface for Transponder/Responder</td>
</tr>
</tbody>
</table>

A-FRAME

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>Hydraulically dampened, wide angle traversing A-frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWL</td>
<td>60Te (latched and unlatched load)</td>
</tr>
<tr>
<td>SEA STATE</td>
<td>Sea state 5</td>
</tr>
<tr>
<td>DIMENSIONS</td>
<td>Outreach approx 13.4m from A-frame leg pivot Clear distance between legs approx 12m</td>
</tr>
<tr>
<td>WORKING ARC</td>
<td>45º to 160º from horizontal inboard</td>
</tr>
<tr>
<td>FLEETING</td>
<td>Roller and stabilising frame can be moved along cross beam by hydraulic cylinder mounted inside roller. Total fleeting distance 3.8m</td>
</tr>
</tbody>
</table>

TOW WINCH

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>Open Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOW WIRE</td>
<td>1500m</td>
</tr>
<tr>
<td>HOIST SPEED</td>
<td>30m/min with 60Te load</td>
</tr>
<tr>
<td>RENDER</td>
<td>Up to 150Te @ 100m/min</td>
</tr>
<tr>
<td>CONSTANT TENSION</td>
<td>5Te @ 100m/min</td>
</tr>
</tbody>
</table>

The ACP2 Plough is not limited to these parameters and can be modified by DeepOcean to complete workscopes in excess of its current configuration.